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HS2

High Speed Rail (Crewe – Manchester) Environmental Statement

Volume 5: Appendix TR-002-00006_Report 3

Traffic and transport

MA06: Hulseheath to Manchester Airport/
MA07: Davenport Green to Ardwick/
MA08: Manchester Piccadilly Station
Transport Assessment Part 2 - Report 3 of 3

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Department for Transport

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11.4.272 This junction is a four-arm signal controlled grade-separated roundabout with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-116.

Table 11-116: 2018 baseline performance at M56 Junction 2/A560 Altrincham Road/B5168 Sharston Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5168 Sharston Road	874	89%	3
M56 off-slip	1,036	41%	7
A560 Altrincham Road (south)	1,057	87%	10
A560 Altrincham Road (west)	1,193	78%	9
	2018 PM peak hour (17:00–18:00) baseline results		
B5168 Sharston Road	688	75%	2
M56 off-slip	867	45%	7
A560 Altrincham Road (south)	804	77%	8
A560 Altrincham Road (west)	1,280	75%	9

11.4.273 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 89% on the B5168 Sharston Road approach with an associated queue length of three PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 77% on the A560 Altrincham Road (south) approach with an associated queue length of eight PCU.

11.4.274 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-117. As the junction is only affected by operation of the Proposed Scheme, future baseline results are presented for 2038 and 2046 only.

Table 11-117: Future baseline performance at M56 Junction 2/A560 Altrincham Road/B5168 Sharston Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
B5168 Sharston Road	892	103%	9	893	104%	9
M56 off-slip	1,230	48%	9	1,340	53%	10
A560 Altrincham Road (south)	1,128	93%	10	1,149	95%	10
A560 Altrincham Road (west)	1,223	80%	9	1,209	79%	9

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
B5168 Sharston Road	724	86%	3	720	91%	4
M56 off-slip	933	48%	8	1,055	54%	9
A560 Altrincham Road (south)	885	84%	8	899	86%	9
A560 Altrincham Road (west)	1,263	74%	9	1,322	78%	10

11.4.275 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 103% on the B5168 Sharston Road approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with the maximum VoC of 86% on the B5168 Sharston Road approach with an associated queue length of three PCU.

11.4.276 In the 2046 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 104% on the B5168 Sharston Road approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with the maximum VoC of 91% on the B5168 Sharston Road approach with an associated queue length of four PCU.

11.4.277 The junction analysis indicates that the junction will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

M60 junction 2/A560 Stockport Road/Heathside Park Road/Carrs Road/Cheadle Point

11.4.278 This junction is a six-arm priority controlled (give way) roundabout with no controlled pedestrian crossing facilities. The Heathside Park Road, Carrs Road and Cheadle Point approaches are minor arms that are not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-118.

Table 11-118: 2018 baseline performance at M60 Junction 2/A560 Stockport Road/Heathside Park Road/Carrs Road/Cheadle Point junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
M60	993	54%	0
Heathside Park Road	-	-	-
A560 Stockport Road (east)	634	37%	5
Carrs Road	-	-	-
Cheadle Point	-	-	-
A560 Stockport Road (west)	1,177	68%	1

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 PM peak hour (17:00–18:00) baseline results		
M60	487	26%	0
Heathside Park Road	-	-	-
A560 Stockport Road (east)	1,001	81%	9
Carrs Road	-	-	-
Cheadle Point	-	-	-
A560 Stockport Road (west)	997	59%	0

11.4.279 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 81% on the A560 Stockport Road (east) approach with an associated queue length of nine PCU.

11.4.280 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-119. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-119: Future baseline performance at M60 Junction 2/A560 Stockport Road/Heathside Park Road/Carrs Road/Cheadle Point junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
M60	865	52%	0	837	52%	0
Heathside Park Road	-	-	-	-	-	-
A560 Stockport Road (east)	828	49%	6	962	56%	7
Carrs Road	-	-	-	-	-	-
Cheadle Point	-	-	-	-	-	-
A560 Stockport Road (west)	1,258	81%	1	1,227	81%	1
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
M60	285	17%	0	216	13%	0
Heathside Park Road	-	-	-	-	-	-
A560 Stockport Road (east)	1,089	88%	10	1,202	97%	11
Carrs Road	-	-	-	-	-	-
Cheadle Point	-	-	-	-	-	-
A560 Stockport Road (west)	1,258	73%	1	1,380	84%	1

11.4.281 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 81% on the A560 Stockport Road (west) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 88% on the A560 Stockport Road (east) approach with an associated queue length of 10 PCU.

11.4.282 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 81% on the A560 Stockport Road (west) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 97% on the A560 Stockport Road (east) approach with an associated queue length of 11 PCU.

A560/Greenwood Road

11.4.283 This junction is a four-arm priority controlled (give way) roundabout with no controlled pedestrian crossing facilities. The A560 Altrincham Road (north-east) is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-120.

Table 11-120: 2018 baseline performance at A560/Greenwood Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A560 Altrincham Road (west)	1,206	55%	0
A560 Altrincham Road (south-east)	1,107	51%	0
Greenwood Road	409	41%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A560 Altrincham Road (west)	1,287	61%	0
A560 Altrincham Road (south-east)	1,150	54%	0
Greenwood Road	341	40%	0

11.4.284 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.285 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-121. As the junction is only affected by operation of the Proposed Scheme, future baseline results are presented for 2038 and 2046 only.

Table 11-121: Future baseline performance at A560/Greenwood Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A560 Altrincham Road (west)	1,267	60%	0	1,299	61%	0
A560 Altrincham Road (south-east)	1,133	56%	0	1,149	59%	0
Greenwood Road	486	47%	0	509	49%	1
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A560 Altrincham Road (west)	1,286	62%	0	1,306	66%	0
A560 Altrincham Road (south-east)	1,054	52%	0	1,079	53%	0
Greenwood Road	445	45%	0	499	51%	1

11.4.286 The assessment shows that this junction operates well within capacity in the 2038 and 2046 future baselines.

M60 junction 3

11.4.287 This junction is a two-arm signal controlled junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-122.

Table 11-122: 2018 baseline performance at M60 junction 3

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Kingsway	763	101%	15
M60 off-slip	1,393	47%	16
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Kingsway	849	51%	16
M60 off-slip	1,984	76%	27

11.4.288 This junction operates over capacity in the 2018 baseline with a maximum VoC of 101% on the A34 Kingsway approach in the AM peak hour with an associated queue length of 15 PCU. The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 76% on the M60 off-slip approach in the PM peak hour with an associated queue length of 27 PCU.

11.4.289 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-123. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-123: Future baseline performance at M60 junction 3

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A34 Kingsway	770	102%	15	785	104%	15	773	103%	15
M60 off-slip	2,136	73%	25	2,405	82%	28	2,506	85%	29
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A34 Kingsway	976	58%	18	1,020	61%	19	1,051	63%	20
M60 off-slip	2,333	90%	32	2,460	95%	33	2,513	97%	34

11.4.290 This junction operates over capacity in the 2030 future baseline with a maximum VoC of 102% on the A34 Kingsway approach in the AM peak hour with an associated queue length of 15 PCU. The assessment shows that this junction operates close to capacity in the 2030 future baseline with the maximum VoC of 90% on the M60 off-slip approach in the PM peak hour with an associated queue length of 32 PCU.

11.4.291 This junction operates over capacity in the 2038 future baseline with a maximum VoC of 104% on the A34 Kingsway approach in the AM peak hour with an associated queue length of 15 PCU. The assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 95% on the M60 off-slip approach in the PM peak hour with an associated queue length of 33 PCU.

11.4.292 This junction operates over capacity in the 2046 future baseline with a maximum VoC of 103% on the A34 Kingsway approach in the AM peak hour with an associated queue length of 15 PCU. The assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 97% on the M60 off-slip approach in the PM peak hour with an associated queue length of 34 PCU.

11.4.293 The junction analysis indicates that the junction will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

M56 junction 3a/A560 Altrincham Road

11.4.294 This junction is a four-arm priority controlled (give away) grade-separated roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-124.

Table 11-124: 2018 baseline performance at M56 junction 3a/A560 Altrincham Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Princess Parkway	1,227	94%	3
A560 Altrincham Road (east)	1,235	95%	4
M56 Princess Parkway northbound off slip	615	73%	1
A560 Altrincham Road (west)	1,262	90%	3
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Princess Parkway	1,071	81%	1
A560 Altrincham Road (east)	1,265	85%	1
M56 Princess Parkway northbound off slip	390	40%	0
A560 Altrincham Road (west)	1,213	79%	1

11.4.295 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 95% on the A560 Altrincham Road (east) approach in the AM peak hour with an associated queue length of four PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the year 2018 baseline with a maximum VoC of 85% on the A560 Altrincham Road (east) approach with an associated queue length of one PCU.

11.4.296 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-125. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-125: Future baseline performance at M56 junction 3a/A560 Altrincham Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A5103 Princess Parkway	1,107	101%	9	1,068	103%	9	1,017	104%	9
A560 Altrincham Road (east)	1,226	102%	9	1,240	104%	9	1,254	105%	9
M56 Princess Parkway northbound off slip	740	71%	1	932	86%	2	1,086	97%	6
A560 Altrincham Road (west)	1,504	95%	4	1,444	97%	5	1,446	101%	10
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A5103 Princess Parkway	1,087	100%	9	1,063	101%	9	1,020	102%	9
A560 Altrincham Road (east)	1,187	97%	5	1,211	100%	9	1,221	101%	9
M56 Princess Parkway northbound off slip	621	56%	1	723	66%	1	776	70%	1
A560 Altrincham Road (west)	1,383	86%	2	1,437	89%	2	1,504	92%	3

11.4.297 In the 2030 future baseline, the assessment shows that this junction operates over capacity in the AM peak hour with a maximum VoC of 102% on the A560 Altrincham Road (east) approach with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 100% is on the A5103 Princess Parkway approach with an associated queue length of nine PCU.

11.4.298 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 104% on the A560 Altrincham Road (east) approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 101% is on the A5103 Princess Parkway approach with a queue length of nine PCU.

11.4.299 In the 2046 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 105% on the A560 Altrincham Road (east) approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 102% is on the A5103 Princess Parkway approach with a queue length of nine PCU.

A5103 Princess Parkway/B5167 Palatine Road

11.4.300 This junction is a four-arm signal controlled grade-separated diamond junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-126.

Table 11-126: 2018 baseline performance at A5103 Princess Parkway/B5167 Palatine Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Princess Parkway southbound off-slip	470	44%	9
B5167 Palatine Road	776	46%	12
A5103 Princess Parkway northbound off-slip	819	77%	16
B5167 Wythenshawe Road	764	29%	12
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Princess Parkway southbound off-slip	719	88%	15
B5167 Palatine Road	650	34%	9
A5103 Princess Parkway northbound off-slip	672	82%	14
B5167 Wythenshawe Road	951	33%	13

11.4.301 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 77% on the A5103 Princess Parkway northbound off-slip approach in the AM peak hour with an associated queue length of 16 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 88% on the A5103 Princess Parkway southbound off-slip approach with an associated queue length of 15 PCU.

11.4.302 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-127. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-127: Future baseline performance at A5103 Princess Road/B5167 Palatine Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A5103 Princess Parkway southbound off-slip	509	48%	10	546	51%	10	568	53%	11
B5167 Palatine Road	924	55%	14	1,004	60%	15	1,040	62%	16
A5103 Princess Parkway northbound off-slip	833	79%	16	835	79%	16	831	79%	16
B5167 Wythenshawe Road	956	36%	15	1,017	39%	16	1,113	42%	17

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 PM peak hour (17:00–18:00)			2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
A5103 Princess Parkway southbound off-slip	760	93%	16	766	93%	16	781	95%	16
B5167 Palatine Road	820	44%	11	882	47%	12	961	51%	13
A5103 Princess Parkway northbound off-slip	728	89%	15	757	92%	16	780	95%	16
B5167 Wythenshawe Road	1,010	35%	14	1,081	37%	15	1,132	39%	16

11.4.303 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 79% on the A5103 Princess Parkway northbound off-slip approach in the AM peak hour with an associated queue length of 16 PCU. In the PM peak hout, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 93% on the A5103 Princess Parkway southbound off-slip approach with an associated queue length of 16 PCU.

11.4.304 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 79% on the A5103 Princess Parkway northbound off-slip approach in the AM peak hour with an associated queue length of 16 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 93% on the A5103 Princess Parkway southbound off-slip approach with an associated queue length of 16 PCU.

11.4.305 In the 2036 future baseline, the assessment shows that this junction operates within capacity in the 2046 future baseline with a maximum VoC of 79% on the A5103 Princess Parkway northbound off-slip approach in the AM peak hour with an associated queue length of 16 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 95% on the A5103 Princess Parkway southbound off-slip approach with an associated queue length of 16 PCU.

M60 junction 27 (A560 Portwood Roundabout)

11.4.306 This junction is a six-arm signal controlled grade-separated roundabout with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-128.

Table 11-128: 2018 baseline performance at M60 junction 27 (A560 Portwood Roundabout) junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6188 Tiviot Way	1,183	76%	13
A560 Crookilley Way	1,259	62%	13

Approach	Flow, PCU/hr	VoC	Queue, PCU
B6104 Carrington Road	1,039	87%	11
A6188 St Marys Way	921	76%	11
A560 Great Portwood Street	197	24%	3
M60	1,255	51%	14
	2018 PM peak hour (17:00–18:00) baseline results		
A6188 Tiviot Way	1,174	101%	14
A560 Crookilley Way	1,045	98%	14
B6104 Carrington Road	690	58%	9
A6188 St Marys Way	1,098	64%	12
A560 Great Portwood Street	654	55%	9
M60	1,438	66%	16

11.4.307 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 87% on the B6104 Carrington Road approach in the AM peak hour with an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates over capacity in the 2018 baseline with maximum VoC of 101% on the A6188 Tiviot Way approach with an associated queue length of 14 PCU.

11.4.308 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-129. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-129: Future baseline performance at M60 Junction 27 (A560 Portwood Roundabout) junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6188 Tiviot Way	1,381	89%	16
A560 Crookilley Way	1,442	71%	15
B6104 Carrington Road	1,204	101%	12
A6188 St Marys Way	1,132	94%	14
A560 Great Portwood Street	281	34%	5
M60	1,510	62%	17
	2030 PM peak hour (17:00–18:00)		
A6188 Tiviot Way	1,203	103%	14
A560 Crookilley Way	1,071	100%	14
B6104 Carrington Road	846	71%	9
A6188 St Marys Way	1,667	97%	19
A560 Great Portwood Street	715	60%	10
M60	1,465	67%	17

11.4.309 The assessment shows that this junction operates over capacity in the 2030 future baseline with a maximum VoC of 101% on the B6104 Carrington Road approach in the AM peak hour

with an associated queue length of 12 PCU. In the PM peak hour, the maximum VoC of 103% is on the A6188 Tiviot Way approach with a queue length of 14 PCU.

11.4.310 The junction analysis indicates that the junction will be operating over its capacity in the 2030 future baseline. However, as the signals timings are determined by the 2018 baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

M60 Junction 24/A57 Manchester Road

11.4.311 This junction is a four-arm signal controlled grade-separated roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-130.

Table 11-130: 2018 baseline performance at M60 Junction 24/A57 Manchester Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
M60 (north)	1,398	104%	22
M67	1,731	71%	19
A57 Manchester Road South (east)	644	85%	9
M60 (south)	1,268	53%	17
A57 Manchester Road (west)	1,103	72%	15
	2018 PM peak hour (17:00–18:00) baseline results		
M60 (north)	1,214	125%	19
M67	1,376	76%	21
A57 Manchester Road South (east)	866	94%	13
M60 (south)	1,580	53%	21
A57 Manchester Road (west)	1,924	102%	26

11.4.312 The assessment shows that this junction operates over capacity in the 2018 baseline with a maximum VoC of 104% on the M60 (north) approach in the AM peak hour with an associated queue length of 22 PCU. In the PM peak hour, the maximum VoC of 125% is on the M60 (north) approach with a queue length of 19 PCU.

11.4.313 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-131. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-131: Future baseline performance at M60 Junction 24/A57 Manchester Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
M60 (north)	1,429	106%	22
M67	683	90%	10
A57 Manchester Road South (east)	2,203	91%	25
M60 (south)	1,479	62%	20

Approach	Flow, PCU/hr	VoC	Queue, PCU
A57 Manchester Road (west)	1,279	83%	18
	2030 PM peak hour (17:00–18:00)		
M60 (north)	1,228	127%	19
M67	900	98%	14
A57 Manchester Road South (east)	1,571	86%	24
M60 (south)	1,911	64%	26
A57 Manchester Road (west)	1,937	102%	25

11.4.314 The assessment shows that this junction operates over capacity in the 2030 future baseline with a maximum VoC of 106% on the M60 (north) approach in the AM peak hour with an associated queue length of 22 PCU. In the PM peak hour, the maximum VoC of 127% is on the M60 (north) approach with a queue length of 19 PCU.

M60 Junction 23/A6140 Moss Way

11.4.315 This junction is a three-arm signal controlled grade-separated half diamond junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-132.

Table 11-132: 2018 baseline performance at M60 Junction 23/A6140 Moss Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6140 Moss Way (north)	447	30%	4
A6140 Moss Way (south)	669	26%	3
M60 northbound off-slip	1,193	66%	12
	2018 PM peak hour (17:00–18:00) baseline results		
A6140 Moss Way (north)	754	45%	7
A6140 Moss Way (south)	670	31%	4
M60 northbound off-slip	1,352	88%	15

11.4.316 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 88% on the M60 northbound off-slip approach with an associated queue length of 15 PCU.

11.4.317 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-133. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-133: Future baseline performance at M60 Junction 23/A6140 Moss Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A6140 Moss Way (north)	488	33%	5	518	35%	5	536	36%	5
A6140 Moss Way (south)	762	29%	3	792	30%	3	812	31%	3
M60 northbound off-slip	1,299	72%	13	1,346	75%	14	1,389	77%	14
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A6140 Moss Way (north)	732	44%	7	730	43%	6	749	45%	7
A6140 Moss Way (south)	737	34%	5	779	36%	5	808	38%	5
M60 northbound off-slip	1,411	92%	15	1,444	94%	16	1,468	95%	16

11.4.318 In the 2030 future baseline, the assessment shows that the junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity with a maximum VoC of 92% on the M60 northbound off-slip approach with an associated queue length of 15 PCU.

11.4.319 In the 2038 future baseline, the assessment shows that the junction operates within capacity in the AM peak hour with a maximum VoC of 75% on the M60 northbound off-slip approach with an associated queue length of 14 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 94% on the M60 northbound off-slip approach with an associated queue length of 16 PCU.

11.4.320 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 77% on the M60 northbound off-slip approach with an associated queue length of 14 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 95% on the M60 northbound off-slip approach with an associated queue length of 16 PCU.

M60 Junction 23/A635 Manchester Road

11.4.321 This junction is a three-arm signal controlled grade-separated half diamond junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-134.

Table 11-134: 2018 baseline performance at M60 Junction 23/A635 Manchester Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
M60 southbound off slip	1,278	59%	28
A635 Manchester Road (east)	1,754	36%	16
A635 Manchester Road (west)	1,428	33%	32
	2018 PM peak hour (17:00–18:00) baseline results		
M60 southbound off slip	1,431	101%	35
A635 Manchester Road (east)	1,810	33%	12
A635 Manchester Road (west)	1,516	44%	25

11.4.322 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 101% on the M60 southbound off slip approach with an associated queue length of 35 PCU.

11.4.323 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-135. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-135: Future baseline performance at M60 Junction 23/A635 Manchester Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
M60 southbound off slip	1,515	70%	34	1,684	78%	37	1,830	85%	41
A635 Manchester Road (east)	2,068	42%	17	2,209	45%	18	2,363	48%	18
A635 Manchester Road (west)	1,520	35%	34	1,602	37%	35	1,668	38%	37
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
M60 southbound off slip	1,456	103%	35	1,478	104%	35	1,508	106%	35
A635 Manchester Road (east)	2,014	37%	13	2,106	38%	14	2,187	40%	14
A635 Manchester Road (west)	1,633	47%	27	1,693	49%	28	1,756	51%	28

11.4.324 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates over capacity in the 2030 future baseline with a maximum VoC of 103% on the M60 southbound off slip approach with an associated queue length of 35 PCU.

11.4.325 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 78% on the M60 southbound off slip

approach with an associated queue length of 37 PCU. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 104% on the M60 southbound off slip approach with an associated queue length of 35 PCU.

11.4.326 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 85% on the M60 southbound off slip approach with an associated queue length of 41 PCU. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 106% on the M60 southbound off slip approach with an associated queue length of 35 PCU.

11.4.327 The junction analysis indicates that the junction will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A555 Ringway Road/B5166 Styal Road

11.4.328 This junction does not exist in the 2018 baseline, however it will be a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities in the future baseline.

11.4.329 The operation of the junction has been assessed for the future baseline using SATURN software. The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-136. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-136: Future baseline performance at A555 Ringway Road/B5166 Styal Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
B5166 Styal Road (north)	976	68%	23	1,102	77%	25	1,280	90%	27
A555 (east)	1,970	83%	32	2,244	95%	36	2,461	104%	40
B5166 Styal Road (south)	607	69%	13	805	94%	17	864	102%	17
A555 Ringway Road	1,908	76%	31	1,975	78%	33	1,849	73%	30
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
B5166 Styal Road (north)	1,030	72%	22	1,114	78%	24	1,206	84%	25
A555 (east)	1,471	62%	24	1,569	66%	26	1,583	67%	27
B5166 Styal Road (south)	849	102%	17	862	103%	17	866	103%	17

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A555 Ringway Road	2,271	90%	38	2,381	95%	39	2,471	98%	40

11.4.330 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 83% on the A555 (east) approach with an associated queue length of 32 PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 102% on the B5166 Styal Road (south) approach with an associated queue length of 17 PCU.

11.4.331 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 95% on the A555 (east) approach with an associated queue length of 36 PCU. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 103% on the B5166 Styal Road (south) approach with an associated queue length of 17 PCU.

11.4.332 In the 2046 future baseline, the assessment shows that this junction operates over capacity in the AM peak hour with a maximum VoC of 104% on the A555 (east) approach with an associated queue length of 40 PCU. In the PM peak hour, the maximum VoC of 103% is on the B5166 Styal Road (south) approach with a queue length of 17 PCU.

A555 Ringway Road West/Enterprise Way

11.4.333 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-137.

Table 11-137: 2018 baseline performance at A555 Ringway Road West/Enterprise Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Enterprise Way	43	3%	1
A555 Ringway Road West (east)	801	23%	7
A555 Ringway Road West (west)	1,037	50%	22
	2018 PM peak hour (17:00–18:00) baseline results		
Enterprise Way	375	19%	7
A555 Ringway Road West (east)	811	31%	13
A555 Ringway Road West (west)	723	96%	21

11.4.334 The assessment shows that this junction operates well within capacity in the 2018 baseline in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 96% on the A555 Ringway Road West (west) approach with an associated queue length of 21 PCU.

11.4.335 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-138. As the junction is only affected by the operation of the Proposed

Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-138: Future baseline performance at A555 Ringway Road West/Enterprise Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Enterprise Way	931	61%	12	1,076	71%	13
A555 Ringway Road West (east)	1,365	51%	16	1,407	52%	16
A555 Ringway Road West (west)	2,359	107%	28	2,116	96%	25
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Enterprise Way	1,562	103%	18	1,543	102%	18
A555 Ringway Road West (east)	1,023	38%	11	1,045	39%	11
A555 Ringway Road West (west)	1,928	87%	26	2,124	96%	27

11.4.336 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 107% on the A555 Ringway Road West (west) approach with an associated queue length of 28 PCU. In the PM peak hour, the maximum VoC of 103% is on the Enterprise Way approach with a queue length of 18 PCU.

11.4.337 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 96% on the A555 Ringway Road West (west) approach with an associated queue length of 25 PCU. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 102% on the Enterprise Way approach with an associated queue length of 18 PCU.

B5166 Styal Road/Finney Lane/Simonsway

11.4.338 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-139.

Table 11-139: 2018 baseline performance at B5166 Styal Road/Finney Lane/Simonsway junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5166 Styal Road (north)	370	37%	8
Finney Lane	1,023	41%	13
B5166 Styal Road (south)	481	42%	9
Simonsway	487	51%	10
	2018 PM peak hour (17:00–18:00) baseline results		
B5166 Styal Road (north)	435	95%	10
Finney Lane	893	24%	6
B5166 Styal Road (south)	559	82%	11
Simonsway	266	105%	6

11.4.339 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 105% on the Simonsway approach with an associated queue length of six PCU.

11.4.340 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-140. As the junction is affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-140: Future baseline performance at B5166 Styal Road/Finney Lane/Simonsway junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
B5166 Styal Road (north)	604	59%	13
Finney Lane	567	24%	9
B5166 Styal Road (south)	509	43%	8
Simonsway	533	65%	11
	2030 PM peak hour (17:00–18:00)		
B5166 Styal Road (north)	701	60%	13
Finney Lane	360	20%	6
B5166 Styal Road (south)	845	60%	11
Simonsway	443	88%	9

11.4.341 The assessment shows that this junction operates well within capacity in the 2030 future baseline in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 88% on the Simonsway approach with an associated queue length of nine PCU.

Simonsway/Poundswick Lane

11.4.342 This junction is a three-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-141.

Table 11-141: 2018 baseline performance at Simonsway/Poundswick Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Poundswick Lane	72	38%	2
Simonsway (east)	553	32%	6
Simonsway (west)	538	55%	7
	2018 PM peak hour (17:00–18:00) baseline results		
Poundswick Lane	135	36%	3
Simonsway (east)	666	50%	3
Simonsway (west)	549	72%	9

11.4.343 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.344 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-142. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-142: Future baseline performance at Simonsway/Poundswick Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Poundswick Lane	84	45%	2	127	68%	3
Simonsway (east)	768	49%	8	864	59%	9
Simonsway (west)	736	75%	10	870	88%	12
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Poundswick Lane	160	43%	3	166	45%	4
Simonsway (east)	888	72%	4	917	76%	4
Simonsway (west)	686	90%	11	716	94%	12

11.4.345 In the 2038 future baseline the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 75% on the Simonsway (west) with an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 90% on the Simonsway (west) approach with an associated queue length of 11 PCU.

11.4.346 In the 2046 future baseline the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 88% on the Simonsway (west) approach with an associated queue length of 12 PCU. In the PM peak hour, the maximum VoC of 94% is on the Simonsway (west) approach with a queue length of 12 PCU.

Greenbrow Road/Newall Road

11.4.347 This junction is a three-arm priority controlled T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-143.

Table 11-143: 2018 baseline performance at Greenbrow Road/Newall Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Greenbrow Road (north)	181	50%	0
Greenbrow Road (south)	758	44%	0
Newall Road	497	79%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Greenbrow Road (north)	108	28%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU
Greenbrow Road (south)	762	44%	0
Newall Road	635	104%	2

11.4.348 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 79% on the Newall Road approach in the AM peak hour with no queue. In the PM peak hour, the junction operates over capacity in the 2018 baseline with a maximum VoC of 104% on the Newall Road approach with an associated queue length of two PCU.

11.4.349 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-144. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-144: Future baseline performance at Greenbrow Road/Newall Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Greenbrow Road (north)	185	63%	1	200	70%	1	175	73%	1
Greenbrow Road (south)	882	51%	0	885	51%	0	997	58%	0
Newall Road	610	99%	1	598	101%	3	619	103%	2
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Greenbrow Road (north)	113	37%	0	117	40%	0	124	45%	0
Greenbrow Road (south)	885	51%	0	910	53%	0	938	54%	0
Newall Road	629	105%	2	635	105%	2	650	106%	2

11.4.350 In the 2030 future baseline, the assessment shows that this junction operates close to capacity with a maximum VoC of 99% on the Newall Road approach in the AM peak hour with an associated queue length of one PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 105% on the Newall Road approach with an associated queue length of two PCU.

11.4.351 In the 2038 future baseline, this junction operates over capacity with a maximum VoC of 101% on the Newall Road approach in the AM peak hour with an associated queue length of three PCU. In the PM peak hour, the maximum VoC of 105% is on the Newall Road approach with a queue length of two PCU.

11.4.352 In the 2036 future baseline, this junction operates over capacity with a maximum VoC of 103% on the Newall Road approach in the AM peak hour with an associated queue length of two PCU. In the PM peak hour, the maximum VoC of 106% is on the Newall Road approach with a queue length of two PCU.

Barnacre Avenue/Newall Road/Whitecarr Lane

11.4.353 This junction is a three-arm priority (give-way) controlled T-junction with no signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-145.

Table 11-145: 2018 baseline performance at Barnacre Avenue/Newall Road/Whitecarr Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Barnacre Avenue	142	44%	0
Newall Road	895	62%	0
Whitecarr Lane	388	19%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Barnacre Avenue	167	56%	1
Newall Road	837	66%	0
Whitecarr Lane	506	25%	0

11.4.354 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.355 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-146. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-146: Future baseline performance at Barnacre Avenue/Newall Road/Whitecarr Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Barnacre Avenue	140	43%	0	115	27%	0
Newall Road	1,054	77%	0	1,140	81%	0
Whitecarr Lane	514	26%	0	507	25%	0
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Barnacre Avenue	88	22%	0	45	12%	0
Newall Road	995	86%	0	1,031	91%	0
Whitecarr Lane	595	30%	0	667	34%	0

11.4.356 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 77% on the Newall Road approach with no queue. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 86% on the Newall Road approach with no queue.

11.4.357 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 81% on the Newall Road approach

with no queue. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 91% on the Newall Road approach with no queue.

A34 Kingsway/Broadway

11.4.358 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The A34 Kingsway road is a diverted road and A34 Kingsway (south) approach does not allow right turn and therefore is not reported. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-147.

Table 11-147: 2018 baseline performance at A34 Kingsway/Broadway junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Kingsway (north)	2,075	36%	0
Broadway	113	96%	3
A34 Kingsway (south)	2,866	72%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Kingsway (north)	2,339	41%	0
Broadway	60	81%	2
A34 Kingsway (south)	2,315	58%	0

11.4.359 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 96% on the A34 Kingsway approach in the AM peak hour with an associated queue length of three PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 81% on the A34 Kingsway (south) approach with an associated queue length of two PCU.

11.4.360 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-148. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-148: 2030 future baseline performance at A34 Kingsway/Broadway junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A34 Kingsway (north)	2,570	45%	0
Broadway	30	70%	1
A34 Kingsway (south)	3,448	86%	0
	2030 PM peak hour (17:00–18:00)		
A34 Kingsway (north)	2,745	48%	0
Broadway	20	46%	1
A34 Kingsway (south)	3,208	80%	0

11.4.361 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 86% on the A34 Kingsway (south) approach with no queue. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 80% on the A34 Kingsway (south) approach with no queue.

B5166 Styal Road/Hollyhedge Road

11.4.362 This junction is a four-arm priority controlled staggered junction with no pedestrian crossing facilities. The West Drive approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-149.

Table 11-149: 2018 baseline performance at B5166 Styal Road/Hollyhedge Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5166 Styal Road (north)	630	56%	0
West Drive	-	-	-
B5166 Styal Road (south)	328	17%	0
Hollyhedge Road	367	45%	1
	2018 PM peak hour (17:00–18:00) baseline results		
B5166 Styal Road (north)	521	50%	0
West Drive	-	-	-
B5166 Styal Road (south)	412	21%	0
Hollyhedge Road	432	55%	1

11.4.363 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.364 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-150. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-150: Future baseline performance at B5166 Styal Road/Hollyhedge Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
B5166 Styal Road (north)	879	90%	1	971	99%	1
West Drive	-	-	-	-	-	-
B5166 Styal Road (south)	449	24%	0	495	26%	0
Hollyhedge Road	462	64%	3	457	65%	4
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
B5166 Styal Road (north)	807	72%	0	901	84%	0
West Drive	-	-	-	-	-	-
B5166 Styal Road (south)	459	24%	0	535	28%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
Hollyhedge Road	507	68%	5	514	75%	5

11.4.365 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 90% on the B5166 Styal Road (north) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.366 In the 2046 future baseline, this junction operates close to capacity in the AM peak hour with a maximum VoC of 99% on the B5166 Styal Road (north) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2046 future baseline with a maximum VoC of 84% on the B5166 Styal Road (north) approach with no queue.

Floats Road/Southmoor Road

11.4.367 This junction is a three-arm priority controlled T-junction with no pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-151.

Table 11-151: 2018 baseline performance at Floats Road/Southmoor Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Floats Road (north)	174	9%	0
Southmoor Road	145	28%	0
Floats Road (south)	523	52%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Floats Road (north)	245	12%	0
Southmoor Road	208	41%	0
Floats Road (south)	588	77%	0

11.4.368 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 77% on the Floats Road (south) approach with no queue.

11.4.369 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-152. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-152: Future baseline performance at Floats Road/Southmoor Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Floats Road (north)	183	9%	0	195	10%	0
Southmoor Road	182	35%	0	193	38%	0
Floats Road (south)	667	70%	0	717	77%	0
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Floats Road (north)	213	11%	0	221	11%	0
Southmoor Road	240	47%	0	257	50%	0
Floats Road (south)	680	79%	0	748	73%	0

11.4.370 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2038 future baseline with a maximum VoC of 79% on the Floats Road (south) approach with no queue.

11.4.371 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 77% on the Floats Road (south) approach with no queue. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A34 Kingsway/A560 Gatley Road

11.4.372 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-153.

Table 11-153: 2018 baseline performance at A34 Kingsway/A560 Gatley Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Kingsway (north)	2,146	68%	25
A560 Gatley Road (east)	135	38%	5
A34 Kingsway (south)	2,866	80%	57
A560 Gatley Road (west)	1,010	90%	33
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Kingsway (north)	2,833	77%	33
A560 Gatley Road (east)	205	35%	8
A34 Kingsway (south)	2,315	91%	68
A560 Gatley Road (west)	957	56%	22

11.4.373 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 90% on the A560 Gatley Road (west) approach in the AM peak hour with an associated queue length of 33 PCU. In the PM peak hour, the maximum VoC of 91% is on the A34 Kingsway (south) approach with a queue length of 68 PCU.

11.4.374 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-154. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-154: 2030 future baseline performance at A34 Kingsway/A560 Gatley Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A34 Kingsway (north)	2,890	91%	34
A560 Gatley Road (east)	167	47%	7
A34 Kingsway (south)	3,449	96%	68
A560 Gatley Road (west)	1,027	94%	33
	2030 PM peak hour (17:00–18:00)		
A34 Kingsway (north)	3,309	94%	23
A560 Gatley Road (east)	63	48%	3
A34 Kingsway (south)	3,208	71%	43
A560 Gatley Road (west)	460	100%	19

11.4.375 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 96% on the A34 Kingsway (south) approach in the AM peak hour with an associated queue length of 68 PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 100% on the A560 Gatley Road (west) approach with an associated queue length of 19 PCU.

11.4.376 The junction analysis indicates that the junction will be operating over its capacity in the 2030 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

Southmoor Road/Ledson Road

11.4.377 This junction is a three-arm priority (give-way) controlled crossroads with no signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-155.

Table 11-155: 2018 baseline performance at Southmoor Road/Ledson Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Southmoor Road (north)	244	10%	0
Southmoor Road (south)	320	18%	0
Ledson Road	83	15%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Southmoor Road (north)	185	7%	0
Southmoor Road (south)	221	12%	0
Ledson Road	218	45%	0

11.4.378 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.379 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-156. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-156: Future baseline performance at Southmoor Road/Ledson Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Southmoor Road (north)	295	12%	0	363	14%	0
Southmoor Road (south)	330	19%	0	348	20%	0
Ledson Road	147	29%	0	169	36%	0
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Southmoor Road (north)	190	7%	0	381	15%	0
Southmoor Road (south)	261	14%	0	294	16%	0
Ledson Road	331	66%	0	296	66%	0

11.4.380 The assessment shows that this junction operates well within capacity in both the 2038 and 2046 future baseline.

Greenwood Road/Royalthorn Road

11.4.381 This junction is a three-arm priority controlled T-junction with no pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-157.

Table 11-157: 2018 baseline performance at Greenwood Road/Royalthorn Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Greenwood Road (east)	294	15%	0
Royalthorn Road	249	64%	0
Greenwood Road (west)	166	9%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Greenwood Road (east)	232	13%	0
Royalthorn Road	117	28%	0
Greenwood Road (west)	232	12%	0

11.4.382 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.383 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-158. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-158: Future baseline performance at Greenwood Road/Royalthorn Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Greenwood Road (east)	423	22%	0	494	25%	0
Royalthorn Road	297	88%	2	274	91%	2
Greenwood Road (west)	209	12%	0	255	14%	0
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Greenwood Road (east)	312	17%	0	341	18%	0
Royalthorn Road	143	39%	0	149	43%	0
Greenwood Road (west)	326	18%	0	374	20%	0

11.4.384 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 88% on the Royalthorn Road approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.385 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 91% on the Royalthorn Road approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A560 Altrincham Road/A560 Shaftesbury Avenue/B5165 Stockport Road/Brooklands Road

11.4.386 This junction is a five-arm priority controlled (give way) roundabout with no controlled pedestrian crossing facilities. The Brooks Drive approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-159.

Table 11-159: 2018 baseline performance at A560 Altrincham Road/A560 Shaftesbury Avenue/B5165 Stockport Road/Brooklands Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Brooklands Road	852	104%	7
A560 Altrincham Road	983	35%	0
Brooks Drive	-	-	-
A560 Shaftesbury Avenue	1,288	65%	0
B5165 Stockport Road	718	96%	4
	2018 PM peak hour (17:00–18:00) baseline results		
Brooklands Road	855	99%	5
A560 Altrincham Road	947	33%	0
Brooks Drive	-	-	-

Approach	Flow, PCU/hr	VoC	Queue, PCU
A560 Shaftesbury Avenue	1,115	59%	0
B5165 Stockport Road	534	68%	1

11.4.387 This junction operates over capacity in the 2018 baseline with a maximum VoC of 104% on the Brooklands Road approach in the AM peak hour with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 99% on the Brooklands Road approach with an associated queue length of five PCU.

11.4.388 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-160. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-160: Future baseline performance at A560 Altrincham Road/A560 Shaftesbury Avenue/B5165 Stockport Road/Brooklands Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Brooklands Road	839	106%	7	838	107%	7	827	108%	8
A560 Altrincham Road	1,023	36%	0	1,106	39%	0	1,206	43%	0
Brooks Drive	-	-	-	-	-	-	-	-	-
A560 Shaftesbury Avenue	1,321	68%	0	1,359	71%	0	1,385	72%	0
B5165 Stockport Road	745	102%	7	728	103%	7	723	103%	7
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Brooklands Road	843	102%	7	843	103%	7	838	104%	7
A560 Altrincham Road	1,030	36%	0	1,133	40%	0	1,193	42%	0
Brooks Drive	-	-	-	-	-	-	-	-	-
A560 Shaftesbury Avenue	1,164	62%	0	1,177	64%	0	1,214	66%	0
B5165 Stockport Road	630	82%	1	654	85%	2	669	89%	2

11.4.389 In the 2030 future baseline this junction operates over capacity in the AM peak hour with a maximum VoC of 106% on the Brooklands Road approach with an associated queue length of seven PCU. In the PM peak hour, the maximum VoC of 102% is on the Brooklands Road approach with a queue length of seven PCU.

11.4.390 In the 2038 future baseline this junction operates over capacity in the AM peak hour with a maximum VoC of 107% on the Brooklands Road approach with an associated queue length

of seven PCU. In the PM peak hour, the maximum VoC of 103% is on the Brooklands Road approach with a queue length of seven PCU.

11.4.391 In the 2046 future baseline this junction operates over capacity in the AM peak hour with a maximum VoC of 108% on the Brooklands Road approach with an associated queue length of eight PCU. In the PM peak hour, the maximum VoC of 104% is on the Brooklands Road approach with a queue length of seven PCU.

A560 Stockport Road/B5465 Edgeley Road

11.4.392 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-161.

Table 11-161: 2018 baseline performance at A560 Stockport Road/B5465 Edgeley Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A560 Stockport Road (north)	670	72%	10
B5465 Edgeley Road	501	40%	4
A560 Stockport Road (south)	845	39%	5
	2018 PM peak hour (17:00–18:00) baseline results		
A560 Stockport Road (north)	750	92%	10
B5465 Edgeley Road	728	55%	5
A560 Stockport Road (south)	844	43%	9

11.4.393 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 92% on the A560 Stockport Road (north) approach with an associated queue length of 10 PCU.

11.4.394 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-162. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-162: Future baseline performance at A560 Stockport Road/B5465 Edgeley Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A560 Stockport Road (north)	812	88%	12
B5465 Edgeley Road	554	44%	5
A560 Stockport Road (south)	846	40%	5
	2030 PM peak hour (17:00–18:00)		
A560 Stockport Road (north)	753	93%	10
B5465 Edgeley Road	757	58%	5
A560 Stockport Road (south)	907	46%	10

11.4.395 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 88% on the A560 Stockport Road (north) approach in the AM peak hour with an associated queue length of 12 PCU. In the PM peak hour, the maximum VoC of 93% is on the A560 Stockport Road (north) approach with a queue length of 10 PCU.

A560 Stockport Road/St Lesmo Road/Essex Avenue

11.4.396 This junction is a four-arm priority controlled (give way) crossroads with no controlled pedestrian crossing facilities. The Essex Avenue approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-163.

Table 11-163: 2018 baseline performance at A560 Stockport Road/St Lesmo Road/Essex Avenue junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A560 Stockport Road (north)	702	35%	0
St Lesmo Road	96	65%	1
A560 Stockport Road (south)	808	61%	0
Essex Avenue	-	-	-
	2018 PM peak hour (17:00–18:00) baseline results		
A560 Stockport Road (north)	599	30%	0
St Lesmo Road	98	25%	0
A560 Stockport Road (south)	1,014	65%	0
Essex Avenue	-	-	-

11.4.397 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.398 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-164. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-164: Future baseline performance at A560 Stockport Road/St Lesmo Road/Essex Avenue junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A560 Stockport Road (north)	856	43%	0
St Lesmo Road	87	92%	3
A560 Stockport Road (south)	833	62%	0
Essex Avenue	-	-	-
	2030 PM peak hour (17:00–18:00)		
A560 Stockport Road (north)	655	33%	0
St Lesmo Road	127	77%	1

Approach	Flow, PCU/hr	VoC	Queue, PCU
A560 Stockport Road (south)	1,168	70%	0
Essex Avenue	-	-	-

11.4.399 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 92% on the St Lesmo Road approach in the AM peak hour with an associated queue length of three PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 77% on the St Lesmo Road approach with an associated queue length of one PCU.

B5167 Palatine Road/Longley Lane/Greenpark Road

11.4.400 This junction is a four-arm priority controlled (give way) crossroads with no controlled pedestrian crossing facilities. The Greenpark Road approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-165.

Table 11-165: 2018 baseline performance at B5167 Palatine Road/Longley Lane/Greenpark Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Greenpark Road	-	-	-
B5167 Palatine Road (east)	244	12%	0
Longley Lane	616	77%	2
B5167 Palatine Road (west)	621	31%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Greenpark Road	-	-	-
B5167 Palatine Road (east)	249	12%	0
Longley Lane	448	64%	1
B5167 Palatine Road (west)	985	49%	0

11.4.401 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 77% on the Longley Lane approach in the AM peak hour with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.402 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-166. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-166: Future baseline performance at B5167 Palatine Road/Longley Lane/Greenpark Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Greenpark Road	-	-	-
B5167 Palatine Road (east)	488	24%	0
Longley Lane	492	81%	5
B5167 Palatine Road (west)	699	35%	0
	2030 PM peak hour (17:00–18:00)		
Greenpark Road	-	-	-
B5167 Palatine Road (east)	325	16%	0
Longley Lane	526	85%	3
B5167 Palatine Road (west)	1,119	56%	0

11.4.403 The assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 81% on the Longley Lane approach in the AM peak hour with an associated queue length of five PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 85% on the Longley Lane approach with an associated queue length of three PCU.

B5167 Wythenshawe Road/Moor Road

11.4.404 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-167.

Table 11-167: 2018 baseline performance at B5167 Wythenshawe Road/Moor Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5167 Wythenshawe Road (east)	450	26%	7
Moor Road	83	18%	2
B5167 Wythenshawe Road (west)	317	35%	5
	2018 PM peak hour (17:00–18:00) baseline results		
B5167 Wythenshawe Road (east)	385	22%	6
Moor Road	218	46%	5
B5167 Wythenshawe Road (west)	338	38%	5

11.4.405 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.406 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-168. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-168: Future baseline performance at B5167 Wythenshawe Road/Moor Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
B5167 Wythenshawe Road (east)	510	30%	8	551	32%	8
Moor Road	101	22%	2	135	29%	3
B5167 Wythenshawe Road (west)	558	70%	8	636	86%	9
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
B5167 Wythenshawe Road (east)	384	22%	6	387	22%	6
Moor Road	279	59%	6	295	62%	7
B5167 Wythenshawe Road (west)	429	46%	6	490	57%	7

11.4.407 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour.

11.4.408 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 86% on the B5167 Wythenshawe Road (west) approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A6 Wellington Road South/Wellington Street/Station Road

11.4.409 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The Station Road approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-169.

Table 11-169: 2018 baseline performance at A6 Wellington Road South/Wellington Street/Station Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6 Wellington Road South (north)	1,271	44%	9
Wellington Street	32	21%	1
A6 Wellington Road South (south)	1,135	61%	20
Station Road	-	-	-
	2018 PM peak hour (17:00–18:00) baseline results		
A6 Wellington Road South (north)	1,009	34%	6
Wellington Street	28	24%	1
A6 Wellington Road South (south)	1,065	56%	18
Station Road	-	-	-

11.4.410 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.411 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-170. As the junction is only affected by the operation of the Proposed

Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-170: Future baseline performance at A6 Wellington Road South/Wellington Street/Station Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A6 Wellington Road South (north)	1,156	45%	13	1,162	45%	13
Wellington Street	272	74%	6	280	79%	6
A6 Wellington Road South (south)	790	48%	11	812	50%	12
Station Road	-	-	-	-	-	-
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A6 Wellington Road South (north)	1,062	42%	12	1,102	43%	13
Wellington Street	284	82%	6	306	89%	6
A6 Wellington Road South (south)	905	55%	13	852	52%	12
Station Road	-	-	-	-	-	-

11.4.412 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2038 future baseline with a maximum VoC of 82% on the Wellington Street approach with an associated queue length of six PCU.

11.4.413 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 79% on the Wellington Street approach with an associated queue length of six PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 89% on the Wellington Street approach with an associated queue length of six PCU.

B5167 Wythenshawe Road/Moorcroft Road

11.4.414 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-171.

Table 11-171: 2018 baseline performance at B5167 Wythenshawe Road/Moorcroft Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Moorcroft Road	363	77%	0
B5167 Wythenshawe Road (east)	115	8%	0
B5167 Wythenshawe Road (west)	301	17%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Moorcroft Road	202	47%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU
B5167 Wythenshawe Road (east)	218	14%	0
B5167 Wythenshawe Road (west)	367	20%	0

11.4.415 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 77% on the Moorcroft Road approach with no queue. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.416 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-172. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-172: Future baseline performance at B5167 Wythenshawe Road/Moorcroft Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Moorcroft Road	391	87%	1
B5167 Wythenshawe Road (east)	112	8%	0
B5167 Wythenshawe Road (west)	398	22%	0
	2030 PM peak hour (17:00–18:00)		
Moorcroft Road	223	54%	0
B5167 Wythenshawe Road (east)	219	19%	0
B5167 Wythenshawe Road (west)	474	26%	0

11.4.417 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 87% on the Moorcroft Road approach in the AM peak hour with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

A34 Kingsway/A5145 Parrs Wood Lane

11.4.418 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-173.

Table 11-173: 2018 baseline performance at A34 Kingsway/A5145 Parrs Wood Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Kingsway (north)	481	61%	10
A5145 Parrs Wood Lane (east)	450	48%	10
A34 Kingsway (south)	1,510	59%	18
A5145 Parrs Wood Lane (west)	1,129	85%	30
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Kingsway (north)	345	58%	8
A5145 Parrs Wood Lane (east)	493	49%	11
A34 Kingsway (south)	1,526	57%	11

Approach	Flow, PCU/hr	VoC	Queue, PCU
A5145 Parrs Wood Lane (west)	1,148	55%	17

11.4.419 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 85% on the A5145 Parrs Wood Lane (west) approach in the AM peak hour with an associated queue length of 30 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity.

11.4.420 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-174. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-174: Future baseline performance at A34 Kingsway/A5145 Parrs Wood Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A34 Kingsway (north)	532	68%	11
A5145 Parrs Wood Lane (east)	462	58%	10
A34 Kingsway (south)	1,679	66%	20
A5145 Parrs Wood Lane (west)	1,217	93%	32
	2030 PM peak hour (17:00–18:00)		
A34 Kingsway (north)	435	75%	10
A5145 Parrs Wood Lane (east)	518	52%	12
A34 Kingsway (south)	1,754	66%	15
A5145 Parrs Wood Lane (west)	1,315	63%	20

11.4.421 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 93% on the A5145 Parrs Wood Lane (west) approach in with an associated queue length of 32 PCU. In the PM peak hour, the assessment shows that this junction operates within capacity with a maximum VoC of 75% on the A34 Kingsway (north) approach with an associated queue length of 10 PCU.

Brooklands Road/Norris Road

11.4.422 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-175.

Table 11-175: 2018 baseline performance at Brooklands Road/Norris Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Brooklands Road (north)	616	31%	0
Norris Road	257	66%	1
Brooklands Road (south)	989	101%	1

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 PM peak hour (17:00–18:00) baseline results		
Brooklands Road (north)	816	41%	0
Norris Road	225	74%	1
Brooklands Road (south)	853	100%	1

11.4.423 The assessment shows that this junction operates over capacity in the 2018 baseline with a maximum VoC of 101% on the Brooklands Road (south) approach in the AM peak hour with an associated queue length of one PCU. In the PM peak, the maximum VoC of 100% is on the Brooklands Road (south) approach with a queue length of one PCU.

11.4.424 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-176. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-176: Future baseline performance at Brooklands Road/Norris Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Brooklands Road (north)	690	35%	0
Norris Road	287	79%	1
Brooklands Road (south)	953	104%	1
	2030 PM peak hour (17:00–18:00)		
Brooklands Road (north)	836	42%	0
Norris Road	220	75%	1
Brooklands Road (south)	845	102%	1

11.4.425 The assessment shows that this junction operates over capacity in the 2030 future baseline with a maximum VoC of 104% on the Brooklands Road (south) approach in the AM peak hour with an associated queue length of one PCU. In the PM peak, the maximum VoC of 102% is on the Brooklands Road (south) approach with a queue length of one PCU.

B5166 Northenden Road/Norris Road

11.4.426 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-177.

Table 11-177: 2018 baseline performance at B5166 Northenden Road/Norris Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5166 Northenden Road (north)	374	15%	0
B5166 Northenden Road (south)	546	28%	0
Norris Road	150	60%	1

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 PM peak hour (17:00–18:00) baseline results		
B5166 Northenden Road (north)	500	21%	0
B5166 Northenden Road (south)	664	34%	0
Norris Road	181	93%	3

11.4.427 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 93% on the Norris Road approach with an associated queue length of three PCU.

11.4.428 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-178. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-178: Future baseline performance at B5166 Northenden Road/Norris Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
B5166 Northenden Road (north)	505	21%	0
B5166 Northenden Road (south)	677	34%	0
Norris Road	171	92%	3
	2030 PM peak hour (17:00–18:00)		
B5166 Northenden Road (north)	644	28%	0
B5166 Northenden Road (south)	961	50%	0
Norris Road	142	97%	4

11.4.429 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 92% on the Norris Road approach in the AM peak hour with an associated queue length of three PCU. In the PM peak hour, the maximum VoC of 97% on the Norris Road approach with an associated queue length of four PCU.

A6188 Tiviot Way/Water Street

11.4.430 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The Reddish Vale Country Park access road approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-179.

Table 11-179: 2018 baseline performance at A6188 Tiviot Way/Water Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6188 Tiviot Way (north)	1,027	45%	11
Reddish Vale Country Park access road	-	-	-
A6188 Tiviot Way (south)	1,229	75%	17

Approach	Flow, PCU/hr	VoC	Queue, PCU
Water Street	267	35%	5
	2018 PM peak hour (17:00–18:00) baseline results		
A6188 Tiviot Way (north)	1,074	48%	12
Reddish Vale Country Park access road	-	-	-
A6188 Tiviot Way (south)	1,127	71%	16
Water Street	583	73%	8

11.4.431 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 75% on the A6188 Tiviot Way (south) approach in the AM peak hour with an associated queue length of 17 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.432 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-180. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-180: Future baseline performance at A6188 Tiviot Way/Water Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6188 Tiviot Way (north)	1,232	54%	13
Reddish Vale Country Park access road	-	-	-
A6188 Tiviot Way (south)	1,364	83%	19
Water Street	307	40%	5
	2030 PM peak hour (17:00–18:00)		
A6188 Tiviot Way (north)	1,096	49%	12
Reddish Vale Country Park access road	-	-	-
A6188 Tiviot Way (south)	1,358	86%	19
Water Street	604	76%	9

11.4.433 The assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 83% on the A6188 Tiviot Way (south) approach in the AM peak hour with an associated queue length of 19 PCU. In the PM peak hour, this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 86% on the A6188 Tiviot Way (south) approach with an associated queue length of 19 PCU.

A6144 Northenden Road/A6144 Old Hall Road

11.4.434 This junction is a two-arm priority controlled (give way) junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-181.

Table 11-181: 2018 baseline performance at A6144 Northenden Road/A6144 Old Hall Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6144 Northenden Road (south)	305	41%	0
A6144 Northenden Road (west)	691	17%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A6144 Northenden Road (south)	337	53%	1
A6144 Northenden Road (west)	842	21%	0

11.4.435 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.436 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-182. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-182: Future baseline performance at A6144 Northenden Road/A6144 Old Hall Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6144 Northenden Road (south)	361	51%	0
A6144 Northenden Road (west)	742	19%	0
	2030 PM peak hour (17:00–18:00)		
A6144 Northenden Road (south)	466	89%	3
A6144 Northenden Road (west)	1,017	25%	0

11.4.437 The assessment shows that this junction operates well within capacity in the 2030 future baseline in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 89% on the A6144 Northenden Road (south) approach in the PM peak hour with an associated queue length of three PCU.

A5145 Barlow Moor Road/B5167 Palatine Road

11.4.438 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-183.

Table 11-183: 2018 baseline performance at A5145 Barlow Moor Road/B5167 Palatine Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5167 Palatine Road (north)	405	28%	6
A5145 Barlow Moor Road (east)	426	46%	9
B5167 Palatine Road (south)	664	40%	9
A5145 Barlow Moor Road (west)	258	33%	5

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 PM peak hour (17:00–18:00) baseline results		
B5167 Palatine Road (north)	390	39%	7
A5145 Barlow Moor Road (east)	384	29%	6
B5167 Palatine Road (south)	844	71%	15
A5145 Barlow Moor Road (west)	381	29%	6

11.4.439 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.440 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-184. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-184: Future baseline performance at A5145 Barlow Moor Road/B5167 Palatine Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00) baseline results		
B5167 Palatine Road (north)	508	38%	7
A5145 Barlow Moor Road (east)	457	51%	9
B5167 Palatine Road (south)	800	52%	11
A5145 Barlow Moor Road (west)	285	37%	6
	2030 PM peak hour (17:00–18:00) baseline results		
B5167 Palatine Road (north)	457	49%	8
A5145 Barlow Moor Road (east)	487	39%	8
B5167 Palatine Road (south)	960	86%	17
A5145 Barlow Moor Road (west)	454	37%	7

11.4.441 The assessment shows that this junction operates well within capacity in the 2030 future baseline in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with the maximum VoC of 86% on the B5167 Palatine Road (south) approach with an associated queue length of 17 PCU.

B5093 Wilmslow Road/Fog Lane/Lapwing Lane

11.4.442 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-185.

Table 11-185: 2018 baseline performance at B5093 Wilmslow Road/Fog Lane/Lapwing Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5093 Wilmslow Road (north)	403	29%	4
Fog Lane	504	76%	6
B5093 Wilmslow Road (south)	357	25%	4
Lapwing Lane	428	66%	5

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 PM peak hour (17:00–18:00) baseline results		
B5093 Wilmslow Road (north)	508	35%	5
Fog Lane	369	63%	4
B5093 Wilmslow Road (south)	305	23%	3
Lapwing Lane	530	79%	6

11.4.443 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 76% on the Fog Lane approach in the AM peak hour with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 79% is on the Lapwing Lane approach with a queue length of six PCU.

11.4.444 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-186. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-186: Future baseline performance at B5093 Wilmslow Road/Fog Lane/Lapwing Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00) baseline results		
B5093 Wilmslow Road (north)	466	33%	5
Fog Lane	542	84%	7
B5093 Wilmslow Road (south)	306	22%	3
Lapwing Lane	462	74%	6
	2030 PM peak hour (17:00–18:00) baseline results		
B5093 Wilmslow Road (north)	586	40%	5
Fog Lane	396	70%	5
B5093 Wilmslow Road (south)	308	24%	3
Lapwing Lane	554	86%	6

11.4.445 In the 2030 future baseline the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 84% on the Fog Lane approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 86% on the Lapwing Lane approach with a queue length of six PCU.

A5145 Barlow Moor Road/A5103 Princess Road

11.4.446 This junction is a four-arm signalised network junction, with signal controlled pedestrian crossing facilities. The southern part of the junction, comprising of the A5103 Princess Road and the slip road between the A5145 Barlow Moor Road and the A5103 Princess Road, operates on a separate set of signals. For reporting purposes, the southern part of the junction is reported first, followed by the main part of the junction. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-187 and Table 11-188.

Table 11-187: 2018 baseline performance at A5145 Barlow Moor Road/A5103 Princess Road junction (southern junction)

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5145 Princess Road southbound slip road	770	21%	5
A5103 Princess Road northbound	2,774	48%	22
	2018 PM peak hour (17:00–18:00) baseline results		
A5145 Princess Road southbound slip road	465	12%	3
A5103 Princess Road northbound	2,578	50%	24

11.4.447 The assessment shows that this junction operates well within capacity in the 2018 baseline.

Table 11-188: 2018 baseline performance at A5145 Barlow Moor Road/A5103 Princess Road junction (main junction)

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Princess Road (north)	2,034	44%	22
A5145 Barlow Moor Road (east)	631	65%	14
A5103 Princess Road (south)	2,381	70%	10
A5103 Princess Road (south) left turn slip	372	14%	3
A5145 Barlow Moor Road (west)	916	22%	2
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Princess Road (north)	2,541	58%	5
A5145 Barlow Moor Road (east)	661	52%	14
A5103 Princess Road (south)	2,049	100%	30
A5103 Princess Road (south) left turn slip	510	19%	4
A5145 Barlow Moor Road (west)	688	16%	3

11.4.448 The assessment shows that this junction operates well within capacity in the 2018 baseline in the AM peak hour. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 100% on the A5103 Princess Road (south) approach with an associated queue length of 30 PCU.

11.4.449 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-189 and Table 11-190. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-189: Future baseline performance at A5145 Barlow Moor Road/A5103 Princess Road junction (southern junction)

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A5145 Princess Road southbound slip road	789	21%	5
A5103 Princess Road northbound	3,119	54%	25
	2030 PM peak hour (17:00–18:00)		
A5145 Princess Road southbound slip road	533	14%	3

Approach	Flow, PCU/hr	VoC	Queue, PCU
A5103 Princess Road northbound	2,866	55%	25

11.4.450 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

Table 11-190: Future baseline performance at A5145 Barlow Moor Road/A5103 Princess Road junction (main junction)

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A5103 Princess Road (north)	2,308	50%	25
A5145 Barlow Moor Road (east)	658	68%	15
A5103 Princess Road (south)	2,715	80%	10
A5103 Princess Road (south) left turn slip	378	14%	3
A5145 Barlow Moor Road (west)	1,096	26%	2
	2030 PM peak hour (17:00–18:00)		
A5103 Princess Road (north)	2,598	59%	5
A5145 Barlow Moor Road (east)	712	57%	15
A5103 Princess Road (south)	2,119	103%	30
A5103 Princess Road (south) left turn slip	721	27%	6
A5145 Barlow Moor Road (west)	849	20%	3

11.4.451 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 80% on the A5103 Princess Road (south) approach with an associated queue length of 10 PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 103% on the A5103 Princess Road (south) approach with an associated queue length of 30 PCU.

11.4.452 The junction analysis indicates that the junction will be operating over its capacity in the 2030 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

Mauldeth Road West/Nell Lane

11.4.453 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-191.

Table 11-191: 2018 baseline performance at Mauldeth Road West/Nell Lane junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Mauldeth Road West (north)	81	7%	1
Nell Lane (east)	600	76%	9
Mauldeth Road West (south)	28	2%	1
Nell Lane (west)	483	77%	7

Approach	Flow, PCU/hr	VoC	Q, PCU
	2018 PM peak hour (17:00–18:00) baseline results		
Mauldeth Road West (north)	143	10%	2
Nell Lane (east)	291	41%	5
Mauldeth Road West (south)	173	12%	3
Nell Lane (west)	381	51%	6

11.4.454 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 77% on the Nell Lane (west) approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.455 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-192. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-192: Future baseline performance at Mauldeth Road West/Nell Lane junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
Mauldeth Road West (north)	90	8%	2
Nell Lane (east)	671	86%	10
Mauldeth Road West (south)	32	3%	1
Nell Lane (west)	492	88%	7
	2030 PM peak hour (17:00–18:00)		
Mauldeth Road West (north)	192	14%	3
Nell Lane (east)	354	51%	6
Mauldeth Road West (south)	277	20%	5
Nell Lane (west)	414	61%	7

11.4.456 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 88% on the Nell Lane (west) approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

A5103 Princess Road/Whitchurch Road

11.4.457 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-193.

Table 11-193: 2018 baseline performance at A5103 Princess Road/Whitchurch Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Princess Road (north)	1,551	39%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU
Whitchurch Road	164	92%	5
A5103 Princess Road (south)	2,441	59%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Princess Road (north)	2,587	65%	0
Whitchurch Road	5	8%	0
A5103 Princess Road (south)	1,688	42%	0

11.4.458 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 92% on the Whitchurch Road approach in the AM peak hour with an associated queue length of five PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.459 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-194. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-194: Future baseline performance at A5103 Princess Road/Whitchurch Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A5103 Princess Road (north)	1,926	48%	0	2,046	51%	0
Whitchurch Road	111	96%	5	93	93%	4
A5103 Princess Road (south)	2,660	65%	0	2,726	67%	0
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A5103 Princess Road (north)	2,622	66%	0	2,644	66%	0
Whitchurch Road	7	12%	0	9	15%	0
A5103 Princess Road (south)	1,779	44%	0	1,823	45%	0

11.4.460 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 96% on the Whitchurch Road approach with an associated queue length of five PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.461 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 93% on the Whitchurch Road approach with an associated queue length of four PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A34 Kingsway/Grangethorpe Drive/Talbot Road

11.4.462 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-195.

Table 11-195: 2018 baseline performance at A34 Kingsway/Grangethorpe Drive/Talbot Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Kingsway (north)	712	37%	11
Grangethorpe Drive	326	42%	8
A34 Kingsway (south)	739	38%	6
Talbot Road	305	70%	7
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Kingsway (north)	1,158	47%	16
Grangethorpe Drive	224	45%	6
A34 Kingsway (south)	599	37%	17
Talbot Road	222	85%	6

11.4.463 The assessment shows that this junction operates well within capacity in the 2018 baseline in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 85% on the Talbot Road approach with an associated queue length of six PCU.

11.4.464 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-196. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-196: Future baseline performance at A34 Kingsway/Grangethorpe Drive/Talbot Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A34 Kingsway (north)	730	38%	12
Grangethorpe Drive	341	45%	8
A34 Kingsway (south)	883	45%	7
Talbot Road	348	87%	8
	2030 PM peak hour (17:00–18:00)		
A34 Kingsway (north)	1,269	51%	17
Grangethorpe Drive	271	55%	7
A34 Kingsway (south)	750	46%	22
Talbot Road	227	90%	6

11.4.465 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 87% on the Talbot Road approach in the AM peak hour with an associated queue length of eight PCU. In the PM peak hour, the maximum VoC of 90% is on the Talbot Road approach with a queue length of six PCU.

Yew Tree Road/Mauldeth Road West

11.4.466 This junction is a four-arm signalised crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-197.

Table 11-197: 2018 baseline performance at Yew Tree Road/Mauldeth Road West junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Yew Tree Road (north)	347	58%	5
Mauldeth Road West (east)	608	46%	8
Yew Tree Road (south)	680	85%	10
Mauldeth Road West (west)	468	96%	8
	2018 PM peak hour (17:00–18:00) baseline results		
Yew Tree Road (north)	366	71%	5
Mauldeth Road West (east)	567	35%	5
Yew Tree Road (south)	382	72%	5
Mauldeth Road West (west)	515	76%	7

11.4.467 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 96% on the Mauldeth Road West (west) approach in the AM peak hour with an associated queue length of eight PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 76% on the Mauldeth Road West (west) approach with an associated queue length of seven PCU.

11.4.468 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-198. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-198: Future baseline performance at Yew Tree Road/Mauldeth Road West junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Yew Tree Road (north)	389	68%	6
Mauldeth Road West (east)	631	47%	8
Yew Tree Road (south)	713	95%	10
Mauldeth Road West (west)	475	100%	8
	2030 PM peak hour (17:00–18:00)		
Yew Tree Road (north)	408	81%	6
Mauldeth Road West (east)	593	37%	5
Yew Tree Road (south)	417	84%	6
Mauldeth Road West (west)	532	89%	7

11.4.469 In the AM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 100% on the Mauldeth Road West (west) approach with an associated queue length of eight PCU. In the PM peak hour, the assessment shows that this junction

operates close to capacity in the 2030 future baseline with a maximum VoC of 89% on the Mauldeth Road West (west) approach with an associated queue length of seven PCU.

B5093 Wilmslow Road/Egerton Road

11.4.470 This junction is a three-arm signalised T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-199.

Table 11-199: 2018 baseline performance at B5093 Wilmslow Road/Egerton Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5093 Wilmslow Road (north)	528	19%	4
Egerton Road	223	88%	5
B5093 Wilmslow Road (south)	511	36%	3
	2018 PM peak hour (17:00–18:00) baseline results		
B5093 Wilmslow Road (north)	913	32%	6
Egerton Road	125	68%	3
B5093 Wilmslow Road (south)	313	21%	2

11.4.471 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 88% on the Egerton Road approach and an associated queue length of five PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.472 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-200. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-200: Future baseline performance at B5093 Wilmslow Road/Egerton Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
B5093 Wilmslow Road (north)	568	21%	4
Egerton Road	234	93%	5
B5093 Wilmslow Road (south)	550	38%	4
	2030 PM peak hour (17:00–18:00)		
B5093 Wilmslow Road (north)	999	35%	6
Egerton Road	143	78%	3
B5093 Wilmslow Road (south)	332	22%	2

11.4.473 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 93% on the Egerton Road approach and an associated queue length of five PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 78% on the Egerton Road approach and an associated queue length of three PCU.

A34 Birchfields Road/A34 Moseley Road/B5093 Moseley Road

11.4.474 This junction is a three-arm priority controlled (give way) roundabout with no signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-201.

Table 11-201: 2018 baseline performance at A34 Birchfields Road/A34 Moseley Road/B5093 Moseley Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Birchfields Road	412	20%	0
A34 Moseley Road	977	39%	0
B5093 Moseley Road	815	57%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Birchfields Road	677	34%	0
A34 Moseley Road	1,074	43%	0
B5093 Moseley Road	765	54%	0

11.4.475 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.476 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-202. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-202: Future baseline performance at A34 Birchfields Road/A34 Moseley Road/B5093 Moseley Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A34 Birchfields Road	333	17%	0
A34 Moseley Road	1,145	46%	0
B5093 Moseley Road	888	69%	1
	2030 PM peak hour (17:00–18:00)		
A34 Birchfields Road	701	36%	0
A34 Moseley Road	1,151	47%	0
B5093 Moseley Road	802	58%	0

11.4.477 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

A34 Kingsway/A34 Moseley Road/A5079 Kingsway

11.4.478 This junction is a three-arm priority controlled (give way) roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-203.

Table 11-203: 2018 baseline performance at A34 Kingsway/A34 Moseley Road/A5079 Kingsway junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5079 Kingsway	607	25%	0
A34 Kingsway	911	36%	0
A34 Moseley Road	1,026	59%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A5079 Kingsway	892	40%	0
A34 Kingsway	682	28%	0
A34 Moseley Road	1,350	71%	0

11.4.479 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.480 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-204. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-204: Future baseline performance at A34 Kingsway/A34 Moseley Road/A5079 Kingsway junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A5079 Kingsway	614	25%	0
A34 Kingsway	1,090	43%	0
A34 Moseley Road	1,058	61%	0
	2030 PM peak hour (17:00–18:00)		
A5079 Kingsway	962	45%	0
A34 Kingsway	827	34%	0
A34 Moseley Road	1,411	77%	0

11.4.481 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 77% on the A34 Moseley Road approach with no queue.

A6010 Edge Lane/A6010 Wilbraham Road/A5145 Edge Lane/Hampton Road

11.4.482 This junction is a four-arm signalised crossroads with signal controlled pedestrian crossing facilities. The Hampton Road approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-205.

Table 11-205: 2018 baseline performance at A6010 Edge Lane/A6010 Wilbraham Road/A5145 Edge Lane/Hampton Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5145 Edge Lane (north)	844	44%	11
Hampton Road	-	-	-
A6010 Wilbraham Road	352	73%	7
A5145 Edge Lane (south)	451	66%	7
	2018 PM peak hour (17:00–18:00) baseline results		
A5145 Edge Lane (north)	729	37%	10
Hampton Road	-	-	-
A6010 Wilbraham Road	331	62%	6
A5145 Edge Lane (south)	278	42%	5

11.4.483 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.484 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-206. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-206: Future baseline performance at A6010 Edge Lane/A6010 Wilbraham Road/A5145 Edge Lane/Hampton Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A5145 Edge Lane (north)	871	45%	11
Hampton Road	-	-	-
A6010 Wilbraham Road	407	84%	8
A5145 Edge Lane (south)	519	76%	9
	2030 PM peak hour (17:00–18:00)		
A5145 Edge Lane (north)	925	47%	12
Hampton Road	-	-	-
A6010 Wilbraham Road	389	72%	7
A5145 Edge Lane (south)	336	50%	6

11.4.485 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 84% on the A6010 Wilbraham Road approach with an associated queue length of eight PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

A6010 Wilmslow Road/A6010 Wilbraham Road/B5093 Moseley Road/B5093 Wilmslow Road

11.4.486 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-207.

Table 11-207: 2018 baseline performance at A6010 Wilmslow Road/A6010 Wilbraham Road/B5093 Moseley Road/B5093 Wilmslow Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6010 Wilmslow Road	608	42%	8
B5093 Moseley Road	503	95%	11
B5093 Wilmslow Road	818	65%	10
A6010 Wilbraham Road	611	73%	12
	2018 PM peak hour (17:00–18:00) baseline results		
A6010 Wilmslow Road	939	58%	12
B5093 Moseley Road	507	91%	11
B5093 Wilmslow Road	564	56%	8
A6010 Wilbraham Road	659	82%	13

11.4.487 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 95% on the B5093 Moseley Road approach in the AM peak hour with an associated queue length of 11 PCU. In the PM peak hour, the maximum VoC of 91% is on the B5093 Moseley Road approach with a queue length of 11 PCU.

11.4.488 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-208. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-208: Future baseline performance at A6010 Wilmslow Road/A6010 Wilbraham Road/B5093 Moseley Road/B5093 Wilmslow Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6010 Wilmslow Road	767	57%	10
B5093 Moseley Road	494	98%	11
B5093 Wilmslow Road (south)	887	78%	11
A6010 Wilbraham Road	674	80%	13
	2030 PM peak hour (17:00–18:00)		
A6010 Wilmslow Road	1,040	67%	13
B5093 Moseley Road	511	93%	11
B5093 Wilmslow Road (south)	595	64%	8
A6010 Wilbraham Road	678	84%	13

11.4.489 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 98% on the B5093 Moseley Road approach with an associated queue length of 11 PCU. In the PM peak hour, the maximum VoC of 93% is on the B5093 Moseley Road approach with a queue length of 11 PCU.

A5103 Princess Road/A6010 Wilbraham Road

11.4.490 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-209.

Table 11-209: 2018 baseline performance at A5103 Princess Road/A6010 Wilbraham Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Princess Road (north)	1,337	79%	20
A6010 Wilbraham Road (east)	447	99%	10
A5103 Princess Road (south)	2,497	94%	18
A6010 Wilbraham Road (west)	456	99%	10
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Princess Road (north)	2,169	87%	20
A6010 Wilbraham Road (east)	520	99%	12
A5103 Princess Road (south)	1,654	60%	25
A6010 Wilbraham Road (west)	522	99%	12

11.4.491 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline, with a maximum VoC of 99% on both the A6010 Wilbraham Road (west) and A6010 Wilbraham Road (east) approaches with an associated queue length of 10 PCU on each approach. In the PM peak hour, the maximum VoC of 99% is on both the A6010 Wilbraham Road (east) and A6010 Wilbraham Road (west) approaches with a queue length of 12 PCU on each approach.

11.4.492 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-210. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-210: Future baseline performance at A5103 Princess Road/A6010 Wilbraham Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A5103 Princess Road (north)	1,550	91%	24	1,549	91%	25
A6010 Wilbraham Road (east)	473	108%	10	679	102%	15
A5103 Princess Road (south)	2,597	98%	18	2,628	99%	18
A6010 Wilbraham Road (west)	470	102%	10	470	102%	10
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A5103 Princess Road (north)	2,205	89%	21	2,218	90%	21
A6010 Wilbraham Road (east)	524	100%	13	525	100%	13
A5103 Princess Road (south)	1,758	63%	27	1,760	63%	28

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A6010 Wilbraham Road (west)	519	101%	12	524	101%	12

11.4.493 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 108% on the A6010 Wilbraham Road (east) approach with an associated queue length of 10 PCU. In the PM peak hour, the maximum VoC of 101% is on the A6010 Wilbraham Road (west) approach with a queue length of 12 PCU.

11.4.494 In the 2046 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 102% on both the A6010 Wilbraham Road (west) and A6010 Wilbraham Road (east) approaches with an associated queue length of 10 PCU and 15 PCU respectively. In the PM peak hour, the maximum VoC of 101% is on the A6010 Wilbraham Road (west) approach with a queue length of 12 PCU.

11.4.495 The junction analysis indicates that the junction will be operating over capacity in the 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A5181 Barton Road/A5145 Kingsway/B5213 Urmston Lane

11.4.496 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-211.

Table 11-211: 2018 baseline performance at A5181 Barton Road/A5145 Kingsway/B5213 Urmston Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5181 Barton Road (north)	646	37%	13
A5145 Kingsway	753	49%	12
A5181 Barton Road (south)	408	58%	10
B5213 Urmston Lane	609	43%	13
	2018 PM peak hour (17:00–18:00) baseline results		
A5181 Barton Road (north)	864	41%	14
A5145 Kingsway	839	60%	16
A5181 Barton Road (south)	362	42%	8
B5213 Urmston Lane	300	36%	8

11.4.497 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.498 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-212. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-212: Future baseline performance at A5181 Barton Road/A5145 Kingsway/B5213 Urmston Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A5181 Barton Road (north)	686	40%	14	718	41%	14	748	43%	15
A5145 Kingsway	813	55%	13	845	59%	14	824	59%	13
A5181 Barton Road (south)	376	56%	9	379	59%	9	350	57%	9
B5213 Urmston Lane	770	55%	17	855	62%	19	946	68%	21
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A5181 Barton Road (north)	880	41%	14	1,008	47%	16	1,073	50%	17
A5145 Kingsway	1,053	77%	20	1,021	79%	19	1,031	82%	19
A5181 Barton Road (south)	494	58%	12	571	70%	13	640	81%	15
B5213 Urmston Lane	439	65%	12	390	87%	10	419	93%	11

11.4.499 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 77% on the A5145 Kingsway approach and an associated queue length of 20 PCU.

11.4.500 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 87% on the B5213 Urmston Lane approach and an associated queue length of 10 PCU.

11.4.501 In the 2046 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 93% on the B5213 Urmston Lane approach and an associated queue length of 11 PCU.

A5103 Princess Road/Platt Lane/Parkway Access

11.4.502 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The Parkway Access approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown Table 11-213.

Table 11-213: 2018 baseline performance at A5103 Princess Road/Platt Lane/Parkway Access junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Princess Road (north)	1,361	53%	12
Platt Lane	277	96%	6
A5103 Princess Road (south)	2,357	82%	11
Parkway Access	-	-	-
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Princess Road (north)	2,012	83%	21
Platt Lane	271	75%	6
A5103 Princess Road (south)	1,566	61%	10
Parkway Access	-	-	-

11.4.503 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 96% on the Platt Lane approach with an associated queue length of six PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 83% on the A5103 Princess Road (north) approach with an associated queue length of 21 PCU.

11.4.504 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-214. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-214: Future baseline performance at A5103 Princess Road/Platt Lane/Parkway Access junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A5103 Princess Road (north)	1,618	63%	15	1,643	64%	15
Platt Lane	276	96%	6	270	94%	6
A5103 Princess Road (south)	2,413	86%	13	2,456	88%	13
Parkway Access	-	-	-	-	-	-
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A5103 Princess Road (north)	2,086	86%	21	2,109	87%	22
Platt Lane	269	74%	6	275	76%	6
A5103 Princess Road (south)	1,665	65%	11	1,666	65%	11
Parkway Access	-	-	-	-	-	-

11.4.505 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 96% on the Platt Lane approach with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 86% is on the A5103 Princess Road (north) approach with a queue length of 21 PCU.

11.4.506 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 94% on the Platt Lane approach with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 87% is on the A5103 Princess Road (north) approach with a queue length of 22 PCU.

A34 Birchfields Road/Old Hall Lane

11.4.507 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The Old Hall Lane (east) approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-215.

Table 11-215: 2018 baseline performance at A34 Birchfields Road/Old Hall Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Birchfields Road (north)	771	105%	8
Old Hall Lane (east)	-	-	-
A34 Birchfields Road (south)	913	80%	10
Old Hall Lane (west)	16	12%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Birchfields Road (north)	1,009	101%	11
Old Hall Lane (east)	-	-	-
A34 Birchfields Road (south)	824	71%	9
Old Hall Lane (west)	20	14%	1

11.4.508 This junction operates over capacity in the 2018 baseline with a maximum VoC of 105% on the A34 Birchfields Road (north) approach in the AM peak hour with an associated queue length of eight PCU. In the PM peak hour, the maximum VoC of 101% is on the A34 Birchfields Road (north) approach with a queue length of 11 PCU.

11.4.509 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-216. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-216: Future baseline performance at A34 Birchfields Road/Old Hall Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A34 Birchfields Road (north)	607	109%	6
Old Hall Lane (east)	-	-	-
A34 Birchfields Road (south)	1,037	91%	12
Old Hall Lane (west)	62	45%	2
	2030 PM peak hour (17:00–18:00)		
A34 Birchfields Road (north)	1,026	101%	11

Approach	Flow, PCU/hr	VoC	Queue, PCU
Old Hall Lane (east)	-	-	-
A34 Birchfields Road (south)	893	77%	10
Old Hall Lane (west)	17	13%	0

11.4.510 This junction operates over capacity in the 2030 future baseline with a maximum VoC of 109% on the A34 Birchfields Road (north) approach in the AM peak hour with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 101% is on the A34 Birchfields Road (north) approach with a queue length of 11 PCU.

11.4.511 The junction analysis indicates that the junction will be operating over its capacity in the 2030 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A6010 Dickenson Road/A6010 Wilmslow Road/B5117 Wilmslow Road

11.4.512 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-217.

Table 11-217: 2018 baseline performance at A6010 Dickenson Road/A6010 Wilmslow Road/B5117 Wilmslow Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5117 Wilmslow Road	422	32%	7
A6010 Dickenson Road	430	76%	9
A6010 Wilmslow Road	847	58%	8
	2018 PM peak hour (17:00–18:00) baseline results		
B5117 Wilmslow Road	798	55%	12
A6010 Dickenson Road	447	79%	9
A6010 Wilmslow Road	556	50%	7

11.4.513 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 76% on the A6010 Dickenson Road approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 79% is on the A6010 Dickenson Road approach with an associated queue length of nine PCU.

11.4.514 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-218. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-218: Future baseline performance at A6010 Dickenson Road/A6010 Wilmslow Road/B5117 Wilmslow Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
B5117 Wilmslow Road	570	43%	9
A6010 Dickenson Road	489	86%	10
A6010 Wilmslow Road	881	62%	9
	2030 PM peak hour (17:00–18:00)		
B5117 Wilmslow Road	894	62%	14
A6010 Dickenson Road	464	82%	10
A6010 Wilmslow Road	598	55%	8

11.4.515 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 86% on the A6010 Dickenson Road approach in the AM peak hour with an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates within capacity with a maximum VoC of 82% on the A6010 Dickenson Road approach with an associated queue length of 10 PCU.

Upper Lloyd Street/Claremont Road/Lloyd Street South

11.4.516 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-219.

Table 11-219: 2018 baseline performance at Upper Lloyd Street/Claremont Road/Lloyd Street South junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Upper Lloyd Street	145	21%	2
Claremont Road (east)	409	85%	7
Lloyd Street South	654	84%	9
Claremont Road (west)	241	80%	4
	2018 PM peak hour (17:00–18:00) baseline results		
Upper Lloyd Street	543	62%	4
Claremont Road (east)	193	38%	3
Lloyd Street South	208	25%	3
Claremont Road (west)	304	67%	5

11.4.517 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 85% on the Claremont Road (east) approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.518 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-220. As the junction is only affected by the operation of the Proposed

Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-220: Future baseline performance at Upper Lloyd Street/Claremont Road/Lloyd Street South junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Upper Lloyd Street	199	29%	3	207	29%	3
Claremont Road (east)	430	91%	7	408	85%	7
Lloyd Street South	701	93%	10	682	87%	9
Claremont Road (west)	203	87%	3	265	89%	4
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Upper Lloyd Street	617	70%	5	638	73%	5
Claremont Road (east)	223	45%	4	229	46%	4
Lloyd Street South	220	27%	3	228	28%	3
Claremont Road (west)	365	71%	6	376	74%	6

11.4.519 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 93% on the Lloyd Street South approach with an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.520 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 89% on the Claremont Road (west) approach with an associated queue length of four PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A34 Birchfields Road/A34 Anson Road/A6010 Dickenson Road

11.4.521 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-221.

Table 11-221: 2018 baseline performance at A34 Birchfields Road/A34 Anson Road/A6010 Dickenson Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Anson Road	586	46%	8
A6010 Dickenson Road (east)	467	91%	10
A34 Birchfields Road	811	59%	11
A6010 Dickenson Road (west)	318	69%	7
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Anson Road	746	61%	11
A6010 Dickenson Road (east)	487	82%	10

Approach	Flow, PCU/hr	VoC	Queue, PCU
A34 Birchfields Road	748	67%	11
A6010 Dickenson Road (west)	392	73%	8

11.4.522 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 91% on the A6010 Dickenson Road (east) approach in the AM peak hour with an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 82% on the A6010 Dickenson Road (east) approach in the PM peak hour with an associated queue length of 10 PCU.

11.4.523 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-222. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-222: Future baseline performance at A34 Birchfields Road/A34 Anson Road/A6010 Dickenson Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A34 Anson Road	419	37%	6
A6010 Dickenson Road (east)	485	95%	10
A34 Birchfields Road	1,000	65%	14
A6010 Dickenson Road (west)	332	72%	7
	2030 PM peak hour (17:00–18:00)		
A34 Anson Road	811	70%	12
A6010 Dickenson Road (east)	491	85%	10
A34 Birchfields Road	812	77%	12
A6010 Dickenson Road (west)	417	78%	9

11.4.524 The assessment shows that this junction operates close capacity in the 2030 future baseline with a maximum VoC of 95% on the A6010 Dickenson Road (east) approach in the AM peak hour with an associated queue length of 10 PCU. In the PM peak hour, the maximum VoC of 85% is on the A6010 Dickenson Road (east) approach with a queue length of 10 PCU.

B5217 Seymour Grove/Kings Road

11.4.525 This junction is a four-arm signal controlled crossroads with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-223.

Table 11-223: 2018 baseline performance at B5217 Seymour Grove/Kings Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5217 Seymour Grove (north)	463	45%	7
Kings Road (east)	560	81%	9

Approach	Flow, PCU/hr	VoC	Queue, PCU
B5217 Seymour Grove (south)	855	69%	14
Kings Road (west)	430	63%	7
	2018 PM peak hour (17:00–18:00) baseline results		
B5217 Seymour Grove (north)	653	53%	8
Kings Road (east)	591	83%	8
B5217 Seymour Grove (south)	523	47%	6
Kings Road (west)	590	89%	8

11.4.526 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 81% on the Kings Road (east) approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 89% on the Kings Road (west) approach with an associated queue length of eight PCU.

11.4.527 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-224. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-224: Future baseline performance at B5217 Seymour Grove/Kings Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
B5217 Seymour Grove (north)	438	46%	7
Kings Road (east)	575	84%	10
B5217 Seymour Grove (south)	963	77%	16
Kings Road (west)	465	73%	8
	2030 PM peak hour (17:00–18:00)		
B5217 Seymour Grove (north)	703	60%	9
Kings Road (east)	596	85%	8
B5217 Seymour Grove (south)	583	53%	7
Kings Road (west)	625	97%	8

11.4.528 The assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 84% on the Kings Road (east) approach in the AM peak hour with an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 97% on the Kings Road (west) approach with a queue length of eight PCU.

A57 Hyde Road/Lime Grove/Saxon Street

11.4.529 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The Lime Grove approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-225.

Table 11-225: 2018 baseline performance at A57 Hyde Road/Lime Grove/Saxon Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Lime Grove	-	-	-
A57 Hyde Road (east)	668	51%	11
Saxon Street	36	8%	1
A57 Hyde Road (west)	523	59%	4
	2018 PM peak hour (17:00–18:00) baseline results		
Lime Grove	-	-	-
A57 Hyde Road (east)	382	45%	7
Saxon Street	99	22%	2
A57 Hyde Road (west)	613	71%	4

11.4.530 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.531 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-226. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-226: Future baseline performance at A57 Hyde Road/Lime Grove/Saxon Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Lime Grove	-	-	-	-	-	-
A57 Hyde Road (east)	685	53%	11	720	55%	12
Saxon Street	67	15%	2	129	29%	3
A57 Hyde Road (west)	644	79%	6	673	82%	6
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Lime Grove	-	-	-	-	-	-
A57 Hyde Road (east)	428	50%	8	466	55%	9
Saxon Street	159	35%	2	177	39%	2
A57 Hyde Road (west)	648	75%	4	665	77%	4

11.4.532 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 79% on the A57 Hyde Road (west) approach with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 75% is on the A57 Hyde Road (west) approach with a queue length of four PCU.

11.4.533 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 82% on the A57 Hyde Road (west) approach with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 77% is on the A57 Hyde Road (west) approach with a queue length of four PCU.

A6 Stockport Road/A6010 Dickenson Road/Stanley Grove

11.4.534 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-227.

Table 11-227: 2018 baseline performance at A6 Stockport Road/A6010 Dickenson Road/Stanley Grove junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Stanley Grove	398	82%	9
A6 Stockport Road (south)	1,195	64%	21
A6010 Dickenson Road	296	65%	7
A6 Stockport Road (north)	857	46%	12
	2018 PM peak hour (17:00–18:00) baseline results		
Stanley Grove	258	51%	6
A6 Stockport Road (south)	613	32%	11
A6010 Dickenson Road	204	46%	5
A6 Stockport Road (north)	1,007	52%	14

11.4.535 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 82% on the Stanley Grove approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.536 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-228. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-228: 2030 future baseline performance at A6 Stockport Road/A6010 Dickenson Road/Stanley Grove junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Stanley Grove	432	91%	10
A6 Stockport Road (south)	1,288	69%	23
A6010 Dickenson Road	309	71%	7
A6 Stockport Road (north)	894	48%	13
	2030 PM peak hour (17:00–18:00)		
Stanley Grove	324	67%	8
A6 Stockport Road (south)	717	37%	12
A6010 Dickenson Road	210	50%	5
A6 Stockport Road (north)	1,086	56%	15

11.4.537 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 91% on the Stanley Grove approach with

an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

B5219 Moss Lane East/Upper Lloyd Street/Lloyd Street North

11.4.538 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-229.

Table 11-229: 2018 baseline performance at B5219 Moss Lane East/Upper Lloyd Street/Lloyd Street North junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Lloyd Street North	246	24%	3
B5219 Moss Lane East (east)	298	37%	5
Upper Lloyd Street	568	47%	3
B5219 Moss Lane East (west)	345	55%	5
	2018 PM peak hour (17:00–18:00) baseline results		
Lloyd Street North	654	55%	8
B5219 Moss Lane East (east)	372	47%	6
Upper Lloyd Street	292	27%	1
B5219 Moss Lane East (west)	367	57%	6

11.4.539 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.540 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-230. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-230: Future baseline performance at B5219 Moss Lane East/Upper Lloyd Street/Lloyd Street North junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Lloyd Street North	345	35%	4	364	37%	4
B5219 Moss Lane East (east)	346	51%	5	340	49%	5
Upper Lloyd Street	769	64%	4	793	67%	4
B5219 Moss Lane East (west)	500	83%	8	508	86%	8
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Lloyd Street North	775	65%	10	806	68%	11
B5219 Moss Lane East (east)	405	54%	6	419	57%	7
Upper Lloyd Street	313	30%	1	328	32%	1
B5219 Moss Lane East (west)	418	65%	7	422	65%	7

11.4.541 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 83% on the B5219 Moss Lane East (west) approach with an associated queue length of eight PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.542 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 86% on the B5219 Moss Lane East (west) approach with an associated queue length of eight PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A34 Upper Brook Street/Hathersage Road

11.4.543 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-231.

Table 11-231: 2018 baseline performance at A34 Upper Brook Street/Hathersage Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Hathersage Road (east)	370	79%	8
A34 Upper Brook Street (south)	732	34%	3
Hathersage Road (west)	124	15%	2
A34 Upper Brook Street (north)	647	30%	8
	2018 PM peak hour (17:00–18:00) baseline results		
Hathersage Road (east)	173	38%	4
A34 Upper Brook Street (south)	675	31%	9
Hathersage Road (west)	182	19%	4
A34 Upper Brook Street (north)	735	34%	9

11.4.544 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 79% on the Hathersage Road (east) approach with an associated queue length of eight PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.545 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-232. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-232: Future baseline performance at A34 Upper Brook Street/Hathersage Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Hathersage Road (east)	378	81%	8	392	87%	9	399	91%	9
A34 Upper Brook Street (south)	893	41%	4	951	44%	4	988	46%	5
Hathersage Road (west)	163	19%	3	186	22%	4	199	24%	4
A34 Upper Brook Street (north)	510	24%	7	484	22%	6	457	21%	6
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Hathersage Road (east)	209	46%	5	213	47%	5	225	50%	5
A34 Upper Brook Street (south)	718	40%	9	762	48%	10	812	56%	10
Hathersage Road (west)	191	21%	4	196	21%	4	200	22%	4
A34 Upper Brook Street (north)	787	36%	10	822	38%	11	849	39%	11

11.4.546 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 81% on the Hathersage Road (east) approach with an associated queue length of eight PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

11.4.547 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 87% on the Hathersage Road (east) approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.548 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 91% on the Hathersage Road (east) approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A57 Hyde Road/Tan Yard Brow/Willow Grove

11.4.549 This junction is a four-arm priority controlled (give way) crossroads with no controlled pedestrian crossing facilities. The Willow Grove approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018

existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-233.

Table 11-233: 2018 baseline performance at A57 Hyde Road/Tan Yard Brow/Willow Grove junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Tan Yard Brow	285	77%	1
A57 Hyde Road (east)	1,765	70%	0
Willow Grove	-	-	-
A57 Hyde Road (west)	655	22%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Tan Yard Brow	109	104%	4
A57 Hyde Road (east)	947	59%	4
Willow Grove	-	-	-
A57 Hyde Road (west)	2,037	68%	0

11.4.550 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 77% on the Tan Yard Brow approach in the AM peak hour with an associated queue length of one PCU. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 104% on the Tan Yard Brow approach and an associated queue length of four PCU.

11.4.551 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-234. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-234: Future baseline performance at A57 Hyde Road/Tan Yard Brow/Willow Grove junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Tan Yard Brow	299	92%	3	285	97%	4	257	100%	6
A57 Hyde Road (east)	2,098	85%	0	2,188	88%	0	2,271	90%	0
Willow Grove	-	-	-	-	-	-	-	-	-
A57 Hyde Road (west)	831	28%	0	911	30%	0	1,008	34%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Tan Yard Brow	99	105%	4	93	105%	4	88	106%	3
A57 Hyde Road (east)	1,072	67%	4	1,127	71%	4	1,164	73%	4
Willow Grove	-	-	-	-	-	-	-	-	-
A57 Hyde Road (west)	2,097	70%	0	2,128	71%	0	2,163	72%	0

11.4.552 In the 2030 future baseline the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 92% on the Tan Yard Brow approach with an associated queue length of three PCU. In the PM peak hour, this junction operates

over capacity in the 2030 future baseline with a maximum VoC of 105% on the Tan Yard Brow approach and an associated queue length of four PCU.

11.4.553 In the 2038 future baseline the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 97% on the Tan Yard Brow approach with an associated queue length of four PCU. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 105% on the Tan Yard Brow approach and an associated queue length of four PCU.

11.4.554 In the 2046 future baseline the assessment shows that this junction operates over capacity in the AM peak hour with a maximum VoC of 100% on the Tan Yard Brow approach with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 106% is on the Tan Yard Brow approach with an associated queue length of three PCU.

A57 Hyde Road/Chapman Street

11.4.555 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-235.

Table 11-235: 2018 baseline performance at A57 Hyde Road/Chapman Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Chapman Street	172	60%	1
A57 Hyde Road (east)	1,612	56%	0
A57 Hyde Road (west)	522	14%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Chapman Street	73	103%	3
A57 Hyde Road (east)	832	41%	2
A57 Hyde Road (west)	1,991	51%	0

11.4.556 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 103% on the Chapman Street approach with an associated queue length of three PCU.

11.4.557 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-236. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-236: Future baseline performance at A57 Hyde Road/Chapman Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Chapman Street	180	82%	2	182	93%	3	215	97%	4
A57 Hyde Road (east)	1,925	66%	0	2,030	72%	0	2,135	79%	0
A57 Hyde Road (west)	685	18%	0	763	20%	0	821	21%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Chapman Street	65	103%	3	61	103%	3	57	103%	3
A57 Hyde Road (east)	968	48%	2	1,029	51%	2	1,072	54%	2
A57 Hyde Road (west)	2,061	53%	0	2,097	54%	0	2,138	55%	0

11.4.558 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 82% on the Chapman Street approach with an associated queue length of two PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 103% on the Chapman Street approach with an associated queue length of three PCU.

11.4.559 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 93% on the Chapman Street approach with an associated queue length of three PCU. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 103% on the Chapman Street approach with an associated queue length of three PCU.

11.4.560 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 97% on the Chapman Street approach with an associated queue length of four PCU. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 103% on the Chapman Street approach with an associated queue length of three PCU.

A57 Hyde Road/Wellington Street/Hengist Street

11.4.561 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The Hengist Street approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-237.

Table 11-237: 2018 baseline performance at A57 Hyde Road/Wellington Street/Hengist Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Wellington Street	13	11%	0
A57 Hyde Road (east)	1,456	61%	13
Hengist Street	-	-	-

Approach	Flow, PCU/hr	VoC	Queue, PCU
A57 Hyde Road (west)	510	35%	8
	2018 PM peak hour (17:00–18:00) baseline results		
Wellington Street	113	94%	3
A57 Hyde Road (east)	768	45%	7
Hengist Street	-	-	-
A57 Hyde Road (west)	1,878	79%	25

11.4.562 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 94% on the Wellington Street approach with an associated queue length of three PCU.

11.4.563 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-238. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-238: Future baseline performance at A57 Hyde Road/Wellington Street/Hengist Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Wellington Street	78	64%	2	84	70%	2
A57 Hyde Road (east)	1,863	80%	17	1,945	84%	17
Hengist Street	-	-	-	-	-	-
A57 Hyde Road (west)	685	46%	10	737	50%	10
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Wellington Street	117	96%	3	119	98%	3
A57 Hyde Road (east)	973	58%	9	1,051	63%	9
Hengist Street	-	-	-	-	-	-
A57 Hyde Road (west)	1,980	84%	25	2,019	85%	25

11.4.564 In the 2038 future baseline, the assessment shows that this junction operates within capacity in AM peak hour with a maximum VoC of 80% on the A57 Hyde Road (east) approach with an associated queue length of 17 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 96% on the Wellington Street approach with an associated queue length of three PCU.

11.4.565 In the 2046 future baseline, the assessment shows that this junction operates within capacity in AM peak hour with a maximum VoC of 84% on the A57 Hyde Road (east) approach with an associated queue length of 17 PCU. In the PM peak hour, the maximum VoC of 98% is on the Wellington Street approach with a queue length of three PCU.

A57 Hyde Road/Knutsford Road/Whitwell Way

11.4.566 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-239.

Table 11-239: 2018 baseline performance at A57 Hyde Road/Knutsford Road/Whitwell Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Whitwell Way	271	42%	6
A57 Hyde Road (east)	1,107	41%	14
Knutsford Road	114	70%	3
A57 Hyde Road (west)	458	19%	6
	2018 PM peak hour (17:00–18:00) baseline results		
Whitwell Way	459	63%	10
A57 Hyde Road (east)	476	22%	6
Knutsford Road	115	82%	3
A57 Hyde Road (west)	1,738	66%	23

11.4.567 The assessment shows that this junction operates well within capacity in the 2018 baseline in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 82% on the Knutsford Road approach with an associated queue length of three PCU.

11.4.568 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-240. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-240: Future baseline performance at A57 Hyde Road/Knutsford Road/Whitwell Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Whitwell Way	304	47%	7
A57 Hyde Road (east)	1,420	54%	18
Knutsford Road	132	82%	3
A57 Hyde Road (west)	567	25%	7
	2030 PM peak hour (17:00–18:00)		
Whitwell Way	497	69%	11
A57 Hyde Road (east)	591	28%	8
Knutsford Road	121	86%	3
A57 Hyde Road (west)	1,771	69%	23

11.4.569 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 82% on the Knutsford Road approach with an associated queue length of three PCU. In the PM peak hour, the assessment shows

that this junction operates close to capacity with a maximum VoC of 86% on the Knutsford Road approach with an associated queue length of three PCU.

A57 Hyde Road/B6178 Hyde Road/B6178 Mount Road

11.4.570 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-241.

Table 11-241: 2018 baseline performance at A57 Hyde Road/B6178 Hyde Road/B6178 Mount Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B6178 Hyde Road	54	11%	1
A57 Hyde Road (east)	1,276	67%	17
B6178 Mount Road	753	82%	13
A57 Hyde Road (west)	358	18%	5
	2018 PM peak hour (17:00–18:00) baseline results		
B6178 Hyde Road	140	17%	3
A57 Hyde Road (east)	706	47%	11
B6178 Mount Road	629	52%	11
A57 Hyde Road (west)	1,463	92%	21

11.4.571 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 82% on the B6178 Mount Road approach with an associated queue length of 13 PCU. In the PM peak hour, this junction operates close to capacity in the 2018 baseline with a maximum VoC of 92% on the A57 Hyde Road (west) approach and an associated queue length of 21 PCU.

11.4.572 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-242. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-242: Future baseline performance at A57 Hyde Road/B6178 Hyde Road/B6178 Mount Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
B6178 Hyde Road	82	16%	2	85	17%	2	95	19%	2
A57 Hyde Road (east)	1,598	83%	21	1,683	87%	22	1,766	91%	23
B6178 Mount Road	795	86%	14	831	90%	15	858	93%	16
A57 Hyde Road (west)	448	22%	6	463	23%	6	486	24%	6
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
B6178 Hyde Road	159	19%	3	166	20%	4	174	21%	4

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A57 Hyde Road (east)	812	54%	13	850	56%	13	903	60%	14
B6178 Mount Road	664	55%	11	687	57%	11	715	59%	11
A57 Hyde Road (west)	1,501	94%	22	1,513	95%	22	1,522	96%	23

11.4.573 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 86% on the B6178 Mount Road approach with an associated queue length of 14 PCU. In the PM peak hour, the maximum VoC of 94% is on the A57 Hyde Road (west) approach with a queue length of 22 PCU.

11.4.574 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 90% on the B6178 Mount Road approach with an associated queue length of 15 PCU. In the PM peak hour, the maximum VoC of 95% is on the A57 Hyde Road (west) approach with a queue length of 22 PCU.

11.4.575 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 93% on the B6178 Mount Road approach in the AM peak hour with an associated queue length of 16 PCU. In the PM peak hour, the maximum VoC of 96% is on the A57 Hyde Road (west) approach and an associated queue length of 23 PCU.

Wellington Street/Cross Lane/Garratt Way

11.4.576 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-243.

Table 11-243: 2018 baseline performance at Wellington Street/Cross Lane/Garratt Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Wellington Street (north)	63	8%	1
Cross Lane	299	60%	4
Wellington Street (south)	423	51%	4
Garratt Way	256	47%	3
	2018 PM peak hour (17:00–18:00) baseline results		
Wellington Street (north)	173	19%	1
Cross Lane	343	53%	4
Wellington Street (south)	321	38%	3
Garratt Way	244	38%	3

11.4.577 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.578 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-244. As the junction is only affected by the operation of the Proposed

Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-244: Future baseline performance at Wellington Street/Cross Lane/Garratt Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			2046 AM peak hour (08:00–09:00)		
Wellington Street (north)	107	12%	1	114	13%	1
Cross Lane	393	79%	5	423	86%	5
Wellington Street (south)	433	51%	4	428	50%	4
Garratt Way	242	44%	3	228	42%	3
	2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
Wellington Street (north)	229	27%	2	246	29%	2
Cross Lane	370	58%	4	391	61%	4
Wellington Street (south)	357	41%	3	340	39%	3
Garratt Way	261	40%	3	265	41%	3

11.4.579 In the 2038 future baseline, the assessment shows that this junction operates within capacity in AM peak hour with a maximum VoC of 79% on the Cross Lane approach with an associated queue length of five PCU. In the PM peak hour, this junction operates well within capacity in the 2038 future baseline.

11.4.580 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in AM peak hour with a maximum VoC of 86% on the Cross Lane approach with an associated queue length of five PCU. In the PM peak hour, this junction operates well within capacity in the 2046 future baseline.

Chapman Street/Cross Lane

11.4.581 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-245.

Table 11-245: 2018 baseline performance at Chapman Street/Cross Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Chapman Street (north)	378	53%	4
Cross Lane (east)	67	13%	1
Chapman Street (south)	195	21%	2
Cross Lane (west)	279	55%	4
	2018 PM peak hour (17:00–18:00) baseline results		
Chapman Street (north)	329	47%	4
Cross Lane (east)	87	15%	1
Chapman Street (south)	88	10%	1
Cross Lane (west)	415	93%	6

11.4.582 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 93% on the Cross Lane (west) approach with an associated queue length of six PCU.

11.4.583 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-246. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-246: Future baseline performance at Chapman Street/Cross Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Chapman Street (north)	425	57%	5	424	59%	5	460	63%	5
Cross Lane (east)	114	21%	2	151	28%	2	178	34%	3
Chapman Street (south)	182	20%	2	202	22%	2	219	24%	3
Cross Lane (west)	251	52%	4	236	48%	4	222	44%	3
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Chapman Street (north)	328	47%	4	335	48%	4	349	50%	4
Cross Lane (east)	93	16%	1	97	17%	1	100	17%	1
Chapman Street (south)	86	10%	1	84	10%	1	83	10%	1
Cross Lane (west)	425	97%	6	425	96%	6	424	96%	6

11.4.584 In the 2030 future baseline the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity with a maximum VoC of 97% on the Cross Lane (west) approach and an associated queue length of six PCU.

11.4.585 In the 2038 future baseline the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity with a maximum VoC of 96% on the Cross Lane (west) approach and an associated queue length of six PCU.

11.4.586 In the 2046 future baseline the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity with a maximum VoC of 96% on the Cross Lane (west) approach and an associated queue length of six PCU.

A57 Hyde Road/Birch Street

11.4.587 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-247.

Table 11-247: 2018 baseline performance at A57 Hyde Road/Birch Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Birch Street	40	13%	0
A57 Hyde Road (east)	1,097	29%	0
A57 Hyde Road (west)	305	8%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Birch Street	22	17%	0
A57 Hyde Road (east)	442	14%	0
A57 Hyde Road (west)	1,314	34%	0

11.4.588 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.589 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-248. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-248: 2030 future baseline performance at A57 Hyde Road/Birch Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Birch Street	59	51%	1
A57 Hyde Road (east)	1,418	37%	0
A57 Hyde Road (west)	395	10%	0
	2030 PM peak hour (17:00–18:00)		
Birch Street	13	8%	0
A57 Hyde Road (east)	580	18%	0
A57 Hyde Road (west)	1,392	36%	0

11.4.590 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

A6010 Pottery Lane/A57 Hyde Road

11.4.591 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-249.

Table 11-249: 2018 baseline performance at A6010 Pottery Lane/A57 Hyde Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6010 Pottery Lane (north)	618	45%	13
A57 Hyde Road (east)	1,099	39%	18
A6010 Pottery Lane (south)	713	47%	14
A57 Hyde Road (west)	305	27%	7
	2018 PM peak hour (17:00–18:00) baseline results		
A6010 Pottery Lane (north)	727	54%	16
A57 Hyde Road (east)	442	17%	7
A6010 Pottery Lane (south)	779	55%	17
A57 Hyde Road (west)	1,220	54%	21

11.4.592 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.593 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-250. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-250: Future baseline performance at A6010 Pottery Lane/A57 Hyde Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6010 Pottery Lane (north)	734	59%	15
A57 Hyde Road (east)	1,455	52%	23
A6010 Pottery Lane (south)	775	53%	15
A57 Hyde Road (west)	395	36%	9
	2030 PM peak hour (17:00–18:00)		
A6010 Pottery Lane (north)	769	57%	16
A57 Hyde Road (east)	567	22%	9
A6010 Pottery Lane (south)	825	59%	18
A57 Hyde Road (west)	1,270	56%	22

11.4.594 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

A57 Hyde Road/Clowes Street

11.4.595 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-251.

Table 11-251: 2018 baseline performance at A57 Hyde Road/Clowes Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Clowes Street	140	90%	3
A57 Hyde Road (east)	980	77%	0
A57 Hyde Road (west)	544	15%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Clowes Street	159	83%	2
A57 Hyde Road (east)	431	46%	0
A57 Hyde Road (west)	1,428	37%	0

11.4.596 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 90% on the Clowes Street approach in the AM peak hour with an associated queue length of three PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 83% on the Clowes Street approach with an associated queue length of two PCU.

11.4.597 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-252. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-252: Future baseline performance at A57 Hyde Road/Clowes Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Clowes Street	75	95%	3	66	100%	3	58	102%	3
A57 Hyde Road (east)	1,320	97%	0	1,400	99%	0	1,454	100%	0
A57 Hyde Road (west)	647	17%	0	672	18%	0	688	18%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Clowes Street	148	88%	2	151	94%	3	145	96%	3
A57 Hyde Road (east)	553	55%	0	597	59%	0	662	64%	0
A57 Hyde Road (west)	1,512	39%	0	1,526	39%	0	1,558	40%	0

11.4.598 In the 2030 future baseline, the assessment shows that this junction operates close to capacity with a maximum VoC of 97% on the A57 Hyde Road (east) approach in the AM peak hour with no queue. In the PM peak hour, the maximum VoC of 88% is on the Clowes Street approach with a queue length of two PCU.

11.4.599 In the 2038 future baseline, this junction operates over capacity with a maximum VoC of 100% on the Clowes Street approach in the AM peak hour with an associated queue length of three PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity with a maximum VoC of 94% on the Clowes Street approach and an associated queue length of three PCU.

11.4.600 In the 2046 future baseline, this junction operates over capacity with a maximum VoC of 102% on the Clowes Street approach with a queue of three PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity with a maximum VoC of 96% on the Clowes Street approach and an associated queue length of three PCU.

A665 Devonshire Street/Coverdale Crescent/Hellidon Close

11.4.601 This junction is a four-arm priority controlled (give way) staggered crossroads with no controlled pedestrian crossing facilities. The Hellidon Close approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-253.

Table 11-253: 2018 baseline performance at A665 Devonshire Street/Coverdale Crescent/Hellidon Close junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A665 Devonshire Street (north)	600	31%	0
Coverdale Crescent	166	85%	2
A665 Devonshire Street (south)	598	25%	0
Hellidon Close	-	-	-
	2018 PM peak hour (17:00–18:00) baseline results		
A665 Devonshire Street (north)	453	23%	0
Coverdale Crescent	193	73%	1
A665 Devonshire Street (south)	621	25%	0
Hellidon Close	-	-	-

11.4.602 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 85% on the Coverdale Crescent approach in the AM peak hour with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.603 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-254. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-254: Future baseline performance at A665 Devonshire Street/Coverdale Crescent/Hellidon Close junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A665 Devonshire Street (north)	629	32%	0
Coverdale Crescent	187	96%	4
A665 Devonshire Street (south)	648	27%	0
Hellidon Close	-	-	-

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 PM peak hour (17:00–18:00)		
A665 Devonshire Street (north)	462	24%	0
Coverdale Crescent	189	84%	2
A665 Devonshire Street (south)	821	33%	0
Hellidon Close	-	-	-

11.4.604 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 96% on the Coverdale Crescent approach in the AM peak hour with an associated queue length of four PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 84% on the Coverdale Crescent approach with an associated queue length of two PCU.

A57 Hyde Road/Bennett Street

11.4.605 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-255.

Table 11-255: 2018 baseline performance at A57 Hyde Road/Bennett Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Bennett Street	81	71%	1
A57 Hyde Road (east)	948	49%	0
A57 Hyde Road (west)	547	14%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Bennett Street	8	10%	0
A57 Hyde Road (east)	491	25%	0
A57 Hyde Road (west)	1,436	37%	0

11.4.606 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.607 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-256. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-256: Future baseline performance at A57 Hyde Road/Bennett Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Bennett Street	50	83%	2	45	94%	2	41	100%	2
A57 Hyde Road (east)	1,232	63%	0	1,314	68%	0	1,367	70%	0
A57 Hyde Road (west)	652	17%	0	677	17%	0	694	18%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Bennett Street	6	10%	0	7	12%	0	9	19%	0
A57 Hyde Road (east)	611	31%	0	655	34%	0	710	37%	0
A57 Hyde Road (west)	1,520	39%	0	1,533	40%	0	1,566	40%	0

11.4.608 In the 2030 future baseline the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 83% on the Bennett Street approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

11.4.609 In the 2038 future baseline this junction operates close to capacity in the AM peak hour with a maximum VoC of 94% on the Bennett Street approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.610 In the 2046 future baseline this junction operates over capacity in the AM peak hour with a maximum VoC of 100% on the Bennett Street approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

Stamford Road/Corporation Road

11.4.611 This junction is a three-arm priority controlled (give way) roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-257.

Table 11-257: 2018 baseline performance at Stamford Road/Corporation Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Stamford Road (west)	214	27%	0
Stamford Road (east)	405	43%	0
Corporation Road	532	64%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Stamford Road (west)	678	81%	1
Stamford Road (east)	291	40%	0
Corporation Road	495	56%	0

11.4.612 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 81% on the Stamford Road (west) approach with an associated queue length of one PCU.

11.4.613 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-258. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-258: Future baseline performance at Stamford Road/Corporation Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			2046 AM peak hour (08:00–09:00)		
Stamford Road (west)	312	44%	0	343	49%	0
Stamford Road (east)	496	55%	0	554	63%	0
Corporation Road	734	91%	1	750	94%	2
	2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
Stamford Road (west)	733	91%	2	765	95%	2
Stamford Road (east)	391	56%	0	422	62%	0
Corporation Road	714	83%	1	766	90%	1

11.4.614 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 91% on the Corporation Road approach with an associated queue length of one PCU. In the PM peak hour, the maximum VoC of 91% is on the Stamford Road (west) approach with a queue length of two PCU.

11.4.615 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 94% on the Corporation Road approach with an associated queue length of two PCU. In the PM peak hour, the maximum VoC of 95% is on the Stamford Road (west) approach with a queue length of two PCU.

A665 Devonshire Street North/A57 Hyde Road/A665 Devonshire Street

11.4.616 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-259.

Table 11-259: 2018 baseline performance at A665 Devonshire Street North/A57 Hyde Road/A665 Devonshire Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A665 Devonshire Street North	566	91%	8
A57 Hyde Road (east)	1,056	36%	13
A665 Devonshire Street	698	91%	10
A57 Hyde Road (west)	375	65%	7
	2018 PM peak hour (17:00–18:00) baseline results		
A665 Devonshire Street North	603	70%	8
A57 Hyde Road (east)	521	23%	8

Approach	Flow, PCU/hr	VoC	Queue, PCU
A665 Devonshire Street	678	56%	9
A57 Hyde Road (west)	1,076	74%	17

11.4.617 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 91% on both the A665 Devonshire Street North and A665 Devonshire Street approaches in the AM peak hour with an associated queue length of eight PCU and 10 PCU respectively. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.618 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-260. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-260: Future baseline performance at A665 Devonshire Street North/A57 Hyde Road/A665 Devonshire Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A665 Devonshire Street North	584	95%	9	588	95%	9	594	96%	9
A57 Hyde Road (east)	1,307	45%	17	1,385	48%	18	1,434	50%	18
A665 Devonshire Street	702	94%	11	711	96%	11	720	98%	11
A57 Hyde Road (west)	471	81%	9	489	94%	9	506	87%	10
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A665 Devonshire Street North	623	72%	9	657	76%	9	701	81%	10
A57 Hyde Road (east)	643	28%	10	688	30%	11	745	33%	12
A665 Devonshire Street	834	70%	12	880	76%	12	921	82%	13
A57 Hyde Road (west)	1,159	79%	19	1,174	80%	19	1,197	82%	19

11.4.619 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 95% on the A665 Devonshire Street North approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 79% on the A57 Hyde Road (west) approach with an associated queue length of 19 PCU.

11.4.620 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 96% on the A665 Devonshire Street approach with an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2038 future baseline with a maximum VoC of 80% on the A57 Hyde Road (west) approach with an associated queue length of 19 PCU.

11.4.621 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 98% on the A665 Devonshire Street approach with an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2046 future baseline with a maximum VoC of 82% on both the A665 Devonshire Street and A57 Hyde Road (west) approaches with an associated queue length of 13 PCU and 19 PCU respectively.

Gorton Lane/Belle Vue Street

11.4.622 This junction is a four-arm priority controlled (give way) staggered junction with no controlled pedestrian crossing facilities. The Gorton Lane (north) approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-261.

Table 11-261: 2018 baseline performance at Gorton Lane/Belle Vue Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Gorton Lane (north)	-	-	-
Gorton Lane (east)	842	42%	0
Belle Vue Street	19	4%	0
Gorton Lane (west)	465	53%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Gorton Lane (north)	-	-	-
Gorton Lane (east)	366	19%	0
Belle Vue Street	51	7%	0
Gorton Lane (west)	657	69%	0

11.4.623 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.624 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-262. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-262: Future baseline performance at Gorton Lane/Belle Vue Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Gorton Lane (north)	-	-	-	-	-	-	-	-	-
Gorton Lane (east)	909	46%	0	942	47%	0	973	49%	0
Belle Vue Street	41	10%	0	72	19%	0	112	31%	1
Gorton Lane (west)	522	66%	0	583	75%	0	600	83%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Gorton Lane (north)	-	-	-	-	-	-	-	-	-
Gorton Lane (east)	399	20%	0	402	20%	0	406	21%	0
Belle Vue Street	47	7%	0	52	8%	0	53	8%	0
Gorton Lane (west)	714	73%	0	745	74%	0	780	76%	0

11.4.625 In the 2030 future baseline, the assessment shows that this junction operates well within capacity.

11.4.626 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 75% on the Gorton Lane (west) approach with no queue. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.627 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 83% on the Gorton Lane (west) approach with no queue. In the PM peak hour, the maximum VoC of 76% is on the Gorton Lane (west) approach with no queue.

A6010 Pottery Lane/Gorton Lane/Wenlock Way

11.4.628 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-263.

Table 11-263: 2018 baseline performance at A6010 Pottery Lane/Gorton Lane/Wenlock Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6010 Pottery Lane (north)	1,215	80%	12
Gorton Lane	834	66%	15
A6010 Pottery Lane (south)	1,014	48%	18
Wenlock Way	63	20%	2
	2018 PM peak hour (17:00–18:00) baseline results		
A6010 Pottery Lane (north)	1,302	47%	11
Gorton Lane	373	49%	8

Approach	Flow, PCU/hr	VoC	Queue, PCU
A6010 Pottery Lane (south)	796	28%	11
Wenlock Way	186	44%	5

11.4.629 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 80% on the A6010 Pottery Lane (north) approach in the AM peak hour with an associated queue length of 12 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.630 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-264. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-264: Future baseline performance at A6010 Pottery Lane/Gorton Lane/Wenlock Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A6010 Pottery Lane (north)	1,263	84%	13	1,290	87%	13	1,307	90%	13
Gorton Lane	895	72%	16	955	77%	17	1,015	81%	18
A6010 Pottery Lane (south)	1,093	53%	19	1,143	57%	20	1,199	59%	21
Wenlock Way	87	27%	2	92	29%	2	112	36%	3
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A6010 Pottery Lane (north)	1,320	48%	11	1,354	49%	11	1,373	50%	11
Gorton Lane	405	54%	9	408	55%	9	406	55%	9
A6010 Pottery Lane (south)	837	30%	11	857	32%	12	886	34%	12
Wenlock Way	232	54%	6	239	56%	6	247	58%	6

11.4.631 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 84% on the A6010 Pottery Lane (north) approach with an associated queue length of 13 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

11.4.632 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 87% on the A6010 Pottery Lane (north) approach with an associated queue length of 13 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.633 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 90% on the A6010 Pottery Lane (north)

approach with an associated queue length of 13 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A665 Chancellor Lane/A665 Devonshire Street North/Higher Ardwick

11.4.634 This junction is a five-arm priority controlled (give way) staggered crossroads with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-265.

Table 11-265: 2017 baseline performance at A665 Chancellor Lane/A665 Devonshire Street North/Higher Ardwick junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
Chancellor Lane (left, ahead and right)	1,432	89%	11
Blind Lane (left, ahead and right)	3	1%	0
Devonshire Street North (left, ahead and right)	954	51%	1
Higher Ardwick (left, ahead and right)	58	13%	0
Temperance Street (left, ahead and right)	3	0%	0
	2017 PM peak hour (17:00–18:00) baseline results		
Chancellor Lane (left, ahead and right)	800	29%	0
Blind Lane (left, ahead and right)	7	1%	0
Devonshire Street North (left, ahead and right)	1,018	54%	1
Higher Ardwick (left, ahead and right)	305	64%	1
Temperance Street (left, ahead and right)	7	1%	0

11.4.635 The assessment shows that this junction operates close to capacity in the 2017 baseline with a maximum DoS of 89% on the Chancellor Lane (left, ahead and right) approach in the AM peak hour with an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2017 baseline.

11.4.636 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-266. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-266: Future baseline performance at A665 Chancellor Lane/A665 Devonshire Street North/Higher Ardwick junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Chancellor Lane (left, ahead and right)	1,657	123%	98	1,675	130%	120	1,680	139%	176

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
Blind Lane (left, ahead and right)	3	0%	0	3	0%	0	3	0%	0
Devonshire Street North (left, ahead and right)	961	51%	1	980	52%	1	996	53%	1
Higher Ardwick (left, ahead and right)	210	44%	0	235	48%	1	267	57%	1
Temperance Street (left, ahead and right)	3	0%	0	3	0%	0	3	0%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Chancellor Lane (left, ahead and right)	828	31%	0	892	34%	0	972	42%	0
Blind Lane (left, ahead and right)	7	0%	0	7	1%	0	7	1%	0
Devonshire Street North (left, ahead and right)	1,176	62%	1	1,227	64%	1	1,275	67%	1
Higher Ardwick (left, ahead and right)	376	86%	3	383	93%	9	376	93%	9
Temperance Street (left, ahead and right)	7	1%	0	7	1%	0	7	1%	0

11.4.637 In the 2030 future baseline, this junction operates over capacity in the AM peak hour with a maximum DoS of 123% on the Chancellor Lane (left, ahead and right) approach with an associated queue length of 98 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum DoS of 86% on the Higher Ardwick (left, ahead and right) approach with an associated queue length of three PCU.

11.4.638 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum DoS of 130% on the Chancellor Lane (left, ahead and right) approach with an associated queue length of 120 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum DoS of 93% on the Higher Ardwick (left, ahead and right) approach with associated queue length of nine PCU.

11.4.639 In the 2046 future baseline, this junction operates over capacity in the AM peak hour with a maximum DoS of 139% on the Chancellor Lane (left, ahead and right) approach with an associated queue length of 176 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum DoS of 93%

on the Higher Ardwick (left, ahead and right) approach with an associated queue length of nine PCU.

A635 Ashton Old Road/Vine Street

11.4.640 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-267.

Table 11-267: 2018 baseline performance at A635 Ashton Old Road/Vine Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A635 Ashton Old Road (east)	1,380	69%	0
Vine Street	84	85%	2
A635 Ashton Old Road (west)	336	20%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A635 Ashton Old Road (east)	573	29%	0
Vine Street	121	54%	1
A635 Ashton Old Road (west)	1,004	71%	0

11.4.641 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 85% on the Vine Street approach in the AM peak hour with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.642 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-268. As the junction is affected by both the construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-268: 2030 future baseline performance at A635 Ashton Old Road/Vine Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A635 Ashton Old Road (east)	1,546	77%	0	1,597	80%	0	1,628	81%	0
Vine Street	51	86%	2	44	91%	2	39	93%	2
A635 Ashton Old Road (west)	376	19%	0	416	21%	0	441	22%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A635 Ashton Old Road (east)	740	37%	0	779	39%	0	833	42%	0
Vine Street	74	66%	1	70	68%	1	58	76%	2

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A635 Ashton Old Road (west)	1,120	67%	0	1,150	69%	0	1,188	73%	0

11.4.643 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 86% on the Vine Street approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

11.4.644 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 91% on the Vine Street approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.645 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 93% on the Vine Street approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2046 future baseline with a maximum VoC of 76% on the Vine Street approach with an associated queue length of two PCU.

A635 Ashton Old Road/Ogden Lane/Fairfield Road

11.4.646 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-269.

Table 11-269: 2018 baseline performance at A635 Ashton Old Road/Ogden Lane/Fairfield Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Fairfield Road	353	91%	8
A635 Ashton Old Road (east)	1,463	48%	16
Ogden Lane	269	94%	6
A635 Ashton Old Road (west)	398	16%	4
	2018 PM peak hour (17:00–18:00) baseline results		
Fairfield Road	265	87%	6
A635 Ashton Old Road (east)	660	26%	7
Ogden Lane	221	91%	5
A635 Ashton Old Road (west)	1,149	39%	12

11.4.647 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 94% on the Ogden Lane approach in the AM peak hour with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 91% is on the Ogden Lane approach with a queue length of five PCU.

11.4.648 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-270. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-270: 2030 future baseline performance at A635 Ashton Old Road/Ogden Lane/Fairfield Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Fairfield Road	338	95%	8
A635 Ashton Old Road (east)	1,597	54%	18
Ogden Lane	274	100%	6
A635 Ashton Old Road (west)	466	19%	5
	2030 PM peak hour (17:00–18:00)		
Fairfield Road	267	89%	7
A635 Ashton Old Road (east)	777	31%	8
Ogden Lane	226	96%	6
A635 Ashton Old Road (west)	1,306	46%	13

11.4.649 This junction operates over capacity in the 2030 future baseline with a maximum VoC of 100% on the Ogden Lane approach with an associated queue length of six PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 96% on the Odgen Lane approach with an associated queue length of six PCU.

11.4.650 The junction analysis indicates that the junction will be operating over its capacity in the 2030 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A635 Manchester Road/Ashton Hill Lane

11.4.651 This junction is a three-arm signal-controlled T-junction with controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-271.

Table 11-271: 2018 baseline performance at A635 Manchester Road/Ashton Hill Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Ashton Hill Lane	177	88%	5
A635 Manchester Road (east)	1,592	67%	8
A635 Manchester Road (west)	336	34%	8
	2018 PM peak hour (17:00–18:00) baseline results		
Ashton Hill Lane	183	91%	5
A635 Manchester Road (east)	917	53%	8
A635 Manchester Road (west)	1,044	51%	17

11.4.652 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 88% on the Ashton Hill Lane approach in the AM peak hour with an associated queue of five PCU. In the PM peak hour, the maximum VoC of 91% is on the Ashton Hill Lane approach with a queue length of five PCU.

11.4.653 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-272. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-272: Future baseline performance at A635 Manchester Road/Ashton Hill Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Ashton Hill Lane	191	95%	6
A635 Manchester Road (east)	1,751	74%	12
A635 Manchester Road (west)	366	37%	9
	2030 PM peak hour (17:00–18:00)		
Ashton Hill Lane	191	95%	6
A635 Manchester Road (east)	1,098	66%	10
A635 Manchester Road (west)	1,162	57%	18

11.4.654 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 95% on the Ashton Hill Lane approach with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 95% is on the Ashton Hill Lane approach with a queue length of six PCU.

A635 Ashton Old Road/A6010 Alan Turing Way/A6010 Pottery Lane

11.4.655 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-273.

Table 11-273: 2018 baseline performance at A635 Ashton Old Road/A6010 Alan Turing Way/A6010 Pottery Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6010 Alan Turing Way	1,060	57%	22
A635 Ashton Old Road (east)	1,396	59%	28
A6010 Pottery Lane	1,293	72%	28
A635 Ashton Old Road (west)	533	40%	13
	2018 PM peak hour (17:00–18:00) baseline results		
A6010 Alan Turing Way	1,022	69%	23
A635 Ashton Old Road (east)	859	32%	15
A6010 Pottery Lane	1,087	70%	25

Approach	Flow, PCU/hr	VoC	Queue, PCU
A635 Ashton Old Road (west)	1,262	61%	26

11.4.656 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.657 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-274. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-274: Future baseline performance at A635 Ashton Old Road/A6010 Alan Turing Way/A6010 Pottery Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A6010 Alan Turing Way	1,140	62%	24	1,181	64%	25	1,233	67%	26
A635 Ashton Old Road (east)	1,474	63%	29	1,508	65%	30	1,552	68%	31
A6010 Pottery Lane	1,325	74%	28	1,338	75%	28	1,339	75%	28
A635 Ashton Old Road (west)	625	48%	15	666	51%	16	734	56%	17
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A6010 Alan Turing Way	1,053	71%	24	1,078	73%	25	1,136	77%	26
A635 Ashton Old Road (east)	1,011	38%	18	1,086	41%	19	1,164	44%	20
A6010 Pottery Lane	1,110	72%	25	1,116	72%	25	1,123	73%	25
A635 Ashton Old Road (west)	1,363	66%	28	1,383	68%	29	1,391	69%	29

11.4.658 In the 2030 future baseline, the assessment shows that this junction operates well within capacity.

11.4.659 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 75% on the A6010 Pottery Lane approach with an associated queue length of 28 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.660 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum of VoC of 75% on the A6010 Pottery Lane approach with an associated queue length of 26 PCU. In the PM peak hour, the maximum VoC of 77% is on the A6010 Alan Turing Way approach with a queue length of 26 PCU.

A635 Ashton Old Road/Stainforth Street

11.4.661 This junction is a three-arm signal-controlled T-junction with controlled pedestrian crossing facilities. Stainforth Street is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-275.

Table 11-275: 2018 baseline performance at A635 Ashton Old Road/Stainforth Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A635 Ashton Old Road (east)	1,234	82%	21
A635 Ashton Old Road (west)	589	21%	2
	2018 PM peak hour (17:00–18:00) baseline results		
A635 Ashton Old Road (east)	517	36%	9
A635 Ashton Old Road (west)	1,262	45%	4

11.4.662 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 82% on the A635 Ashton Old Road (east) approach, with an associated queue length of 21 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.663 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-276. As the junction is only affected by both construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-276: Future baseline performance at A635 Ashton Old Road/Stainforth Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A635 Ashton Old Road (east)	1,338	88%	22
A635 Ashton Old Road (west)	683	24%	2
	2030 PM peak hour (17:00–18:00)		
A635 Ashton Old Road (east)	606	42%	11
A635 Ashton Old Road (west)	1,363	49%	5

11.4.664 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 88% on the A635 Ashton Old Road (east) approach with an associated queue length of 22 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

A635 Ashton Old Road/Gable Street

11.4.665 This junction is a three-arm signal-controlled T-junction with controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-277.

Table 11-277: 2018 baseline performance at A635 Ashton Old Road/Gable Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A635 Ashton Old Road (east)	1,234	82%	6
Gable Street	304	29%	6
A635 Ashton Old Road (west)	589	28%	2
	2018 PM peak hour (17:00–18:00) baseline results		
A635 Ashton Old Road (east)	517	36%	2
Gable Street	52	5%	1
A635 Ashton Old Road (west)	1,262	61%	2

11.4.666 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 82% on the A635 Ashton Old Road (east) approach with an associated queue length of six PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.667 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-278. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-278: Future baseline performance at A635 Ashton Old Road/Gable Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A635 Ashton Old Road (east)	1,338	88%	9
Gable Street	364	35%	7
A635 Ashton Old Road (west)	683	32%	2
	2030 PM peak hour (17:00–18:00)		
A635 Ashton Old Road (east)	606	42%	2
Gable Street	72	6%	1
A635 Ashton Old Road (west)	1,363	66%	3

11.4.668 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 88% on the A635 Ashton Old Road (east) approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

A635 Ashton Old Road/Rondin Road

11.4.669 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-279.

Table 11-279: 2018 baseline performance at A635 Ashton Old Road/Rondin Road junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A635 Aston Old Road (west) (ahead and right)	667	32%	0
A635 Aston Old Road (east) (left and ahead)	1,442	0%	0
Rondin Road (left and right)	6	2%	0
	2017 PM peak hour (17:00–18:00) baseline results		
A635 Aston Old Road (west) (ahead and right)	652	26%	0
A635 Aston Old Road (east) (left and ahead)	749	0%	0
Rondin Road (left and right)	31	6%	0

11.4.670 The assessment shows that this junction operates well within capacity in the 2017 baseline.

11.4.671 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-280. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-280: Future baseline performance at A635 Ashton Old Road/Rondin Road junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A635 Aston Old Road (west) (ahead and right)	759	36%	7	797	38%	0	827	39%	0
A635 Aston Old Road (east) (left and ahead)	1,596	0%	0	1,660	0%	0	1,752	0%	0
Rondin Road (left and right)	6	2%	0	6	2%	0	8	5%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A635 Aston Old Road (west) (ahead and right)	743	32%	0	762	33%	0	772	33%	0
A635 Aston Old Road (east) (left and ahead)	870	0%	0	916	0%	0	977	0%	0
Rondin Road (left and right)	34	6%	0	35	6%	0	37	7%	0

11.4.672 The assessment shows that this junction operates well within capacity in the 2030, 2038 and 2046 future baseline.

A635 Ashton Old Road/A665 Midland Street

11.4.673 This junction is a three-arm signal controlled T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-281.

Table 11-281: 2017 baseline performance at A635 Ashton Old Road/A665 Midland Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A635 Ashton Old Road (east) (nearside) (ahead)	491	32%	3
A635 Ashton Old Road (east) (offside) (ahead)	936	55%	8
A665 Midland Street (left and right)	25	16%	1
A635 Ashton Old Road (west) (ahead)	642	35%	1
	2017 PM peak hour (17:00–18:00) baseline results		
A635 Ashton Old Road (east) (nearside) (ahead)	287	23%	3
A635 Ashton Old Road (east) (offside) (ahead)	492	35%	6
A665 Midland Street (left and right)	174	39%	4
A635 Ashton Old Road (west) (ahead)	478	25%	2

11.4.674 The assessment shows that this junction operates well within capacity in the 2017 baseline.

11.4.675 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-282. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-282: 2030 future baseline performance at A635 Ashton Old Road/A665 Midland Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A635 Ashton Old Road (east) (nearside) (ahead)	620	80%	16
A635 Ashton Old Road (east) (offside) (ahead)	959	113%	86
A665 Midland Street (left and right)	42	4%	1
A635 Ashton Old Road (west) (ahead)	718	80%	18
	2030 PM peak hour (17:00–18:00)		
A635 Ashton Old Road (east) (nearside) (ahead)	362	35%	6
A635 Ashton Old Road (east) (offside) (ahead)	538	48%	9
A665 Midland Street (left and right)	280	39%	6
A635 Ashton Old Road (west) (ahead)	473	32%	7

11.4.676 In the 2030 future baseline, the assessment shows that this junction operates over capacity in the AM peak hour with a maximum DoS of 113% on offside lane of the A635 Ashton Old Road (east) approach with an associated queue length of 86 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

11.4.677 The junction analysis indicates that the junction will be operating over its capacity in the 2030 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A635 Manchester Road/A6140 Moss Way

11.4.678 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-283.

Table 11-283: 2018 baseline performance at A635 Manchester Road/A6140 Moss Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6140 Moss Way (north)	86	28%	3
A635 Manchester Road (east)	1,181	44%	9
A6140 Moss Way (south)	1,374	70%	23
A635 Manchester Road (west)	1,197	39%	24
	2018 PM peak hour (17:00–18:00) baseline results		
A6140 Moss Way (north)	186	30%	5
A635 Manchester Road (east)	1,198	46%	26
A6140 Moss Way (south)	1,267	68%	21
A635 Manchester Road (west)	1,363	47%	21

11.4.679 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.680 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-284. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-284: Future baseline performance at A635 Manchester Road/A6140 Moss Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6140 Moss Way (north)	93	30%	3
A635 Manchester Road (east)	1,388	52%	11
A6140 Moss Way (south)	1,449	74%	25
A635 Manchester Road (west)	1,306	42%	25
	2030 PM peak hour (17:00–18:00)		
A6140 Moss Way (north)	200	33%	6
A635 Manchester Road (east)	1,260	49%	27
A6140 Moss Way (south)	1,305	70%	22
A635 Manchester Road (west)	1,485	51%	25

11.4.681 In the 2030 future baseline, the assessment shows that this junction operates well within capacity.

A662 Ashton New Road/Hillkirk Street

11.4.682 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-285.

Table 11-285: 2018 baseline performance at A662 Ashton New Road/Hillkirk Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Hillkirk Street	138	70%	1
A662 Ashton New Road (east)	934	36%	0
A662 Ashton New Road (west)	279	14%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Hillkirk Street	225	84%	2
A662 Ashton New Road (east)	336	14%	0
A662 Ashton New Road (west)	612	31%	0

11.4.683 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 84% on the Hillkirk Street approach with an associated queue length of two PCU.

11.4.684 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-286. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-286: Future baseline performance at A662 Ashton New Road/Hillkirk Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Hillkirk Street	157	87%	2
A662 Ashton New Road (east)	1,029	40%	0
A662 Ashton New Road (west)	305	15%	0
	2030 PM peak hour (17:00–18:00)		
Hillkirk Street	224	87%	2
A662 Ashton New Road (east)	363	15%	0
A662 Ashton New Road (west)	595	30%	0

11.4.685 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 87% on the Hillkirk Street approach in the AM peak hour with an associated queue length of two PCU. In the PM peak hour, the maximum VoC of 87% is on the Hillkirk Street approach with a queue length of two PCU.

Millstream Lane/Edge Lane/Berry Brow

11.4.686 This junction is a three-arm priority controlled crossroads with no pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-287.

Table 11-287: 2018 baseline performance at Millstream Lane/Edge Lane/Berry Brow junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Berry Brow	764	38%	0
Millstream Lane	298	102%	6
Edge Lane	705	68%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Berry Brow	649	33%	0
Millstream Lane	339	93%	3
Edge Lane	720	101%	2

11.4.687 This junction operates over capacity in the 2018 baseline with a maximum VoC of 102% on the Millstream Lane approach in the AM peak hour with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 101% is on the Edge Lane approach with a queue length of two PCU.

11.4.688 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-288. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-288: Future baseline performance at Millstream Lane/Edge Lane/Berry Brow junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Berry Brow	923	46%	0	952	48%	0
Millstream Lane	240	104%	6	225	105%	6
Edge Lane	749	88%	0	786	85%	0
	2038 PM peak hour (17:00-18:00)			**2046 PM peak hour (17:00-18:00)**		
Berry Brow	847	43%	0	984	50%	0
Millstream Lane	286	98%	5	241	98%	5
Edge Lane	609	103%	2	554	104%	2

11.4.689 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 104% on the Millstream Lane approach with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 103% is on the Edge Lane approach with a queue length of two PCU.

11.4.690 In the 2046 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 105% on the Millstream Lane approach with an associated queue length of

six PCU. In the PM peak hour, the maximum VoC of 104% is on the Edge Lane approach with a queue length of two PCU.

Briscoe Lane/Grimshaw Lane

11.4.691 This junction is a three-arm priority (give-way) controlled T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-289.

Table 11-289: 2018 baseline performance at Briscoe Lane/Grimshaw Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Briscoe Lane (east)	1,078	82%	0
Briscoe Lane (west)	412	22%	0
Grimshaw Lane	280	77%	1
	2018 PM peak hour (17:00–18:00) baseline results		
Briscoe Lane (east)	663	60%	0
Briscoe Lane (west)	878	45%	0
Grimshaw Lane	218	70%	1

11.4.692 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 82% on the Briscoe Lane (east) approach in the AM peak hour with no queue. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.693 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-290. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-290: Future baseline performance at Briscoe Lane/Grimshaw Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Briscoe Lane (east)	1,116	88%	0
Briscoe Lane (west)	431	23%	0
Grimshaw Lane	325	86%	1
	2030 PM peak hour (17:00–18:00)		
Briscoe Lane (east)	669	64%	0
Briscoe Lane (west)	923	47%	0
Grimshaw Lane	240	80%	1

11.4.694 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 88% on the Briscoe Lane (east) approach with no queue. In the PM peak hour, the assessment shows that this junction operates

within capacity in the 2030 future baseline with a maximum VoC of 80% on the Grimshaw Lane approach with an associated queue length of one PCU.

Briscoe Lane/Ten Acres Lane

11.4.695 This junction is a four-arm signalised crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-291.

Table 11-291: 2018 baseline performance at Briscoe Lane/Ten Acres Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Ten Acres Lane (north)	480	85%	8
Briscoe Lane (east)	940	98%	11
Ten Acres Lane (south)	256	43%	4
Briscoe Lane (west)	477	75%	6
	2018 PM peak hour (17:00–18:00) baseline results		
Ten Acres Lane (north)	317	58%	5
Briscoe Lane (east)	580	58%	7
Ten Acres Lane (south)	342	57%	6
Briscoe Lane (west)	895	84%	11

11.4.696 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 98% on the Briscoe Lane (east) approach with an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 84% on the Briscoe Lane (west) approach with an associated queue length of 11 PCU.

11.4.697 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-292. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-292: Future baseline performance at Briscoe Lane/Ten Acres Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Ten Acres Lane (north)	489	87%	8
Briscoe Lane (east)	937	99%	11
Ten Acres Lane (south)	284	44%	5
Briscoe Lane (west)	534	85%	7
	2030 PM peak hour (17:00–18:00)		
Ten Acres Lane (north)	360	62%	6
Briscoe Lane (east)	625	63%	8
Ten Acres Lane (south)	344	60%	6
Briscoe Lane (west)	921	87%	12

11.4.698 In the AM peak hour, this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 99% on the Briscoe Lane (east) approach with an associated queue length of 11 PCU. In the PM peak hour, the maximum VoC of 87% is on the Briscoe Lane (west) approach with a queue length of 12 PCU.

Culcheth Lane/Briscoe Lane

11.4.699 This junction is a three-arm priority controlled T-junction with no pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-293.

Table 11-293: 2018 baseline performance at Culcheth Lane/Briscoe Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Culcheth Lane (north)	571	92%	1
Culcheth Lane (south)	226	11%	0
Briscoe Lane	373	49%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Culcheth Lane (north)	672	82%	0
Culcheth Lane (south)	91	5%	0
Briscoe Lane	685	79%	1

11.4.700 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 92% on the Culcheth Lane (north) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 82% on the Culcheth Lane (north) approach with no queue.

11.4.701 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-294. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-294: Future baseline performance at Culcheth Lane/Briscoe Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Culcheth Lane (north)	468	80%	1	445	78%	1
Culcheth Lane (south)	286	15%	0	307	16%	0
Briscoe Lane	405	51%	0	407	52%	1
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Culcheth Lane (north)	736	87%	0	781	91%	0
Culcheth Lane (south)	80	4%	0	82	4%	0
Briscoe Lane	729	85%	1	749	89%	2

11.4.702 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 80% on the Culcheth Lane (north) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 87% on the Culcheth Lane (north) approach with no queue.

11.4.703 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 78% on the Culcheth Lane (north) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 91% on the Culcheth Lane (north) approach with no queue.

A663 Broadway/Long Lane

11.4.704 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The Costco Access Road approach is a minor arm and is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-295.

Table 11-295: 2018 baseline performance at A663 Broadway/Long Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A663 Broadway (north)	1,902	82%	29
Long Lane	239	67%	6
A663 Broadway (south)	1,329	87%	13
Costco Access Road	-	-	-
	2018 PM peak hour (17:00–18:00) baseline results		
A663 Broadway (north)	2,076	85%	43
Long Lane	241	67%	6
A663 Broadway (south)	1,501	85%	17
Costco Access Road	-	-	-

11.4.705 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 87% on the A663 Broadway (south) approach, with an associated queue length of 13 PCU. In the PM peak hour, the maximum VoC of 85% is on both the A663 Broadway (north) and A663 Broadway (south) approaches with a queue length of 43 PCU and 17 PCU respectively.

11.4.706 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-296. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-296: Future baseline performance at A663 Broadway/Long Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A663 Broadway (north)	1,952	84%	30
Long Lane	239	67%	6
A663 Broadway (south)	1,186	78%	11
Costco Access Road	-	-	-
	2030 PM peak hour (17:00–18:00)		
A663 Broadway (north)	2,142	88%	45
Long Lane	247	69%	6
A663 Broadway (south)	1,491	85%	16
Costco Access Road	-	-	-

11.4.707 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 84% on the A663 Broadway (north) approach with an associated queue length of 30 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity with a maximum VoC of 88% on the A663 Broadway (north) approach with an associated queue length of 45 PCU.

MA08

A57(M) Mancunian Way/A5067 Cambridge Street/Cambridge Street

11.4.708 This junction is a four-arm priority controlled grade separated roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-297.

Table 11-297: 2018 baseline performance at A57(M) Mancunian Way/A5067 Cambridge Street/Cambridge Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Cambridge Street	299	24%	0
A57(M) Mancunian Way westbound off-slip	1,175	96%	3
A5067 Cambridge Street (south)	363	32%	0
A5103 Mancunian Way	1,072	63%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Cambridge Street	501	35%	0
A57(M) Mancunian Way westbound off-slip	1,089	90%	1
A5067 Cambridge Street (south)	363	25%	0
A5103 Mancunian Way	1,224	58%	0

11.4.709 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 96% on the A57(M) Mancunian Way westbound off-slip approach in the AM peak hour with an associated queue length of three PCU. In the PM peak hour, the maximum VoC of 90% is on the A57(M) Mancunian Way westbound off-slip approach with a queue length of one PCU.

11.4.710 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-298. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-298: Future baseline performance at A57(M) Mancunian Way/A5067 Cambridge Street/Cambridge Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Cambridge Street	522	34%	0	528	35%	0	548	37%	0
A57(M) Mancunian Way westbound off-slip	1,105	103%	7	1,095	104%	7	1,095	104%	7

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A5067 Cambridge Street (south)	692	64%	1	707	65%	1	740	67%	1
A5103 Mancunian Way	691	38%	0	740	41%	0	761	43%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Cambridge Street	910	67%	1	905	68%	1	906	69%	1
A57(M) Mancunian Way westbound off-slip	1,044	102%	7	1,059	102%	7	1,056	102%	7
A5067 Cambridge Street (south)	346	28%	0	359	29%	0	389	31%	0
A5103 Mancunian Way	1,315	60%	0	1,337	61%	0	1,374	64%	0

11.4.711 This junction operates over capacity in the 2030 future baseline with a maximum VoC of 103% on the A57(M) Mancunian Way westbound off-slip approach in the AM peak hour with an associated queue length of seven PCU. In the PM peak hour, the maximum VoC of 102% is on the A57(M) Mancunian Way westbound off-slip approach with a queue length of seven PCU.

11.4.712 This junction operates over capacity in the 2038 future baseline with a maximum VoC of 104% on the A57(M) Mancunian Way westbound off-slip approach in the AM peak hour with an associated queue length of seven PCU. In the PM peak hour, the maximum VoC of 102% is on the A57(M) Mancunian Way westbound off-slip approach with a queue length of seven PCU.

11.4.713 This junction operates over capacity in the 2046 future baseline with a maximum VoC of 104% on the A57(M) Mancunian Way westbound off-slip approach in the AM peak hour with an associated queue length of seven PCU. In the PM peak hour, the maximum VoC of 102% is on the A57(M) Mancunian Way westbound off-slip approach with a queue length of seven PCU.

A57 (M) Mancunian Way/A5103 Princess Road/A5103 Medlock Street

11.4.714 This junction is a four-arm signal controlled roundabout with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-299.

Table 11-299: 2018 baseline performance at A57 (M) Mancunian Way/A5103 Princess Road/A5103 Medlock Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Medlock Street	472	49%	1

Approach	Flow, PCU/hr	VoC	Queue, PCU
A5103 Mancunian Way	934	63%	1
A5103 Princess Road	2,525	95%	3
A57(M) Mancunian Way	581	104%	8
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Medlock Street	860	77%	1
A5103 Mancunian Way	1,050	77%	1
A5103 Princess Road	1,946	71%	1
A57(M) Mancunian Way	962	70%	1

11.4.715 In the AM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 104% on the A57(M) Mancunian Way approach with an associated queue length of eight PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 77% on the A5103 Medlock Street approach with an associated queue length of one PCU.

11.4.716 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-300. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-300: Future baseline performance at A57 (M) Mancunian Way/A5103 Princess Road/A5103 Medlock Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A5103 Medlock Street	564	42%	0	573	44%	0	592	46%	0
A5103 Mancunian Way	1,424	98%	7	1,421	97%	6	1,415	98%	7
A5103 Princess Road	1,905	102%	12	1,928	102%	12	1,953	102%	12
A57(M) Mancunian Way	658	106%	9	650	106%	9	636	106%	8
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A5103 Medlock Street	1,091	85%	2	1,080	86%	2	1,094	89%	3
A5103 Mancunian Way	1,391	97%	5	1,391	97%	5	1,388	97%	6
A5103 Princess Road	2,143	87%	2	2,210	89%	2	2,254	90%	2
A57(M) Mancunian Way	1,029	94%	5	987	96%	6	949	97%	6

11.4.717 In the 2030 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 106% on the A57(M) Mancunian Way approach with an associated queue

length of nine PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 97% on the A5103 Mancunian Way approach with an associated queue length of five PCU.

11.4.718 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 106% on the A57(M) Mancunian Way approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 97% on the A5103 Mancunian Way approach and an associated queue length of five PCU.

11.4.719 In the 2046 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 106% on the A57(M) Mancunian Way approach with an associated queue length of eight PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 97% on both the A5103 Mancunian Way and A5103 Mancunian Way approaches with an associated queue length of six PCU on both approaches.

11.4.720 The junction analysis indicates that the junction will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A57 Mancunian Way/A56 Chester Road/A5067 Chorlton Road (Deansgate Interchange)

11.4.721 This junction is a five-arm partially signal controlled hamburger roundabout with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-301.

Table 11-301: 2018 baseline performance at A57(M) Mancunian Way/A56 Chester Road/A5067 Chorlton Road (Deansgate Interchange) junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A56 Chester Road (east)	807	51%	13
A57(M) Mancunian Way off-slip	583	32%	0
A5067 Chorlton Road	908	58%	0
A56 Chester Road (west)	1,775	75%	23
A57 Egerton Street off-slip	488	32%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A56 Chester Road (east)	1,450	88%	23
A57(M) Mancunian Way off-slip	565	34%	0
A5067 Chorlton Road	682	37%	0
A56 Chester Road (west)	1,360	55%	17
A57 Egerton Street off-slip	388	24%	0

11.4.722 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 75% on the A56 Chester Road (west) approach in the AM peak hour with an associated queue length of 23 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with the maximum VoC of 88% on the A56 Chester Road (east) approach with an associated queue length of 23 PCU.

11.4.723 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-302. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-302: Future baseline performance at A57(M) Mancunian Way/A56 Chester Road/A5067 Chorlton Road (Deansgate Interchange) junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A56 Chester Road (east)	886	56%	14	902	57%	14	915	58%	14
A57(M) Mancunian Way off-slip	888	52%	0	994	58%	0	1,092	64%	0
A5067 Chorlton Road	997	101%	7	980	103%	7	929	105%	7
A56 Chester Road (west)	1,791	77%	23	1,791	77%	23	1,791	77%	23
A57 Egerton Street off-slip	649	53%	1	641	52%	1	636	52%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A56 Chester Road (east)	1,538	96%	24	1,536	96%	24	1,541	100%	24
A57(M) Mancunian Way off-slip	796	63%	1	845	69%	1	888	73%	1
A5067 Chorlton Road	599	43%	0	643	47%	0	692	51%	0
A56 Chester Road (west)	1,714	74%	22	1,728	75%	22	1,745	76%	22
A57 Egerton Street off-slip	476	38%	0	519	42%	0	692	51%	0

11.4.724 In the 2030 future baseline this junction operates over capacity in the AM peak hour with a maximum VoC of 101% on the A5067 Chorlton Road approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 96% on the A56 Chester Road (east) approach with an associated queue length of 24 PCU.

11.4.725 In the 2038 future baseline this junction operates over capacity in the AM peak hour with a maximum VoC of 103% on the A5067 Chorlton Road approach with an associated queue

length of seven PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 96% on the A56 Chester Road (east) approach with an associated queue length of 24 PCU.

11.4.726 In the 2046 future baseline this junction operates over capacity with a maximum VoC of 105% on the A5067 Chorlton Road approach in the AM peak hour with an associated queue length of seven PCU. In the PM peak hour, the maximum VoC of 100% is on the A56 Chester Road (east) approach with a queue length of 24 PCU.

A57(M) Mancunian Way/A6 London Road/A6 Downing Street

11.4.727 This junction is a four-arm signal controlled grade separated crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-303.

Table 11-303: 2018 baseline performance at A57(M) Mancunian Way/A6 London Road/A6 Downing Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6 London Road (north)	729	33%	7
A635 Mancunian Way westbound off-slip	0	0%	0
A6 Downing Street	1,053	32%	7
A57(M) Mancunian Way eastbound off-slip	781	64%	10
A6 London Road southbound central link	1,200	48%	11
A6 London Road northbound central link	486	39%	1
	2018 PM peak hour (17:00–18:00) baseline results		
A6 London Road (north)	1,129	61%	13
A635 Mancunian Way westbound off-slip	0	0%	0
A6 Downing Street	594	25%	4
A57(M) Mancunian Way eastbound off-slip	929	52%	12
A6 London Road southbound central link	1,858	78%	18
A6 London Road northbound central link	238	38%	1

11.4.728 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 78% on the A6 London Road southbound central link approach and an associated queue length of 18 PCU.

11.4.729 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-304. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-304: Future baseline performance at A57(M) Mancunian Way/A6 London Road/A6 Downing Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A6 London Road (north)	1,002	46%	10	1,039	48%	10	1,085	50%	10
A635 Mancunian Way westbound off-slip	12	1%	0	1	0%	0	0	0%	0
A6 Downing Street	1,603	49%	10	1,710	52%	11	1,791	54%	12
A67(M) Mancunian Way eastbound off-slip	645	53%	9	658	54%	9	675	56%	9
A6 London Road southbound central link	1,466	59%	12	1,505	61%	12	1,548	62%	12
A6 London Road northbound central link	658	52%	2	678	54%	2	690	55%	2
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A6 London Road (north)	1,049	57%	12	1,055	57%	10	1,058	57%	12
A635 Mancunian Way westbound off-slip	73	7%	1	83	8%	1	91	9%	1
A6 Downing Street	744	31%	3	809	34%	3	878	37%	4
A67(M) Mancunian Way eastbound off-slip	851	48%	13	860	48%	13	854	48%	13
A6 London Road southbound central link	1,835	77%	19	1,851	77%	19	1,856	78%	19
A6 London Road northbound central link	199	32%	1	209	33%	1	247	39%	1

11.4.730 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 77% on the A6 London Road southbound central link approach with an associated queue length of 19 PCU.

11.4.731 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2038 future baseline with a maximum VoC of 77% on the A6 London Road southbound central link approach with an associated queue length of 19 PCU.

11.4.732 In the 2046 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2046 future baseline with a maximum VoC of 78% on the A6 London Road southbound central link approach with an associated queue length of 19 PCU.

M602 junction 3/A57 Regent Road/A57 Eccles New Road/A5063 Albion Way/A5063 Trafford Road

11.4.733 This junction is a five-arm signal controlled roundabout with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-305.

Table 11-305: 2018 baseline performance at M602 junction 3/A57 Regent Road/A57 Eccles New Road/A5063 Albion Way/A5063 Trafford Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5063 Albion Way	1,003	52%	13
A57 Regent Road	2,253	74%	31
A5063 Trafford Road	755	46%	11
A57 Eccles New Road	759	34%	10
M602	3,009	96%	45
	2018 PM peak hour (17:00–18:00) baseline results		
A5063 Albion Way	1,247	52%	14
A57 Regent Road	2,126	93%	32
A5063 Trafford Road	1,479	58%	15
A57 Eccles New Road	1,957	54%	15
M602	1,939	62%	29

11.4.734 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 96% on the M602 approach in the AM peak hour with an associated queue length of 45 PCU. In the PM peak hour, the maximum VoC of 93% is on the A57 Regent Road approach with a queue length of 32 PCU.

11.4.735 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-306. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-306: Future baseline performance at M602 junction 3/A57 Regent Road/A57 Eccles New Road/A5063 Albion Way/A5063 Trafford Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A5063 Albion Way	1,180	61%	15	1,198	62%	16	1,211	62%	16
A57 Regent Road	2,322	76%	32	2,373	78%	33	2,426	80%	33
A5063 Trafford Road	743	45%	11	690	42%	10	701	42%	10
A57 Eccles New Road	624	28%	8	669	30%	9	721	32%	9
M602	3,195	102%	46	3,238	103%	46	3,279	105%	46

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A5063 Albion Way	1,256	52%	14	1,248	52%	14	1,248	52%	14
A57 Regent Road	2,201	96%	33	2,252	98%	33	2,320	101%	34
A5063 Trafford Road	1,504	59%	15	1,554	61%	16	1,633	64%	17
A57 Eccles New Road	1,869	51%	15	1,908	52%	15	2,026	56%	16
M602	2,130	68%	32	2,240	71%	33	2,317	74%	34

11.4.736 In the 2030 future baseline this junction operates over capacity in the AM peak hour with a maximum VoC of 102% on the M602 approach with an associated queue length of 46 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 96% on the A57 Regent Road approach and an associated queue length of 33 PCU.

11.4.737 In the 2038 future baseline this junction operates over capacity in the AM peak hour with a maximum VoC of 103% on the M602 approach with an associated queue length of 46 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 98% on the A57 Regent Road approach and an associated queue length of 33 PCU.

11.4.738 In the 2046 future baseline this junction operates over capacity with a maximum VoC of 105% in the AM peak hour on the M602 approach with an associated queue length of 46 PCU. In the PM peak hour, the maximum VoC of 101% is on the A57 Regent Road approach with a queue length of 34 PCU.

M62 junction 18/M66 junction 4/M60 junction 18/Simister Island

11.4.739 This junction is a four-arm signal controlled grade-separated roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-307.

Table 11-307: 2018 baseline performance at M62 junction 18/M66 junction 4/M60 junction 18/Simister Island junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
M66 southbound off-slip	1,097	82%	12
M62 westbound off-slip	502	84%	7
M60 northbound off-slip	519	60%	7
M60 eastbound off-slip	1,396	68%	11
	2018 PM peak hour (17:00–18:00) baseline results		
M66 southbound off-slip	1,220	102%	16

Approach	Flow, PCU/hr	VoC	Queue, PCU
M62 westbound off-slip	660	82%	10
M60 northbound off-slip	847	78%	12
M60 eastbound off-slip	1,680	79%	15

11.4.740 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 84% on the M62 westbound off-slip approach with an associated queue length of seven PCU. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 102% on the M66 southbound off-slip approach with an associated queue length of 16 PCU.

11.4.741 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-308. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-308: Future baseline performance at M62 junction 18/M66 junction 4/M60 junction 18/Simister Island junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
M66 southbound off-slip	1,223	92%	14
M62 westbound off-slip	534	89%	7
M60 northbound off-slip	655	76%	8
M60 eastbound off-slip	1,574	76%	13
	2030 PM peak hour (17:00–18:00)		
M66 southbound off-slip	1,219	102%	16
M62 westbound off-slip	634	79%	9
M60 northbound off-slip	935	86%	13
M60 eastbound off-slip	1,777	84%	16

11.4.742 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 92% on the M66 southbound off-slip approach with an associated queue length of 14 PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 102% on the M66 southbound off-slip approach with an associated queue length of 16 PCU.

A6 Stockport Road/A6 Ardwick Green South/A57 Hyde Road

11.4.743 This junction is a five-arm priority controlled (give way) roundabout with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-309.

Table 11-309: 2018 baseline performance at A6 Stockport Road/A6 Ardwick Green South/A57 Hyde Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Higher Ardwick	408	28%	0
A57 Hyde Road	715	48%	0
A6 Stockport Road	696	54%	0
Brunswick Street	339	28%	0
A6 Ardwick Green South	736	43%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Higher Ardwick	383	36%	0
A57 Hyde Road	357	24%	0
A6 Stockport Road	438	27%	0
Brunswick Street	752	48%	0
A6 Ardwick Green South	1,158	78%	1

11.4.744 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 78% on the A6 Ardwick Green South approach with an associated queue length of one PCU.

11.4.745 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-310. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-310: Future baseline performance at A6 Stockport Road/A6 Ardwick Green South/A57 Hyde Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Higher Ardwick	522	38%	0	581	43%	0	598	45%	0
A57 Hyde Road	959	69%	1	1,020	76%	1	1,049	79%	1
A6 Stockport Road	831	78%	1	872	88%	3	906	95%	4
Brunswick Street	652	67%	1	720	79%	2	753	86%	3
A6 Ardwick Green South	817	52%	0	835	55%	0	862	57%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Higher Ardwick	444	44%	0	495	50%	0	539	55%	1
A57 Hyde Road	500	35%	0	550	39%	0	610	44%	0
A6 Stockport Road	502	34%	0	517	36%	0	539	39%	0
Brunswick Street	972	67%	1	987	71%	1	1,004	74%	1

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A6 Ardwick Green South	1,156	86%	2	1,166	86%	2	1,171	87%	2

11.4.746 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 78% on the A6 Stockport Road approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 86% on the A6 Ardwick Green South approach in the PM peak hour with an associated queue length of two PCU.

11.4.747 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 88% on the A6 Stockport Road with an associated queue length of three PCU. In the PM peak hour, the maximum VoC of 86% is on the A6 Ardwick Green South approach with a queue length of two PCU.

11.4.748 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 95% on the A6 Stockport Road approach in the AM peak hour with an associated queue length of four PCU. In the PM peak hour, the maximum VoC of 87% is on the A6 Ardwick Green South approach with a queue length of two PCU.

A34 Princess Street/A34 Brook Street/Sackville Street

11.4.749 This junction is now a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The former junction was a priority controlled T-junction. The operation of the former junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-311.

Table 11-311: 2018 baseline performance at A34 Princess Street/A34 Brook Street/Sackville Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Princess Street	531	9%	0
Sackville Street	591	102%	5
A34 Brook Street	-	-	-
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Princess Street	900	15%	0
Sackville Street	417	97%	4
A34 Brook Street	-	-	-

11.4.750 In the AM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 102% on the Sackville Street approach with an associated queue length of five PCU. In the PM peak hour, the assessment shows that this junction operates close to

capacity in the 2018 baseline with a maximum VoC of 97% on the Sackville Street approach with an associated queue length of four PCU.

11.4.751 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-312. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-312: Future baseline performance at A34 Princess Street/A34 Brook Street/Sackville Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A34 Princess Street	266	14%	3	275	15%	3	284	15%	3
Sackville Street	604	49%	9	605	49%	9	603	48%	8
A34 Brook Street	544	31%	6	558	31%	6	591	33%	6
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A34 Princess Street	869	45%	9	889	46%	9	901	46%	9
Sackville Street	565	47%	8	571	48%	8	579	48%	8
A34 Brook Street	507	28%	5	545	30%	6	589	32%	6

11.4.752 The assessment shows that this junction operates well within capacity in the 2030, 2038 and 2046 future baseline.

A6 Downing Street/Grosvenor Street

11.4.753 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. Grosvenor Street is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-313.

Table 11-313: 2018 baseline performance at A6 Downing Street/Grosvenor Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6 Downing Street (north)	1,111	46%	8
A6 Downing Street (south)	896	68%	16
	2018 PM peak hour (17:00–18:00) baseline results		
A6 Downing Street (north)	631	42%	8
A6 Downing Street (south)	1,319	53%	2

11.4.754 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.755 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-314. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-314: Future baseline performance at A6 Downing Street/Grosvenor Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6 Downing Street (north)	1,603	66%	13
A6 Downing Street (south)	1,157	88%	21
	2030 PM peak hour (17:00–18:00)		
A6 Downing Street (north)	824	55%	10
A6 Downing Street (south)	1,394	56%	2

11.4.756 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 88% on the A6 Downing Street (south) approach with an associated queue length of 21 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

A5103 Albion Street/A5103 Medlock Street/City Road East

11.4.757 This junction is a three-arm priority T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-315.

Table 11-315: 2018 baseline performance at A5103 Albion Street/A5103 Medlock Street/City Road East junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Albion Street	566	25%	0
A5103 Medlock Street	1,042	27%	0
City Road East	134	31%	1
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Albion Street	741	30%	0
A5103 Medlock Street	506	13%	0
City Road East	264	40%	3

11.4.758 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.759 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-316. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-316: Future baseline performance at A5103 Albion Street/A5103 Medlock Street/City Road East junction

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A5103 Albion Street	542	25%	0	552	25%	0	565	26%	0
A5103 Medlock Street	1,485	38%	0	1,470	37%	0	1,469	37%	0
City Road East	179	65%	3	182	65%	3	185	66%	3
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A5103 Albion Street	1,013	45%	0	995	44%	0	993	44%	0
A5103 Medlock Street	1,182	31%	0	1,195	31%	0	1,188	31%	0
City Road East	351	83%	4	358	86%	5	366	88%	5

11.4.760 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 83% on the City Road East approach with an associated queue length of four PCU.

11.4.761 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 86% on the City Road East approach with an associated queue length of five PCU.

11.4.762 In the 2046 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 88% on the City Road East approach with an associated queue length of five PCU.

A635/A665 Pin Mill Brow network

Existing layout

11.4.763 The A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street/A635 Mancunian Way/A665 Pin Mill Brow network incorporates the following four junctions:

- A665 Pin Mill Brow/A635 Mancunian Way is a three-arm signal controlled junction to the north;
- A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street is a four-arm signal controlled junction to the east;

- A665 Chancellor Lane/A665 Midland Street/North Western Street is a four-arm priority controlled (give way) staggered junction approximately 260m to the south. The North Western Street approach is a minor arm that is not included within the LinSig model; and
- A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street is a four-arm signal controlled junction to the west.

11.4.764 The operation of the junctions that form the A635/A665 Pin Mill Brow network have been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software. A summary of performance for the main approaches is shown in Table 11-317, while the results for each lane of the individual junctions are included in Table 11-318, Table 11-319, Table 11-320 and Table 11-321.

Table 11-317: 2017 baseline performance of key approaches at A635/A665 Pin Mill Brow network

Junction	Approach	Total flow, PCU/hr	Max DoS	Total queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results			
A665 Pin Mill Brow/A665 Mancunian Way	A665 Pin Mill Brow (north)	1,834	67%	24
	A665 Pin Mill Brow (south)	1,141	92%	17
	A635 Mancunian Way	1,432	95%	43
A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street	A665 Pin Mill Brow	1,123	50%	13
	A635 Ashton Old Road	1,427	104%	48
	A665 Chancellor Lane	957	103%	48
	A635 Fairfield Street	697	112%	41
A665 Chancellor Lane/A665 Midland Street/North Western Street	A665 Chancellor Lane (north)	1,215	0%	0
	A665 Midland Street	2	1%	0
	A665 Chancellor Lane (south)	988	49%	1
	North Western Street	-	-	-
A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street	A635 Mancunian Way (north)	711	49%	18
	A635 Fairfield Street	853	91%	12
	A635 Mancunian Way (south)	2,055	117%	148
	B6469 Fairfield Street	206	89%	9
	2017 PM peak hour (17:00–18:00) baseline results			
A665 Pin Mill Brow/A665 Mancunian Way	A665 Pin Mill Brow (north)	2,139	127%	123
	A665 Pin Mill Brow (south)	1,560	97%	22
	A635 Mancunian Way	1,047	98%	27
A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street	A665 Pin Mill Brow	1,230	48%	11
	A635 Ashton Old Road	779	51%	12
	A665 Chancellor Lane	1,307	116%	127
	A635 Fairfield Street	101	11%	1
A665 Chancellor Lane/A665 Midland	A665 Chancellor Lane (north)	570	0%	0
	A665 Midland Street	15	8%	0
	A665 Chancellor Lane (south)	1,307	65%	1

Junction	Approach	Total flow, PCU/hr	Max DoS	Total queue, PCU
Street/North Western Street	North Western Street	-	-	-
A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street	A635 Mancunian Way (north)	909	104%	39
	A635 Fairfield Street	526	21%	11
	A635 Mancunian Way (south)	1,307	120%	141
	B6469 Fairfield Street	288	40%	6

11.4.765 The A665 Pin Mill Brow/A635 Mancunian Way junction operates close to capacity in the 2017 baseline with a maximum DoS of 95% on the A635 Mancunian Way approach in the AM peak hour with an associated queue length of 43 PCU. In the PM peak hour, this junction operates over capacity in the 2017 baseline with a maximum DoS of 127% on the A665 Pin Mill Brow (north) approach with an associated queue length of 123 PCU.

11.4.766 The A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street junction operates over capacity in the 2017 baseline with a maximum DoS of 112% on the A635 Fairfield Street approach in the AM peak hour with an associated queue length of 41 PCU. In the PM peak hour, the maximum DoS of 116% is on the A665 Chancellor Lane approach with a queue length of 127 PCU.

11.4.767 The A665 Chancellor Lane/Midland Street/North Western Street junction operates well within capacity in the 2017 baseline.

11.4.768 The A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street junction operates over capacity in the 2017 baseline with a maximum DoS of 117% on the A635 Mancunian Way (south) approach in the AM peak hour with an associated queue length of 148 PCU. In the PM peak hour, the maximum DoS of 120% is on the A635 Mancunian Way (south) approach with a queue length of 141 PCU.

Table 11-318: 2017 baseline performance at A665 Pin Mill Brow/A635 Mancunian Way junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A665 Pin Mill Brow (north) (nearside) (ahead)	1,123	51%	6
A665 Pin Mill Brow (north) (centre) (right)	351	61%	9
A665 Pin Mill Brow (north) (offside) (right)	360	67%	9
A665 Pin Mill Brow (south) (nearside and centre) (left and ahead)	1,059	92%	17
A665 Pin Mill Brow (south) (offside) (ahead)	82	7%	0
A635 Mancunian Way (nearside) (left)	617	84%	18
A635 Mancunian Way (offside) (left)	815	95%	26
	2017 PM peak hour (17:00–18:00) baseline results		
A665 Pin Mill Brow (north) (nearside) (ahead)	1,230	53%	6
A665 Pin Mill Brow (north) (centre) (right)	453	118%	51
A665 Pin Mill Brow (north) (offside) (right)	456	127%	66

Approach	Flow, PCU/hr	DoS	Queue, PCU
A665 Pin Mill Brow (south) (nearside and centre) (left and ahead)	1,444	97%	22
A665 Pin Mill Brow (south) (offside) (ahead)	116	8%	1
A635 Mancunian Way (nearside) (left)	421	72%	4
A635 Mancunian Way (offside) (left)	626	98%	23

Table 11-319: 2017 baseline performance at A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A665 Pin Mill Brow (nearside) (left and ahead)	479	40%	5
A665 Pin Mill Brow (offside) (ahead)	644	50%	7
A635 Ashton Old Road (nearside) (east) (left)	389	104%	31
A635 Ashton Old Road (centre 1) (ahead)	102	104%	
A635 Ashton Old Road (centre 2) (ahead)	732	90%	17
A635 Ashton Old Road (offside) (right)	204	90%	
A665 Chancellor Lane (nearside) (left and ahead)	885	103%	47
A665 Chancellor Lane (offside) (ahead)	72	8%	1
A635 Fairfield Street (nearside) (ahead)	498	98%	22
A635 Fairfield Street (offside) (ahead and right)	199	112%	18
	2017 PM peak hour (17:00–18:00) baseline results		
A665 Pin Mill Brow (nearside) (left and ahead)	731	48%	7
A665 Pin Mill Brow (offside) (ahead)	499	30%	4
A635 Ashton Old Road (nearside) (east) (left)	0	0%	6
A635 Ashton Old Road (centre 1) (ahead)	287	43%	
A635 Ashton Old Road (centre 2) (ahead)	239	51%	6
A635 Ashton Old Road (offside) (right)	253	51%	
A665 Chancellor Lane (nearside) (left and ahead)	1,210	116%	126
A665 Chancellor Lane (offside) (ahead)	97	9%	1
A635 Fairfield Street (nearside) (ahead)	52	11%	0
A635 Fairfield Street (offside) (ahead and right)	49	10%	1

Table 11-320: 2017 baseline performance at A665 Chancellor Lane/A665 Midland Street/North Western Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A665 Chancellor Lane (north) (left and ahead)	1,215	0%	0
A665 Midland Street (left and right)	2	1%	0
A665 Chancellor Lane (south) (ahead and right)	988	49%	1
North Western Street	-	-	-

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 PM peak hour (17:00–18:00) baseline results		
A665 Chancellor Lane (north) (left and ahead)	570	0%	0
A665 Midland Street (left and right)	15	8%	0
A665 Chancellor Lane (south) (ahead and right)	1,307	65%	1
North Western Street	-	-	-

Table 11-321: 2017 baseline performance at A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A635 Mancunian Way (north) (nearside) (ahead)	351	49%	9
A635 Mancunian Way (north) (offside) (ahead and right)	360	46%	9
A635 Fairfield Street (nearside) (ahead)	102	9%	2
A635 Fairfield Street (centre) (ahead)	528	60%	11
A635 Fairfield Street (offside) (ahead and right)	223	91%	
A635 Mancunian Way (south) (nearside and centre 1) (left and ahead)	700	107%	49
A635 Mancunian Way (south) (centre 2) (ahead)	815	117%	88
A635 Mancunian Way (south) (centre 3 and offside) (right)	540	72%	12
B6469 Fairfield Street (left, ahead and right)	206	89%	9
	2017 PM peak hour (17:00–18:00) baseline results		
A635 Mancunian Way (north) (nearside) (ahead)	453	104%	25
A635 Mancunian Way (north) (offside) (ahead and right)	456	90%	13
A635 Fairfield Street (nearside) (ahead)	287	21%	7
A635 Fairfield Street (centre) (ahead)	239	16%	5
A635 Fairfield Street (offside) (ahead and right)	0	0%	
A635 Mancunian Way (south) (nearside and centre 1) (left and ahead)	597	117%	65
A635 Mancunian Way (south) (centre 2) (ahead)	626	120%	74
A635 Mancunian Way (south) (centre 3 and offside) (right)	84	13%	1
B6469 Fairfield Street (left, ahead and right)	288	40%	6

11.4.769 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-322 and Table 11-323 respectively. This summarises performance for the main approaches, while the results for each lane of the individual junctions are included in Table 11-324, Table 11-325, Table 11-326 and Table 11-327. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-322: Future baseline performance of key approaches at A635/A665 Pin Mill Brow network (AM peak)

Junction/approach		Total flow, PCU/hr	Max DoS	Total queue, PCU	Total flow, PCU/hr	Max DoS	Total queue, PCU	Total flow, PCU/hr	Max DoS	Total queue, PCU
		2030 AM peak hour (08:00–09:00)			2038 AM peak hour (08:00–09:00)			2046 AM peak hour (08:00–09:00)		
A665 Pin Mill Brow/A665 Mancunian Way	A665 Pin Mill Brow (north)	2,188	61%	27	2,250	62%	28	2,297	70%	32
	A665 Pin Mill Brow (south)	1,215	96%	19	1,230	95%	34	1,258	83%	25
	A635 Mancunian Way	1,502	94%	45	1,532	95%	47	1,553	93%	47
A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street	A665 Pin Mill Brow	1,337	58%	15	1,386	66%	18	1,407	74%	21
	A635 Ashton Old Road	1,473	111%	64	1,643	105%	59	1,737	99%	44
	A665 Chancellor Lane	1,073	116%	101	1,102	122%	123	1,135	136%	173
	A635 Fairfield Street	764	94%	26	782	96%	17	792	93%	13
A665 Chancellor Lane/A665 Midland Street/North Western Street	A665 Chancellor Lane	1,306	0%	0	1,130	0%	0	1,405	0%	0
	A665 Midland Street	1	0%	0	1	0%	0	1	0%	0
	A665 Chancellor Lane	1,143	56%	1	1,186	59%	1	1,229	61%	1
	North Western Street	-	-	-	-	-	-	-	-	-
A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street	A635 Mancunian Way (north)	851	134%	121	864	114%	66	890	86%	28
	A635 Fairfield Street	915	58%	8	1,098	70%	6	1,195	47%	12
	A635 Mancunian Way (south)	2,164	78%	47	2,190	81%	49	2,200	111%	131
	B6469 Fairfield Street	228	88%	9	233	101%	14	240	70%	7

Table 11-323: Future baseline performance of key approaches at A635/A665 Pin Mill Brow network (PM peak)

Junction/Approach		Total flow, PCU/hr	Max DoS	Total queue, PCU	Total flow, PCU/hr	Max DoS	Total queue, PCU	Total flow, PCU/hr	Max DoS	Total queue, PCU
		2030 PM peak hour (17:00–18:00)			2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
A665 Pin Mill Brow/A665 Mancunian Way	A665 Pin Mill Brow (north)	2,213	109%	84	2,281	101%	50	2,344	104%	70
	A665 Pin Mill Brow (south)	1,694	98%	25	1,730	89%	31	1,770	89%	31
	A635 Mancunian Way	1,474	98%	23	1,496	100%	42	1,503	98%	48
A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street	A665 Pin Mill Brow	1,187	52%	12	1,225	64%	18	1,276	62%	17
	A635 Ashton Old Road	910	48%	14	955	41%	4	1,017	47%	14
	A665 Chancellor Lane	1,446	116%	121	1,478	135%	180	1,522	148%	247
	A635 Fairfield Street	145	15%	1	183	12%	1	227	18%	2
A665 Chancellor Lane/A665 Midland Street/North Western Street	A665 Chancellor Lane	609	0%	0	660	0%	0	734	0%	0
	A665 Midland Street	8	4%	0	8	5%	0	9	6%	0
	A665 Chancellor Lane	1,532	79%	2	1,587	79%	2	1,632	81%	2
	North Western Street	-	-	-	-	-	-	-	-	-
A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street	A635 Mancunian Way (north)	1,026	71%	27	1,056	100%	48	1,068	97%	37
	A635 Fairfield Street	640	32%	5	677	29%	4	736	31%	6
	A635 Mancunian Way (south)	1,675	148%	222	1,714	126%	147	1,745	132%	186
	B6469 Fairfield Street	274	101%	17	281	91%	11	287	79%	9

11.4.770 In the 2030 future baseline, the assessment shows that the A665 Pin Mill Brow/A635 Mancunian Way junction operates close to capacity in the AM peak hour with a maximum DoS of 96% on the A665 Pin Mill Brow (south) approach with an associated queue length of 19 PCU. In the PM peak hour, this junction operates over capacity in the 2030 baseline with a maximum DoS of 109% on the A665 Pin Mill Brow (north) approach with an associated queue length of 84 PCU.

11.4.771 In the 2030 future baseline, the assessment shows that the A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street junction operates over capacity in the AM peak hour with a maximum DoS of 116% on the A665 Chancellor Lane approach with an associated queue length of 101 PCU. In the PM peak hour, the maximum DoS of 116% is on the A665 Chancellor Lane approach with a queue length of 121 PCU.

11.4.772 In the 2030 future baseline, the assessment shows that the A665 Chancellor Lane/A665 Midland Street/North Western Street junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum DoS of 79% on the A665 Chancellor Lane (south) approach with an associated queue length of two PCU.

11.4.773 In the 2030 future baseline, the assessment shows that the A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street junction operates over capacity in the AM peak hour with a maximum DoS of 134% on the A635 Mancunian Way (north) approach in the AM peak hour with an associated queue length of 121 PCU. In the PM peak hour, the maximum DoS of 148% is on the A635 Mancunian Way (south) approach with a queue length of 222 PCU.

11.4.774 In the 2038 future baseline, the assessment shows that the A665 Pin Mill Brow/A635 Mancunian Way junction operates close to capacity in the AM peak hour with a maximum DoS of 95% on both the A635 Mancunian Way and A635 Pin Mill Brow (south) approaches with an associated queue length of 47 PCU and 34 PCU respectively. In the PM peak hour, this junction operates over capacity in the 2030 baseline with a maximum DoS of 101% on the A665 Pin Mill Brow (north) approach with an associated queue length of 50 PCU.

11.4.775 In the 2038 future baseline, the assessment shows that the A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street junction operates over capacity in the AM peak hour with a maximum DoS of 122% on the A665 Chancellor Lane approach with an associated queue length of 123 PCU. In the PM peak hour, the maximum DoS of 135% is on the A665 Chancellor Lane approach with a queue length of 180 PCU.

11.4.776 In the 2038 future baseline, the assessment shows that the A665 Chancellor Lane/A665 Midland Street/North Western Street junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2038 future baseline with a maximum DoS of 79% on the A665 Chancellor Lane (south) approach with an associated queue length of two PCU.

11.4.777 In the 2038 future baseline, the assessment shows that the A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street junction operates over capacity in the AM peak hour with a maximum DoS of 114% on the A635 Mancunian Way (north) approach in the AM peak

hour with an associated queue length of 66 PCU. In the PM peak hour, the maximum DoS of 126% is on the A635 Mancunian Way (south) approach with a queue length of 147 PCU.

11.4.778 In the 2046 future baseline, the assessment shows that the A665 Pin Mill Brow/A635 Mancunian Way junction operates close to capacity in the AM peak hour with a maximum DoS of 93% on the A635 Mancunian Way approach with an associated queue length of 47 PCU. In the PM peak hour, this junction operates over capacity in the 2046 baseline with a maximum DoS of 104% on the A665 Pin Mill Brow (north) approach with an associated queue length of 70 PCU.

11.4.779 In the 2046 future baseline, the assessment shows that the A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street junction operates over capacity in the AM peak hour with a maximum DoS of 136% on the A665 Chancellor Lane approach with an associated queue length of 173 PCU. In the PM peak hour, the maximum DoS of 148% is on the A665 Chancellor Lane approach with a queue length of 247 PCU.

11.4.780 In the 2046 future baseline, the assessment shows that the A665 Chancellor Lane/A665 Midland Street/North Western Street junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2046 future baseline with a maximum DoS of 81% on the A665 Chancellor Lane (south) approach with an associated queue length of two PCU.

11.4.781 In the 2046 future baseline, the assessment shows that the A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street junction operates over capacity in the AM peak hour with a maximum DoS of 111% on the A635 Mancunian Way (south) approach in the AM peak hour with an associated queue length of 131 PCU. In the PM peak hour, the maximum DoS of 132% is on the A635 Mancunian Way (south) approach with a queue length of 186 PCU.

Table 11-324: Future baseline performance at A665 Pin Mill Brow/A635 Mancunian Way junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A665 Pin Mill Brow (north) (nearside) (ahead)	1,337	56%	7	1,386	58%	8	1,407	62%	9
A665 Pin Mill Brow (north) (centre)(right)	440	61%	10	443	61%	11	459	69%	12
A665 Pin Mill Brow (north) (offside) (right)	411	61%	10	421	62%	10	431	70%	11
A665 Pin Mill Brow (south) (nearside and centre) (left and ahead)	1,080	96%	19	1,089	95%	32	1,112	83%	25
A665 Pin Mill Brow (south) (offside) (ahead)	135	13%	0	141	13%	3	146	13%	0
A635 Mancunian Way (nearside) (left)	669	80%	18	690	83%	19	709	88%	21
A635 Mancunian Way (offside) (left)	833	94%	28	842	95%	29	844	93%	26
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A665 Pin Mill Brow (north) (nearside) (ahead)	1,187	52%	6	1,225	53%	6	1,276	56%	7
A665 Pin Mill Brow (north) (centre) (right)	528	107%	39	513	89%	17	551	103%	32
A665 Pin Mill Brow (north) (offside) (right)	498	109%	39	543	101%	28	517	104%	31
A665 Pin Mill Brow (south) (nearside and centre) (left and ahead)	1,329	98%	25	1,263	89%	30	1,419	89%	31
A665 Pin Mill Brow (south) (offside) (ahead)	365	28%	1	467	39%	1	351	28%	1
A635 Mancunian Way (nearside) (left)	801	90%	7	865	100%	30	778	91%	20
A635 Mancunian Way (offside) (left)	673	98%	16	631	86%	12	725	98%	28

Table 11-325: Future baseline performance at A665 Pin Mill Brow/A635 Ashton Old Road/A665 Chancellor Lane/A635 Fairfield Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A665 Pin Mill Brow (nearside) (left and ahead)	575	47%	6	542	44%	7	570	53%	7
A665 Pin Mill Brow (offside) (ahead)	762	58%	9	844	66%	11	837	74%	14
A635 Ashton Old Road (nearside) (east) (left)	430	111%	53	407	105%	41	403	99%	30
A635 Ashton Old Road (centre 1) (ahead)	190	111%		354	105%		498	99%	
A635 Ashton Old Road (centre 2) (ahead)	684	80%	11	697	80%	18	651	71%	14
A635 Ashton Old Road (offside) (right)	169	80%		185	80%		185	71%	
A665 Chancellor Lane (nearside) (left and ahead)	948	116%	99	971	122%	120	999	136%	170
A665 Chancellor Lane (offside) (ahead)	125	14%	2	131	16%	2	136	17%	3
A635 Fairfield Street (nearside) (ahead)	623	88%	19	640	88%	12	652	83%	7
A635 Fairfield Street (offside) (ahead and right)	141	94%	7	142	96%	6	140	93%	6
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A665 Pin Mill Brow (nearside) (left and ahead)	692	52%	8	697	64%	11	712	62%	10
A665 Pin Mill Brow (offside) (ahead)	495	33%	5	528	44%	6	564	45%	7
A635 Ashton Old Road (nearside) (east) (left)	22	46%	8	26	40%	2	32	44%	8
A635 Ashton Old Road (centre 1) (ahead)	340	46%		358	40%		374	44%	
A635 Ashton Old Road (centre 2) (ahead)	300	45%	6	319	41%	2	354	46%	7
A635 Ashton Old Road (offside) (right)	248	48%		252	41%		257	47%	
A665 Chancellor Lane (nearside) (left and ahead)	1,095	116%	114	1,022	135%	170	1,182	148%	240
A665 Chancellor Lane (offside) (ahead)	351	35%	6	456	57%	10	340	40%	7

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
A635 Fairfield Street (nearside) (ahead)	52	9%	0	95	12%	1	91	13%	0
A635 Fairfield Street (offside) (ahead and right)	93	15%	1	88	11%	1	136	18%	1

Table 11-326: Future baseline performance at A665 Chancellor Lane/A665 Midland Street/North Western Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A665 Chancellor Lane (north) (left and ahead)	1,306	0%	0	1,130	0%	0	1,405	0%	0
A665 Midland Street (left and right)	1	0%	0	1	0%	0	1	0%	0
A665 Chancellor Lane (south) (ahead and right)	1,143	56%	1	1,186	59%	1	1,229	61%	1
North Western Street	-	-	-	-	-	-	-	-	-
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A665 Chancellor Lane (north) (left and ahead)	609	0%	0	660	0%	0	734	0%	0
A665 Midland Street (left and right)	8	4%	0	8	5%	0	9	6%	0
A665 Chancellor Lane (south) (ahead and right)	1,532	79%	2	1,587	79%	2	1,632	81%	2
North Western Street	-	-	-	-	-	-	-	-	-

Table 11-327: Future baseline performance at A635 Mancunian Way/A635 Fairfield Street/B6469 Fairfield Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A635 Mancunian Way (north) (nearside) (ahead)	440	134%	75	443	114%	45	459	86%	15
A635 Mancunian Way (north) (offside) (ahead and right)	411	116%	45	421	100%	21	431	75%	13
A635 Fairfield Street (nearside) (ahead)	190	12%	2	354	25%	1	498	41%	7
A635 Fairfield Street (centre) (ahead)	557	42%	6	572	50%	5	532	47%	5
A635 Fairfield Street (offside) (ahead and right)	168	58%		172	70%		165	43%	
A635 Mancunian Way (south) (nearside and centre 1) (left and ahead)	734	74%	17	737	76%	17	741	105%	45
A635 Mancunian Way (south) (centre 2) (ahead)	833	78%	20	842	81%	21	844	111%	71
A635 Mancunian Way (south) (centre 3 and offside) (right)	597	56%	10	611	58%	11	615	79%	16
B6469 Fairfield Street (left, ahead and right)	228	88%	9	233	101%	14	240	70%	7
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A635 Mancunian Way (north) (nearside) (ahead)	528	71%	14	513	100%	25	551	97%	22
A635 Mancunian Way (north) (offside) (ahead and right)	498	61%	13	543	98%	23	517	83%	16
A635 Fairfield Street (nearside) (ahead)	340	32%	3	358	29%	2	379	31%	4
A635 Fairfield Street (centre) (ahead)	284	26%	2	300	23%	1	335	27%	3
A635 Fairfield Street (offside) (ahead and right)	16	26%		19	23%		22	27%	
A635 Mancunian Way (south) (nearside and centre 1) (left and ahead)	874	148%	174	924	126%	129	833	132%	132
A635 Mancunian Way (south) (centre 2) (ahead)	673	107%	46	631	81%	17	725	108%	52
A635 Mancunian Way (south) (centre 3 and offside) (right)	128	17%	2	159	17%	2	187	23%	2
B6469 Fairfield Street (left, ahead and right)	274	101%	17	281	91%	11	287	79%	9

A665 Chancellor Lane/Dark Lane

11.4.782 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-328.

Table 11-328: 2017 baseline performance at A665 Chancellor Lane/Dark Lane junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A665 Chancellor Lane (north) (ahead and right)	1,567	69%	2
A665 Chancellor Lane (south) (left and ahead)	891	0%	0
Dark Lane	66	12%	0
	2017 PM peak hour (17:00–18:00) baseline results		
A665 Chancellor Lane (north) (ahead and right)	853	33%	0
A665 Chancellor Lane (south) (left and ahead)	1,117	0%	0
Dark Lane	199	38%	0

11.4.783 The assessment shows that this junction operates within capacity in the 2017 baseline.

11.4.784 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-329. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-329: Future baseline performance at A665 Chancellor Lane/Dark Lane junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A665 Chancellor Lane (north) (ahead and right)	1,813	1,813	1,813
A665 Chancellor Lane (south) (left and ahead)	1,029	1,029	1,029
Dark Lane	44	8%	0
	2030 PM peak hour (17:00–18:00)		
A665 Chancellor Lane (north) (ahead and right)	881	881	881
A665 Chancellor Lane (south) (left and ahead)	1,238	1,238	1,238
Dark Lane	211	39.8%	0

11.4.785 In the 2030 future baseline, the assessment shows that this junction is nearing capacity in the AM peak hour with a maximum DoS of 77% on the A665 Chancellor Lane (north) approach with an associated queue length of three PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline.

A34 Oxford Street/B6469 Whitworth Street West/B6469 Whitworth Street

11.4.786 This junction is a four-arm signal controlled crossroads with controlled pedestrian crossing facilities. Although the A34 Oxford Street (north) approach is now two-way, this change is not included in the baseline strategic traffic model. The junction has therefore been modelled in the baseline based on its layout prior to the changes, when the A34 Oxford Street (north) was a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-330.

Table 11-330: 2018 baseline performance at A34 Oxford Street/B6469 Whitworth Street West/B6469 Whitworth Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B6469 Whitworth Street	493	30%	4
A34 Oxford Street (south)	1,303	72%	13
B6469 Whitworth Street West	212	24%	4
	2018 PM peak hour (17:00–18:00) baseline results		
B6469 Whitworth Street	683	43%	5
A34 Oxford Street (south)	850	45%	10
B6469 Whitworth Street West	98	12%	2

11.4.787 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.788 The future baseline modelling takes account of the changes made to the A34 Oxford Street/B6469 Whitworth Street West/B6469 Whitworth Street junction layout with the A34 Oxford Street approach becoming two-way.

11.4.789 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-331. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-331: Future baseline performance at A34 Oxford Street/B6469 Whitworth Street West/B6469 Whitworth Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A34 Oxford Road (north)	125	21%	2	126	21%	2	126	21%	2
B6469 Whitworth Street	488	51%	8	492	51%	8	500	52%	8

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A34 Oxford Street (south)	398	65%	5	416	69%	5	427	70%	5
B6469 Whitworth Street West	347	40%	5	353	41%	5	348	40%	5
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A34 Oxford Road (north)	593	91%	9	598	92%	9	598	92%	9
B6469 Whitworth Street	551	65%	9	561	66%	10	567	67%	10
A34 Oxford Street (south)	244	129%	3	244	131%	3	244	137%	3
B6469 Whitworth Street West	202	37%	4	217	40%	4	220	41%	4

11.4.790 In the 2030 future baseline, this junction operates well within capacity in the AM peak hour. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 129% on the A34 Oxford Street (south) approach with an associated queue length of three PCU.

11.4.791 In the 2038 future baseline, this junction operates well within capacity in the AM peak hour. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 131% on the A34 Oxford Street (south) approach with a queue length of three PCU.

11.4.792 In the 2046 future baseline, this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates over capacity in the 2046 future baseline with a maximum VoC of 137% on the A34 Oxford Street (south) approach with a queue length of three PCU.

11.4.793 The junction analysis indicates that the junction will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A5103 Albion Street/A5103 Lower Mosley Street/Great Bridgewater Street

11.4.794 This junction is a four-arm signal controlled crossroad junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-332.

Table 11-332: 2018 baseline performance at A5103 Albion Street/A5103 Lower Mosley Street/Great Bridgewater Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Lower Mosley Street	0	0%	0
Great Bridgewater Street (east)	657	37%	8
A5103 Albion Street	718	41%	12
Great Bridgewater Street (west)	404	72%	3
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Lower Mosley Street	0	0%	0
Great Bridgewater Street (east)	1,267	71%	16
A5103 Albion Street	599	30%	10
Great Bridgewater Street (west)	113	95%	2

11.4.795 The assessment shows that in the AM peak hour this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 95% on the Great Bridgewater Street (west) approach with an associated queue length of two PCU.

11.4.796 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-333. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only. It should be noted that the modelling forecasts no use of A5103 Lower Mosley Street although in practice it is likely there will be some, but very limited, use.

Table 11-333: Future baseline performance at A5103 Albion Street/A5103 Lower Mosley Street/Great Bridgewater Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A5103 Lower Mosley Street	0	0%	0
Great Bridgewater Street (east)	531	41%	6
A5103 Albion Street	1,490	85%	25
Great Bridgewater Street (west)	685	102%	6
	2030 PM peak hour (17:00–18:00)		
A5103 Lower Mosley Street	67	5%	1
Great Bridgewater Street (east)	1,649	96%	21
A5103 Albion Street	851	45%	14
Great Bridgewater Street (west)	162	89%	2

11.4.797 This junction operates over capacity in the 2030 future baseline with a maximum VoC of 102% on the Great Bridgewater Street (west) approach in the AM peak hour with an associated queue length of six PCU. In the PM peak hour, the assessment shows that this

junction operates close to capacity in the 2030 future baseline with a maximum VoC of 96% on the Great Bridgewater Street (east) approach with an associated queue length of 21 PCU.

11.4.798 The junction analysis indicates that the junction will be operating over its capacity in the 2030 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A57 Regent Road/A57 Dawson Street/A6042 Trinity Way/Water Street

11.4.799 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The Water Street approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-334.

Table 11-334: 2018 baseline performance at A57 Regent Road/A57 Dawson Street/A6042 Trinity Way/Water Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A642 Trinity Way	966	49%	21
A57 Dawson Street	2,892	81%	33
Water Street	-	-	-
A57 Regent Road	1,962	84%	31
	2018 PM peak hour (17:00–18:00) baseline results		
A642 Trinity Way	1,475	78%	29
A57 Dawson Street	2,542	84%	31
Water Street	-	-	-
A57 Regent Road	1,883	71%	28

11.4.800 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 84% on the A57 Regent Road approach in the AM peak hour with an associated queue length of 31 PCU. In the PM peak hour, the maximum VoC of 84% is on the A57 Dawson Street approach with a queue length of 31 PCU.

11.4.801 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-335. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-335: Future baseline performance at A57 Regent Road/A57 Dawson Street/A6042 Trinity Way/Water Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			2038 AM peak hour (08:00–09:00)			2046 AM peak hour (08:00–09:00)		
A642 Trinity Way	1,168	53%	23	1,178	54%	23	1,198	55%	24
A57 Dawson Street	3,398	69%	41	3,483	71%	41	3,545	72%	42
Water Street	-	-	-	-	-	-	-	-	-
A57 Regent Road	2,104	90%	34	2,077	88%	34	2,060	87%	34
	2030 PM peak hour (17:00–18:00)			2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
A642 Trinity Way	1,742	90%	33	1,782	92%	34	1,823	94%	34
A57 Dawson Street	2,709	94%	46	2,747	95%	47	2,790	97%	48
Water Street	-	-	-	-	-	-	-	-	-
A57 Regent Road	1,868	73%	34	1,882	74%	34	1,894	74%	35

11.4.802 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 90% on the A57 Regent Road approach in the AM peak hour with an associated queue length of 34 PCU. In the PM peak hour, the maximum VoC of 94% is on the A57 Dawson Street approach with a queue length of 46 PCU.

11.4.803 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 88% on the A57 Regent Road approach in the AM peak hour with an associated queue length of 34 PCU. In the PM peak hour, the maximum VoC of 95% is on the A57 Dawson Street approach with a queue length of 47 PCU.

11.4.804 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 87% on the A57 Regent Road approach in the AM peak hour with an associated queue length of 34 PCU. In the PM peak hour, the maximum VoC of 97% is on the A57 Dawson Street approach with a queue length of 48 PCU.

A56 Deansgate/A6143 Liverpool Road/Great Bridgewater Street

11.4.805 This junction is a four-arm signal controlled staggered crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-336.

Table 11-336: 2018 baseline performance at A56 Deansgate/A6143 Liverpool Road/Great Bridgewater Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A56 Deansgate (north)	376	26%	8
Great Bridgewater Street	156	35%	2
A56 Deansgate (south)	1,241	88%	14
A6143 Liverpool Road	495	83%	10
	2018 PM peak hour (17:00–18:00) baseline results		
A56 Deansgate (north)	780	101%	10
Great Bridgewater Street	593	85%	1
A56 Deansgate (south)	451	56%	10
A6143 Liverpool Road	447	55%	7

11.4.806 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 88% on the A56 Deansgate (south) approach with an associated queue length of 14 PCU. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 101% on the A56 Deansgate (north) approach with an associated queue length of 10 PCU.

11.4.807 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-337. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-337: Future baseline performance at A56 Deansgate/A6143 Liverpool Road/Great Bridgewater Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A56 Deansgate (north)	499	34%	11
Great Bridgewater Street	317	80%	6
A56 Deansgate (south)	1,254	98%	12
A6143 Liverpool Road	439	92%	9
	2030 PM peak hour (17:00–18:00)		
A56 Deansgate (north)	778	100%	8
Great Bridgewater Street	597	94%	1
A56 Deansgate (south)	587	74%	13
A6143 Liverpool Road	493	65%	8

11.4.808 This junction operates close to capacity in the 2030 future baseline with a maximum VoC of 98% on the A56 Deansgate (south) approach in the AM peak hour with an associated queue length of 12 PCU. In the PM peak hour, this junction operates over capacity in the 2018

baseline with a maximum VoC of 100% on the A56 Deansgate (north) approach with a queue length of eight PCU.

B6469 Fairfield Street/Travis Street

11.4.809 This junction is a five-arm signal controlled crossroads with no controlled pedestrian crossing facilities. The Neild Street approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-338.

Table 11-338: 2018 baseline performance at B6469 Fairfield Street/Travis Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Travis Street (north) (left, ahead and right)	488	85%	13
B6469 Fairfield Street (east) (nearside) (left and ahead)	538	53%	7
B6469 Fairfield Street (east) (offside) (right)	39	12%	1
Neild Street (left, ahead and right)	-	-	-
Travis Street (south) (left, ahead and right)	15	3%	0
Fairfield Street (west) (left, ahead and right)	427	83%	8
	2018 PM peak hour (17:00–18:00) baseline results		
Travis Street (north) (left, ahead and right)	410	71%	9
B6469 Fairfield Street (east) (nearside) (left and ahead)	290	43%	5
B6469 Fairfield Street (east) (offside) (right)	35	17%	1
Neild Street (left, ahead and right)	-	-	-
Travis Street (south) (left, ahead and right)	37	10%	1
Fairfield Street (west) (left, ahead and right)	519	68%	6

11.4.810 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum DoS of 85% on the Travis Street (north) approach with an associated queue length of 13 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.811 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-339. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-339: Future baseline performance at B6469 Fairfield Street/Travis Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Travis Street (north) (left, ahead and right)	643	120%	72	665	122%	79	655	122%	79
B6469 Fairfield Street (east) (nearside) (left and ahead)	308	46%	6	291	43%	5	293	43%	5
B6469 Fairfield Street (east) (offside) (right)	39	14%	1	39	15%	1	39	16%	1
Neild Street (left, ahead and right)	-	-	-	-	-	-	-	-	-
Travis Street (south) (left, ahead and right)	15	3%	0	15	3%	0	15	3%	0
Fairfield Street (west) (left, ahead and right)	530	89%	10	561	86%	9	581	87%	10
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Travis Street (north) (left, ahead and right)	450	77%	10	497	86%	13	538	95%	18
B6469 Fairfield Street (east) (left and ahead)	353	52%	7	308	46%	6	275	41%	5
B6469 Fairfield Street (east) (right)	35	19%	1	35	19%	1	35	18%	1
Neild Street (left, ahead and right)	-	-	-	-	-	-	-	-	-
Travis Street (south) (left, ahead and right)	37	11%	1	37	10%	1	37	9%	1
Fairfield Street (west) (left, ahead and right)	556	78%	7	543	70%	6	550	69%	6

11.4.812 In the 2030 future baseline, this junction operates over capacity in the AM peak hour with a maximum DoS of 120% on the Travis Street (north) approach with an associated queue length of 72 PCU. In the PM peak hour, the assessment shows that this junction operates

within capacity in the 2030 future baseline with a maximum DoS of 78% on the Fairfield Street (west) approach with an associated queue length of seven PCU.

11.4.813 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum DoS of 122% on the Travis Street (north) approach with an associated queue length of 79 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum DoS of 86% on the Travis Street (north) approach with an associated queue length of 13 PCU.

11.4.814 In the 2046 future baseline, this junction operates over capacity in the AM peak hour with a maximum DoS of 122% on the Travis Street (north) approach with an associated queue length of 79 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum DoS of 95% on the Travis Street (north) approach with an associated queue length of 18 PCU.

11.4.815 The junction analysis indicates that the junction will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

B6469 Whitworth Street/Sackville Street

11.4.816 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The Sackville Street (north) approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-340.

Table 11-340: 2018 baseline performance at B6469 Whitworth Street/Sackville Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B6469 Whitworth Street (east)	694	60%	9
Sackville Street (south)	429	42%	7
B6469 Whitworth Street (west)	338	45%	3
Sackville Street (north)	-	-	-
	2018 PM peak hour (17:00–18:00) baseline results		
B6469 Whitworth Street (east)	520	35%	5
Sackville Street (south)	563	78%	10
B6469 Whitworth Street (west)	386	33%	9
Sackville Street (north)	-	-	-

11.4.817 In the 2018 baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction

operates within capacity in the 2018 baseline with a maximum VoC of 78% on the Sackville Street (south) approach with an associated queue length of 10 PCU.

11.4.818 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-341. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-341: Future baseline performance at B6469 Whitworth Street/Sackville Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
B6469 Whitworth Street (east)	806	69%	11
Sackville Street (south)	629	60%	10
B6469 Whitworth Street (west)	223	28%	2
Sackville Street (north)	-	-	-
	2030 PM peak hour (17:00–18:00)		
B6469 Whitworth Street (east)	832	58%	7
Sackville Street (south)	572	79%	10
B6469 Whitworth Street (west)	270	23%	6
Sackville Street (north)	-	-	-

11.4.819 In the 2030 future baseline the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 79% on the Sackville Street (south) approach with an associated queue length of 10 PCU.

A34 Oxford Street/A5103 Portland Street/A5103 Chepstow Street

11.4.820 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. Although the A34 Oxford Street (north) approach is now two-way, this change is not included in the baseline strategic traffic model. The junction has therefore been modelled in the baseline based on its layout prior to the changes, when the A34 Oxford Street (north) was a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-342.

Table 11-342: 2018 baseline performance at A34 Oxford Street/A5103 Portland Street/A5103 Chepstow Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Portland Street	713	85%	11

Approach	Flow, PCU/hr	VoC	Queue, PCU
A34 Oxford Street (south)	866	57%	14
A5103 Chepstow Street	275	81%	5
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Portland Street	814	77%	11
A34 Oxford Street (south)	589	50%	10
A5103 Chepstow Street	294	87%	6

11.4.821 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 85% on the A5103 Portland Street approach in the AM peak hour with an associated queue length of 11 PCU. In the PM peak hour, the maximum VoC of 87% on the Chepstow Street approach with an associated queue length of six PCU.

11.4.822 The future baseline modelling takes account of the changes made to the A34 Oxford Street/A5103 Portland Street/A5103 Chepstow Street junction layout with the A34 Oxford Street approach becoming two-way.

11.4.823 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-343. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-343: Future baseline performance at A34 Oxford Street/A5103 Portland Street/A5103 Chepstow Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A34 Oxford Street (north)	291	38%	5	293	38%	5	290	38%	5
A5103 Portland Street	733	62%	10	722	61%	10	701	60%	10
A34 Oxford Street (south)	299	86%	5	298	86%	5	297	85%	5
A5103 Chepstow Street	227	31%	4	245	33%	4	264	36%	5
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A34 Oxford Street (north)	431	54%	8	437	55%	8	456	58%	8
A5103 Portland Street	625	64%	9	648	67%	9	692	71%	10
A34 Oxford Street (south)	203	145%	3	200	146%	3	192	149%	2

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A5103 Chepstow Street	481	65%	9	485	66%	9	501	68%	9

11.4.824 In the 2030 future baseline, this junction operates close to capacity in the AM peak hour with a maximum VoC of 86% on the A34 Oxford Street (south) approach with an associated queue length of five PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 145% on the A34 Oxford Street (south) approach with an associated queue length of three PCU.

11.4.825 In the 2038 future baseline, this junction operates close to capacity in the AM peak hour with a maximum VoC of 86% on the A34 Oxford Street (south) approach with an associated queue length of five PCU. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 146% on the A34 Oxford Street (south) approach with an associated queue length of three PCU.

11.4.826 In the 2046 future baseline, this junction operates close to capacity in the AM peak hour with a maximum VoC of 85% on the A34 Oxford Street (south) approach with an associated queue length of five PCU. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 149% on the A34 Oxford Street (south) approach with an associated queue length of two PCU.

11.4.827 The junction analysis indicates that the junction will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A6 London Road/B6469 Fairfield Street

11.4.828 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. This junction was upgraded in 2018. The former arrangement comprised of two lanes on the A6 London Road (north) approach and right-turn movements from A6 London Road (north) to B6469 Fairfield Street were banned. The operation of the former junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-344.

Table 11-344: 2018 baseline performance at A6 London Road/B6469 Fairfield Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6 London Road (north)	561	53%	8
B6469 Fairfield Street (east)	593	78%	10
A6 London Road (south)	797	77%	13

Approach	Flow, PCU/hr	VoC	Queue, PCU
B6469 Fairfield Street (west)	307	48%	5
	2018 PM peak hour (17:00–18:00) baseline results		
A6 London Road (north)	683	65%	11
B6469 Fairfield Street (east)	418	68%	7
A6 London Road (south)	438	43%	7
B6469 Fairfield Street (west)	557	85%	9

11.4.829 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 78% on the B6469 Fairfield Street (east) approach with an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 85% on the B6469 Fairfield Street (east) approach with a queue length of nine PCU.

11.4.830 The A6 London Road/B6469 Fairfield Street junction was upgraded in 2018 to provide additional capacity on the A6 London Road (north) approach. The improvements included an additional approach lane on the A6 London Road (north), increasing the number of lanes from two lanes to three lanes, and reinstating right-turn movements from A6 London Road (north) to B6469 Fairfield Street (west) which were previously banned. The assessment takes into account the completed changes in the future baseline.

11.4.831 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-345. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-345: Future baseline performance at A6 London Road/B6469 Fairfield Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A6 London Road (north)	1,011	84%	14	1,034	87%	14	1,067	90%	15
B6469 Fairfield Street (east)	723	101%	12	713	102%	11	712	104%	11
A6 London Road (south)	839	80%	14	869	83%	14	902	86%	15
B6469 Fairfield Street (west)	360	60%	6	385	64%	6	406	68%	7
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A6 London Road (north)	991	58%	15	996	58%	15	999	59%	15
B6469 Fairfield Street (east)	404	83%	7	417	86%	7	426	87%	7

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A6 London Road (south)	264	21%	4	273	22%	4	300	24%	5
B6469 Fairfield Street (west)	523	98%	9	526	100%	9	529	101%	9

11.4.832 In the 2030 future baseline, this junction operates over capacity in AM peak hour with a maximum VoC of 101% on the B6469 Fairfield Street (east) approach with an associated queue length of 12 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 98% on the B6469 Fairfield Street (west) approach with a queue length of nine PCU.

11.4.833 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 102% on the B6469 Fairfield Street (east) approach with an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a the maximum VoC of 100% on the B6469 Fairfield Street (west) approach with a queue length of nine PCU.

11.4.834 In the 2046 future baseline, this junction operates over capacity with a maximum VoC of 104% on the B6469 Fairfield Street (east) approach in the AM peak hour with an associated queue length of 11 PCU. In the PM peak hour, the maximum VoC of 101% is on the B6469 Fairfield Street (west) approach with a queue length of nine PCU.

11.4.835 The junction analysis indicates that the junction on B6469 Fairfield Street (east) will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A34 Princess Street/Bloom Street

11.4.836 This junction is a four-arm priority controlled (give way) crossroads with no pedestrian crossing facilities. Although the A34 Princess Street (south) approach is now two-way, this change is not included in the baseline strategic traffic model. The junction has therefore been modelled in the baseline based on its layout prior to the changes, when the A34 Princess Street (south) was a one-way exit arm from the junction and is therefore not reported in the results. Bloom Street (west) is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-346.

Table 11-346: 2018 baseline performance at A34 Princess Street/Bloom Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Princess Street (north)	712	18%	0
Bloom Street (east)	169	44%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Princess Street (north)	1,118	28%	0
Bloom Street (east)	187	78%	2

11.4.837 The assessment shows that this junction operates well within capacity in the 2018 baseline in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the year future baseline with a maximum VoC of 78% on the Bloom Street (east) approach with an associated queue length of two PCU.

11.4.838 The future baseline modelling takes account of the changes made to the A34 Princess Street/Bloom Street junction layout with the A34 Princess Street (south) approach becoming two-way.

11.4.839 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-347. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-347: Future baseline performance at A34 Princess Street/Bloom Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A34 Princess Street (north)	302	16%	0	307	16%	0
Bloom Street (east)	117	22%	0	124	24%	0
A34 Princess Street (south)	389	68%	0	373	66%	0
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A34 Princess Street (north)	603	31%	0	593	31%	0
Bloom Street (east)	266	70%	1	267	69%	1
A34 Princess Street (south)	124	30%	0	120	29%	0

11.4.840 The assessment shows that this junction operates well within capacity in the 2038 and 2046 future baseline.

A5066 Oldfield Road/A57 Regent Road

11.4.841 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-348.

Table 11-348: 2018 baseline performance at A5066 Oldfield Road/A57 Regent Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5066 Oldfield Road (north)	380	99%	9
A57 Regent Road (east)	2,159	87%	14
A5066 Oldfield Road (south)	573	98%	13
A57 Regent Road (west)	1,662	102%	27
	2018 PM peak hour (17:00–18:00) baseline results		
A5066 Oldfield Road (north)	351	79%	15
A57 Regent Road (east)	2,078	73%	44
A5066 Oldfield Road (south)	531	69%	23
A57 Regent Road (west)	1,667	87%	50

11.4.842 In the AM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 102% on the A57 Regent Road (west) approach and an associated queue length of 27 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 87% on the A57 Regent Road(west) approach and an associated queue length of 50 PCU.

11.4.843 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-349. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-349: Future baseline performance at A5066 Oldfield Road/A57 Regent Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A5066 Oldfield Road (north)	405	106%	9
A57 Regent Road (east)	2,126	86%	12
A5066 Oldfield Road (south)	614	103%	14
A57 Regent Road (west)	1,948	86%	31
	2030 PM peak hour (17:00–18:00)		
A5066 Oldfield Road (north)	330	97%	9
A57 Regent Road (east)	2,063	88%	42
A5066 Oldfield Road (south)	501	91%	14
A57 Regent Road (west)	1,578	101%	31

11.4.844 This junction operates over capacity in the 2030 future baseline with a maximum VoC of 106% on the A5066 Oldfield Road (north) approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 101% is on the A57 Regent Road(west) approach with a queue length of 31 PCU.

A665 Great Ancoats Street/A665 Pin Mill Brow/Helmet Street

11.4.845 This junction is a three-arm priority controlled (give way) T-junction with no pedestrian crossing facilities. The A665 Great Ancoats Street (north) is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-350.

Table 11-350: 2017 baseline performance at A665 Great Ancoats Street/A665 Pin Mill Brow/Helmet Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A665 Great Ancoats Street (south) (left and ahead)	1,612	0%	0
A665 Great Ancoats Street (south) (ahead)	778	0%	0
Helmet Street (left)	3	1%	0
	2017 PM peak hour (17:00–18:00) baseline results		
A665 Great Ancoats Street (south) (left and ahead)	1,612	0%	0
A665 Great Ancoats Street (south) (ahead)	778	0%	0
Helmet Street (left)	0	0%	0

11.4.846 The assessment shows that this junction operates within capacity in the 2017 baseline.

11.4.847 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-351. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-351: Future baseline performance at A665 Great Ancoats Street/A665 Pin Mill Brow/Helmet Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A665 Great Ancoats Street (south) (left and ahead)	1,605	0%	0	1,615	0%	0	1,543	0%	0
A665 Great Ancoats Street (south) (ahead)	967	0%	0	983	0%	0	907	0%	0
Helmet Street (left)	1	0%	0	1	0%	0	2	1%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 PM peak hour (17:00–18:00)			2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
A665 Great Ancoats Street (south) (left and ahead)	1,605	0%	0	1,615	0%	0	1,543	0%	0
A665 Great Ancoats Street (south) (ahead)	967	0%	0	983	0%	0	907	0%	0
Helmet Street (left)	0	0%	0	0	0%	0	0	0%	0

11.4.848 The assessment shows that this junction operates well within capacity in the 2030, 2038 and 2046 future baseline.

A665 Great Ancoats Street/Palmerston Street

11.4.849 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The A665 Great Ancoats Street (south) is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-352.

Table 11-352: 2017 baseline performance at A665 Great Ancoats Street/Palmerston Street junction

Approach	Flow, PCU/hr	DoS	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A665 Great Ancoats Street (north) (left and ahead)	1,136	41%	0
A665 Great Ancoats Street (north) (ahead)	647	31%	0
Palmerston Street (left)	67	12%	0
	2017 PM peak hour (17:00–18:00) baseline results		
A665 Great Ancoats Street (north) (left and ahead)	1,373	47%	0
A665 Great Ancoats Street (north) (ahead)	593	28%	0
Palmerston Street (left)	325	57%	1

11.4.850 The assessment shows that this junction operates within capacity in the 2017 baseline.

11.4.851 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-353. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-353: Future baseline performance at A665 Great Ancoats Street/Palmerston Street junction

Approach	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A665 Great Ancoats Street (north) (left and ahead)	1,342	45%	0	1,388	46%	0	1,404	49%	1
A665 Great Ancoats Street (north) (ahead)	851	40%	0	864	41%	0	890	42%	0
Palmerston Street (left)	13	2%	0	14	2%	0	15	3%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A665 Great Ancoats Street (north) (left and ahead)	1,358	47%	0	1,405	48%	1	1,459	51%	1
A665 Great Ancoats Street (north) (ahead)	685	32%	0	736	35%	0	767	36%	0
Palmerston Street (left)	352	62%	1	338	59%	1	334	59%	1

11.4.852 The assessment shows that this junction operates within capacity in the 2030, 2038 and 2046 future baseline.

A6 London Road/A6 Whitworth Street/Store Street/Tram Crossing

11.4.853 This junction is a five-arm partially signal controlled staggered junction, with signal controlled pedestrian crossing facilities. The Store Street approach to the junction is priority controlled (give-way). As the A6 London Road (north) approach is unopposed as it approaches Store Street, the results represent the signalised stopline to the south of Store Street. Whitworth Street (west) is a one-way exit arm from the junction and is therefore not reported in the results. The Tram Signals approach is a minor arm which is not used by traffic and is also not reported in the results. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-354.

Table 11-354: 2017 baseline performance at A6 London Road/A6 Whitworth Street/Store Street/Tram Crossing junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
08:00–09:00	**2017 AM peak hour (08:00–09:00) baseline results**		
A6 London Road (north) (nearside) (ahead)	320	41%	5

Approach	Flow, PCU/hr	DoS	Queue, PCU
A6 London Road (north) (offside) (ahead)	348	42%	6
Store Street (left)	159	27%	0
Whitworth Street (south) (nearside bus lane) (left)	0	0%	0
Whitworth Street (south) (offside) (left)	666	51%	7
17:00–18:00	**2017 PM peak hour (17:00–18:00) baseline results**		
A6 London Road (north) (nearside) (ahead)	344	44%	6
A6 London Road (north) (offside) (ahead)	372	45%	6
Store Street (left)	123	21%	0
Whitworth Street (south) (nearside bus lane) (left)	0	0%	0
Whitworth Street (south) (offside) (left)	366	28%	3

11.4.854 The assessment shows that this junction operates well within capacity in the 2017 baseline.

11.4.855 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-355. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-355: Future baseline performance at A6 London Road/A6 Whitworth Street/Store Street/Tram Crossing junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
08:00–09:00	**2030 AM peak hour (08:00–09:00)**			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A6 London Road (north) (nearside) (ahead)	540	69%	11	551	70%	11	567	72%	12
A6 London Road (north) (offside) (ahead)	576	70%	12	589	71%	12	605	73%	13
Store Street (left)	417	73%	1	433	76%	2	439	77%	2
Whitworth Street (south) (nearside) bus lane) (left)	0	0%	0	0	0%	0	0	0%	0
Whitworth Street (south) (offside) (left)	883	67%	12	892	68%	12	902	69%	12
17:00–18:00	**2030 PM peak hour (17:00–18:00)**			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A6 London Road (north) (nearside) (ahead)	493	63%	10	496	63%	10	497	63%	10
A6 London Road (north) (offside) (ahead)	527	64%	10	592	64%	10	531	64%	10
Store Street (left)	351	61%	1	352	61%	1	358	62%	1
Whitworth Street (south) (nearside) bus lane) (left)	0	0%	0	0	0%	0	0	0%	0

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
Whitworth Street (south) (offside) (left)	384	29%	3	401	31%	4	435	33%	4

11.4.856 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

11.4.857 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum DoS of 76% on the Store Street approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.858 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum DoS of 77% on the Store Street approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A6 Aytoun Street/Minshull Street

11.4.859 This junction is a three-arm priority controlled (give-way) T-junction with no controlled pedestrian crossing facilities. The A6 Aytoun Street (north) is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-356.

Table 11-356: 2018 baseline performance at A6 Aytoun Street/Minshull Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6 Aytoun Street (south)	619	17%	0
Minshull Street	120	20%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A6 Aytoun Street (south)	437	11%	0
Minshull Street	303	53%	0

11.4.860 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.861 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-357. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-357: Future baseline performance at A6 Aytoun Street/Minshull Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6 Aytoun Street (south)	1,006	27%	0
Minshull Street	261	45%	0
	2030 PM peak hour (17:00–18:00)		
A6 Aytoun Street (south)	338	9%	0
Minshull Street	581	87%	1

11.4.862 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 87% on the Minshull Street approach with an associated queue length of one PCU.

A34 Peter Street/A6042 Mount Street/Mount Street

11.4.863 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The A6042 Mount Street is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-358.

Table 11-358: 2018 baseline performance at A34 Peter Street/A6042 Mount Street/Mount Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A34 Peter Street (east)	612	74%	7
Mount Street	85	29%	2
A34 Peter Street (west)	301	46%	4
	2018 PM peak hour (17:00–18:00) baseline results		
A34 Peter Street (east)	408	49%	4
Mount Street	0	0%	0
A34 Peter Street (west)	311	48%	5

11.4.864 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.865 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-359. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-359: Future baseline performance at A34 Peter Street/A6042 Mount Street/Mount Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A34 Peter Street (east)	292	50%	3
Mount Street	181	71%	3
A34 Peter Street (west)	638	97%	9
	2030 PM peak hour (17:00–18:00)		
A34 Peter Street (east)	211	39%	2
Mount Street	59	28%	1
A34 Peter Street (west)	585	89%	9

11.4.866 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 97% on the A34 Peter Street (west) approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 89% is on the A34 Peter Street (west) approach with a queue length of nine PCU.

A665 Great Ancoats Street/Every Street

11.4.867 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-360.

Table 11-360: 2017 baseline performance at A665 Great Ancoats Street/Every Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
Every Street (left and right)	372	69%	5
A665 Great Ancoats Street (east) (nearside) (ahead)	1,663	108%	108
A665 Great Ancoats Street (east) (centre and offside) (ahead and right)	900	125%	104
A665 Great Ancoats Street (west) (nearside) (left and ahead)	1,070	141%	192
A665 Great Ancoats Street (west) (offside) (ahead)	490	60%	10
	2017 PM peak hour (17:00–18:00) baseline results		
Every Street (left and right)	551	62%	10
A665 Great Ancoats Street (east) (nearside) (ahead)	1,859	110%	126
A665 Great Ancoats Street (east) (centre and offside) (ahead and right)	742	148%	93
A665 Great Ancoats Street (west) (nearside) (left and ahead)	1,350	148%	268
A665 Great Ancoats Street (west) (offside) (ahead)	159	16%	2

11.4.868 The junction operates over capacity in the 2017 baseline with a maximum DoS of 141% on the nearside lane of the A665 Great Ancoats Street (west) approach in the AM peak hour with an associated queue length of 192 PCU. In the PM peak hour, the maximum DoS of 148% is on both the nearside lane of the A665 Great Ancoats Street (west) approach and the centre and offside lanes of the A665 Great Ancoats Street (east) approach with an associated queue length of 268 and 93 PCU.

11.4.869 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-361. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-361: Future baseline performance at A665 Great Ancoats Street/Every Street junction

Approach	Flow, PCU/ hr	DoS	Queue, PCU	Flow, PCU/ hr	DoS	Queue, PCU	Flow, PCU/ hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Every Street (left and right)	541	76%	7	571	78%	8	583	79%	9
A665 Great Ancoats Street (east) (nearside) (ahead)	1,736	108%	105	1,767	108%	110	1,808	103%	75
A665 Great Ancoats Street (east) (centre and offside) (ahead and right)	969	154%	217	984	157%	226	992	156%	207
A665 Great Ancoats Street (west) (nearside) (left and ahead)	1,199	158%	265	1,220	161%	274	1,222	152%	252
A665 Great Ancoats Street (west) (offside) (ahead)	617	76%	15	629	77%	15	659	76%	15
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Every Street (left and right)	617	68%	12	665	72%	13	705	79%	15
A665 Great Ancoats Street (east) (nearside) (ahead)	2,060	112%	139	2,045	110%	120	2,109	106%	92
A665 Great Ancoats Street (east) (centre and offside) (ahead and right)	1,038	148%	193	1,098	147%	223	1,076	149%	204
A665 Great Ancoats Street (west)	1,307	147%	252	1,313	151%	268	1,343	151%	273

Approach	Flow, PCU/ hr	DoS	Queue, PCU	Flow, PCU/ hr	DoS	Queue, PCU	Flow, PCU/ hr	DoS	Queue, PCU
(nearside) (left and ahead)									
A665 Great Ancoats Street (west) (offside) (ahead)	225	23%	4	270	29%	4	283	30%	5

11.4.870 This junction operates over capacity in the 2030 future baseline with a maximum DoS of 158% on the nearside lane of the A665 Great Ancoats Street (west) approach in the AM peak hour with an associated queue length of 265 PCU. In the PM peak hour, the maximum DoS of 148% is on the centre and offside lanes of the A665 Great Ancoats Street (east) approach with an associated queue length of 193 PCU.

11.4.871 The junction operates over capacity in the 2038 future baseline with a maximum DoS of 161% on the nearside lane of the A665 Great Ancoats Street (west) approach in the AM peak hour with an associated queue length of 274 PCU. In the PM peak hour, the maximum DoS of 151% is on the nearside lane of the A665 Great Ancoats Street (west) approach with an associated queue length of 268 PCU.

11.4.872 This junction operates over capacity in the 2046 future baseline with a maximum DoS of 156% on centre and offside lanes of the A665 Great Ancoats Street (east) approach in the AM peak hour with an associated queue length of 207 PCU. In the PM peak hour, the maximum DoS of 151% is on the nearside lane of the A665 Great Ancoats Street (west) approach with an associated queue length of 273 PCU.

A5103 Portland Street/Sackville Street/Nicholas Street

11.4.873 This junction is a four-arm signal controlled staggered junction with signal controlled pedestrian crossing facilities. Nicholas Street is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-362.

Table 11-362: 2018 baseline performance at A5103 Portland Street/Sackville Street/Nicholas Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5103 Portland Street (north)	769	62%	12
Sackville Street	236	48%	5
A5103 Portland Street (south)	220	25%	2
	2018 PM peak hour (17:00–18:00) baseline results		
A5103 Portland Street (north)	782	58%	12

Approach	Flow, PCU/hr	VoC	Queue, PCU
Sackville Street	330	57%	6
A5103 Portland Street (south)	447	50%	6

11.4.874 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.875 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-363. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-363: Future baseline performance at A5103 Portland Street/Sackville Street/Nicholas Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A5103 Portland Street (north)	797	67%	12	768	65%	12
Sackville Street	483	100%	9	488	100%	9
A5103 Portland Street (south)	189	22%	2	195	23%	2
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A5103 Portland Street (north)	534	39%	8	587	43%	9
Sackville Street	486	84%	9	501	86%	9
A5103 Portland Street (south)	364	37%	3	362	38%	3

11.4.876 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 100% on the Sackville Street approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2038 future baseline with a maximum VoC of 84% on the Sackville Street approach with an associated queue length of nine PCU.

11.4.877 In the 2046 future baseline, junction operates over capacity in the AM peak hour with a maximum VoC of 100% on the Sackville Street approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 86% on the Sackville Street approach with an associated queue length of nine PCU.

A665 Great Ancoats Street/A662 Pollard Street/Adair Street/Chapeltown Street

11.4.878 This junction network is comprised of three adjacent junctions. The A665 Great Ancoats Street/ Chapeltown Street is a three-arm priority controlled (give way) T-junction with no pedestrian crossing facilities. The A665 Great Ancoats Street/A662 Pollard Street is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The A665 Great Ancoats Street/Adair Street is a three-arm signal controlled T-junction with no pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-364.

Table 11-364: 2017 baseline performance at A665 Great Ancoats Street/A662 Pollard Street/Adair Street/Chapeltown Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A665 Great Ancoats Street (west) (nearside) (left and ahead)	873	96%	28
A665 Great Ancoats Street (west) (offside) (ahead)	594	60%	11
A662 Pollard Street (left and right)	580	93%	15
A665 Great Ancoats Street (east) (nearside) (left and ahead)	887	75%	17
A665 Great Ancoats Street (east) (offside) (ahead)	300	23%	3
Adair Street (left)	235	44%	5
Adair Street (right)	-	-	-
Chapeltown Street (left)	13	3%	0
A665 Great Ancoats Street (internal eastbound) (nearside) (ahead)	779	41%	0
A665 Great Ancoats Street (internal eastbound) (centre and offside) (ahead and right)	896	69%	15
A665 Great Ancoats Street (internal westbound) (nearside) (ahead)	875	71%	3
A665 Great Ancoats Street (internal westbound) (centre and offside) (ahead and right)	486	43%	7
	2017 PM peak hour (17:00–18:00) baseline results		
A665 Great Ancoats Street (west) (nearside) (left and ahead)	932	93%	27
A665 Great Ancoats Street (west) (offside) (ahead)	721	65%	13
A662 Pollard Street (left and right)	197	34%	3
A665 Great Ancoats Street (east) (nearside) (left and ahead)	707	54%	9
A665 Great Ancoats Street (east) (offside) (ahead)	401	29%	4
Adair Street (left)	395	94%	15
Adair Street (right)	-	-	-

Approach	Flow, PCU/hr	DoS	Queue, PCU
Chapeltown Street (left)	87	18%	0
A665 Great Ancoats Street (internal eastbound) (nearside) (ahead)	600	32%	0
A665 Great Ancoats Street (internal eastbound) (centre and offside) (ahead and right)	887	45%	17
A665 Great Ancoats Street (internal westbound) (nearside) (ahead)	818	59%	13
A665 Great Ancoats Street (internal westbound) (centre and offside) (ahead and right)	657	73%	11

11.4.879 The assessment shows that this junction operates close to capacity in the 2017 baseline with a maximum DoS of 96% on the nearside lane of the A665 Great Ancoats Street (west) approach in the AM peak hour with an associated queue length of 28 PCU. In the PM peak hour, the maximum DoS of 94% is on the Adair Street approach with a queue length of 15 PCU.

11.4.880 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-365. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-365: Future baseline performance at A665 Great Ancoats Street/A662 Pollard Street/Adair Street/Chapeltown Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			2038 AM peak hour (08:00–09:00)			2046 AM peak hour (08:00–09:00)		
A665 Great Ancoats Street (west) (nearside) (left and ahead)	823	95%	26	1,010	106%	61	1,513	142%	273
A665 Great Ancoats Street (west) (offside) (ahead)	901	95%	28	761	73%	16	297	26%	4
A662 Pollard Street (left and right)	713	93%	19	716	106%	43	720	126%	99
A665 Great Ancoats Street (east) (nearside) (left and ahead)	599	53%	9	1,122	91%	29	1,028	77%	18
A665 Great Ancoats Street (east) (offside) (ahead)	672	55%	11	184	14%	2	300	21%	3
Adair Street (left)	251	44%	5	256	53%	6	262	70%	7
Adair Street (right)	-	-	-	-	-	-	-	-	-
Chapeltown Street (left)	13	3%	0	13	3%	0	13	3%	0
A665 Great Ancoats Street (internal eastbound) (nearside) (ahead)	719	38%	0	901	45%	0	1,425	53%	0
A665 Great Ancoats Street (internal eastbound) (centre and offside) (ahead and right)	1,335	94%	26	1,196	101%	22	712	119%	24
A665 Great Ancoats Street (internal westbound) (nearside) (ahead)	597	51%	4	1,096	86%	3	1,006	73%	3
A665 Great Ancoats Street (internal westbound) (centre and offside) (ahead and right)	857	67%	14	395	49%	4	512	50%	4
	2030 PM peak hour (17:00–18:00)			2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
A665 Great Ancoats Street (west) (nearside) (left and ahead)	756	85%	19	804	91%	22	1,020	104%	54
A665 Great Ancoats Street (west) (offside) (ahead)	851	86%	21	920	95%	29	750	69%	15
A662 Pollard Street (left and right)	271	39%	4	713	96%	22	363	61%	8
A665 Great Ancoats Street (east) (nearside) (left and ahead)	879	74%	17	1,068	92%	28	1,026	80%	20
A665 Great Ancoats Street (east) (offside) (ahead)	683	53%	10	203	16%	2	584	43%	7
Adair Street (left)	463	87%	14	251	45%	5	465	105%	30

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
Adair Street (right)	-	-	-	-	-	-	-	-	-
Chapeltown Street (left)	13	3%	0	13	3%	0	74	21%	1
A665 Great Ancoats Street (internal eastbound) (nearside) (ahead)	502	27%	0	700	37%	0	700	36%	0
A665 Great Ancoats Street (internal eastbound) (centre and offside) (ahead and right)	1,080	70%	23	1,354	99%	27	1,072	94%	19
A665 Great Ancoats Street (internal westbound) (nearside) (ahead)	961	70%	17	1,044	87%	2	1,113	80%	21
A665 Great Ancoats Street (internal westbound) (centre and offside) (ahead and right)	1,036	73%	19	410	48%	4	936	77%	16

11.4.881 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum DoS of 95% on the nearside and offside lanes of the A665 Great Ancoats Street (west) approach with an associated queue length of 26 PCU and 28 PCU respectively. In the PM peak hour, the maximum DoS of 87% is on the Adair Street approach with a queue length of 14 PCU.

11.4.882 In the 2038 future baseline, the assessment shows that this junction operates over capacity in the AM peak hour with a maximum DoS of 106% on both the nearside lane of the A665 Great Ancoats Street (west) approach and the A662 Pollard Street approach with an associated queue length of 61 PCU and 43 PCU respectively. In the PM peak hour, the assessment shows that this junction is at capacity in the 2038 future baseline with a maximum DoS of 99% on the centre and offside lanes of the A665 Great Ancoats (internal eastbound) approach with an associated queue length of 27 PCU.

11.4.883 In the 2046 future baseline, the assessment shows that this junction operates over capacity in the AM peak hour with a maximum DoS of 142% on the nearside lane of the A665 Great Ancoats Street (west) approach in the AM peak hour with an associated queue length of 273 PCU. In the PM peak hour, the maximum DoS of 105% is on the Adair Street approach with a queue length of 30 PCU.

11.4.884 The junction analysis indicates that the junction will be operating over its capacity in the 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A34 Quay Street/Lower Byrom Street/Gartside Street

11.4.885 This junction is a four-arm priority crossroads with no controlled pedestrian crossing facilities. The Gartside Street approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-366.

Table 11-366: 2018 baseline performance at A34 Quay Street/Lower Byrom Street/Gartside Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Gartside Street	-	-	-
A34 Quay Street (east)	394	20%	0
Lower Byrom Street	343	93%	3
A34 Quay Street (west)	775	83%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Gartside Street	-	-	-
A34 Quay Street (east)	219	11%	0
Lower Byrom Street	375	84%	1
A34 Quay Street (west)	547	46%	0

11.4.886 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 93% on the Lower Byrom Street approach with an associated queue length of three PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 84% on the Lower Byrom Street approach with an associated queue length of one PCU.

11.4.887 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-367. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-367: Future baseline performance at A34 Quay Street/Lower Byrom Street/Gartside Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Gartside Street	-	-	-	-	-	-	-	-	-
A34 Quay Street (east)	385	20%	0	460	24%	0	509	26%	0
Lower Byrom Street	382	96%	3	338	96%	4	313	97%	4
A34 Quay Street (west)	939	71%	0	942	73%	0	940	70%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Gartside Street	-	-	-	-	-	-	-	-	-
A34 Quay Street (east)	558	29%	0	569	30%	0	592	31%	0
Lower Byrom Street	291	87%	2	284	85%	2	272	85%	2
A34 Quay Street (west)	705	70%	0	719	70%	0	738	70%	0

11.4.888 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 96% on the Lower Byrom Street approach with an associated queue length of three PCU. In the PM peak hour, the maximum VoC of 87% is on the Lower Byrom Street approach with a queue length of two PCU.

11.4.889 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 96% on the Lower Byrom Street approach with an associated queue length of four PCU. In the PM peak hour, the maximum VoC of 85% is on the Lower Byrom Street approach with a queue length of two PCU.

11.4.890 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 97% on the Lower Byrom Street approach with an associated queue length of four PCU. In the PM peak hour, the maximum VoC of 85% is on the Lower Byrom Street approach with a queue length of two PCU.

A6 Piccadilly/A6 London Road/B6181 Ducie Street/Auburn Street

11.4.891 This junction is a five-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. Auburn Street is a one-way entry arm into the junction. The operation of the junction has been assessed for the 2019 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-368.

Table 11-368: 2019 baseline performance at A6 Piccadilly/A6 London Road/B6181 Ducie Street/Auburn Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2019 AM peak hour (08:00–09:00) baseline results		
A6 Piccadilly (north) (nearside bus lane) (ahead)	140	33%	3
A6 Piccadilly (north) (offside) (ahead)	255	62%	6
B6181 Ducie Street (left)	153	84%	6
Station Approach (left, ahead and right)	31	14%	1
A6 London Road (ahead)	0	0%	0
Auburn Street (nearside) (left and ahead)	272	78%	7
Auburn Street (offside) (ahead)	86	39%	2
	2019 PM peak hour (17:00–18:00) baseline results		
A6 Piccadilly (north) (nearside bus lane) (ahead)	168	39%	4
A6 Piccadilly (north) (offside) (ahead)	265	64%	6
B6181 Ducie Street (left)	145	80%	5
Station Approach (left, ahead and right)	32	14%	1
A6 London Road (ahead)	3	1%	0
Auburn Street (nearside) (left and ahead)	361	103%	21
Auburn Street (offside) (ahead)	99	45%	2

11.4.892 The assessment shows that this junction operates within capacity in the 2019 baseline with a maximum DoS of 84% on the B6181 Ducie Street (left) approach in the AM peak hour with an associated queue length of six PCU. In the PM peak hour, this junction operates over capacity in the 2019 baseline with a maximum DoS of 103% on the nearside lane of the Auburn Street approach with an associated queue length of 21 PCU.

11.4.893 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-369. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-369: Future baseline performance at A6 Piccadilly/A6 London Road/B6181 Ducie Street/Auburn Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A6 Piccadilly (north) (nearside bus lane) (ahead)	140	33%	3	140	33%	3	140	33%	3
A6 Piccadilly (north) (offside) (ahead)	308	74%	8	326	79%	9	371	89%	12
B6181 Ducie Street (left)	218	120%	29	218	120%	29	220	121%	30
Station Approach (left, ahead and right)	32	14%	1	32	14%	1	32	14%	1
A6 London Road (ahead)	0	0%	0	0	0%	0	0	0%	0
Auburn Street (nearside) (left and ahead)	312	89%	10	318	91%	11	327	94%	12
Auburn Street (offside) (ahead)	212	120%	28	221	125%	33	229	129%	38
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A6 Piccadilly (north) (nearside bus lane) (ahead)	168	39%	4	168	39%	4	168	39%	4
A6 Piccadilly (north) (offside) (ahead)	301	73%	8	317	76%	8	350	84%	10
B6181 Ducie Street (left)	188	104%	13	188	104%	13	186	102%	13
Station Approach (left, ahead and right)	31	14%	1	31	14%	1	32	14%	1
A6 London Road (ahead)	3	1%	0	3	1%	0	4	1%	0
Auburn Street (nearside) (left and ahead)	382	109%	31	386	110%	34	396	113%	39
Auburn Street (offside) (ahead)	189	107%	16	183	103%	13	166	94%	8

11.4.894 In the 2030 future baseline, this junction operates over capacity in the AM peak hour with the maximum DoS of 120% on both the B6181 Ducie Street (left) and Auburn Street (ahead) approaches, with an associated queue length of 29 PCU and 28 PCU respectively. In the PM peak hour, the maximum DoS of 109% is on the nearside lane of the Auburn Street approach with a queue length of 31 PCU.

11.4.895 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum DoS of 125% on offside lane of the the Auburn Street approach with an associated queue length of 33 PCU. In the PM peak hour, the maximum DoS of 110% is on the nearside lane of the Auburn Street approach with a queue length of 34 PCU.

11.4.896 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum DoS of 129% on the offside lane of the Auburn Street approach with an associated queue length of 38 PCU. In the PM peak hour, the maximum DoS of 113% is on the nearside lane of the Auburn Street approach with a queue length of 39 PCU.

11.4.897 The junction analysis indicates that the junction will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation in the AM peak hour.

A34 New Quay Street/A34 Quay Street/B5225 Quay Street/Gartside Street

11.4.898 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-370.

Table 11-370: 2018 baseline performance at A34 New Quay Street/A34 Quay Street/B5225 Quay Street/Gartside Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Gartside Street	187	83%	4
A34 Quay Street	650	41%	7
B5225 Quay Street	97	43%	2
A34 New Quay Street	663	42%	3
	2018 PM peak hour (17:00–18:00) baseline results		
Gartside Street	227	89%	5
A34 Quay Street	445	28%	5
B5225 Quay Street	62	23%	1
A34 New Quay Street	452	33%	2

11.4.899 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 83% on the Gartside Street approach in the AM peak hour with an associated queue length of four PCU. In the PM peak hour, this junction operates close to capacity in the 2018 baseline with a maximum VoC of 89% on the Gartside Street approach with a queue length of five PCU.

11.4.900 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-371. As the junction is only affected by the operation of the Proposed

Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-371: Future baseline performance at A34 New Quay Street/A34 Quay Street/B5225 Quay Street/Gartside Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			2046 AM peak hour (08:00–09:00)		
Gartside Street	202	113%	4	206	114%	4
A34 Quay Street	731	50%	8	754	52%	8
B5225 Quay Street	156	86%	4	155	86%	4
A34 New Quay Street	834	54%	4	833	55%	4
	2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
Gartside Street	367	121%	6	363	122%	6
A34 Quay Street	749	51%	9	756	52%	9
B5225 Quay Street	108	38%	2	111	38%	2
A34 New Quay Street	592	51%	3	613	53%	3

11.4.901 In the 2038 future baseline, this junction operates over capacity with a maximum VoC of 113% on the Gartside Street approach in the AM peak hour with an associated queue length of four PCU. In the PM peak hour, the maximum VoC of 121% is on the Gartside Street approach with a queue length of six PCU.

11.4.902 In the 2046 future baseline, this junction operates over capacity with a maximum VoC of 114% on the Gartside Street approach in the AM peak hour with an associated queue length of four PCU. In the PM peak hour, the maximum VoC of 122% is on the Gartside Street approach with a queue length of six PCU.

11.4.903 The junction analysis indicates that the junction will be operating over its capacity in the 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

B6181 Dale Street/B6181 Ducie Street

11.4.904 This junction is a three-arm priority controlled give way T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-372.

Table 11-372: 2018 baseline performance at B6181 Dale Street/B6181 Ducie Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Ducie Street (east)	111	20%	0
B6181 Ducie Street (west)	411	24%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU
B6181 Dale Street	326	66%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Ducie Street (east)	106	20%	0
B6181 Ducie Street (west)	345	20%	0
B6181 Dale Street	255	49%	0

11.4.905 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.906 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-373. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-373: Future baseline performance at B6181 Dale Street/B6181 Ducie Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Ducie Street (east)	52	11%	0	56	12%	0	83	14%	0
B6181 Ducie Street (west)	516	30%	0	520	30%	0	524	30%	0
B6181 Dale Street	480	90%	0	483	91%	0	462	89%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Ducie Street (east)	261	45%	0	274	47%	0	288	50%	0
B6181 Ducie Street (west)	372	21%	0	372	21%	0	372	21%	0
B6181 Dale Street	311	67%	0	315	68%	0	320	70%	0

11.4.907 In the 2030 future baseline the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 90% on the B6181 Dale Street approach with no queue. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

11.4.908 In the 2038 future baseline the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 91% on the B6181 Dale Street approach with no queue. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.909 In the 2046 future baseline the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 89% on the B6181 Dale Street approach with no queue. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A5066 Oldfield Road/Liverpool Street/Middlewood Street

11.4.910 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities). The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-374.

Table 11-374: 2018 baseline performance at A5066 Oldfield Road/Liverpool Street/Middlewood Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5066 Oldfield Road (north)	416	51%	7
Middlewood Street	186	22%	2
A5066 Oldfield Road (south)	537	60%	9
Liverpool Street	928	74%	14
	2018 PM peak hour (17:00–18:00) baseline results		
A5066 Oldfield Road (north)	645	43%	8
Middlewood Street	269	75%	5
A5066 Oldfield Road(south)	680	45%	8
Liverpool Street	387	105%	8

11.4.911 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 105% on the Liverpool Street approach with an associated queue length of eight PCU.

11.4.912 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-375. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-375: Future baseline performance at A5066 Oldfield Road/Liverpool Street/Middlewood Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A5066 Oldfield Road (north)	440	65%	8	492	74%	9	546	84%	10
Middlewood Street	374	46%	3	460	56%	5	540	65%	7
A5066 Oldfield Road (south)	717	86%	13	699	90%	12	681	95%	12
Liverpool Street	957	88%	15	909	88%	14	873	90%	14
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A5066 Oldfield Road (north)	699	49%	9	604	41%	7	602	38%	7
Middlewood Street	311	86%	6	286	79%	6	259	72%	5
A5066 Oldfield Road (south)	567	42%	7	553	42%	7	511	38%	6
Liverpool Street	391	108%	8	412	108%	8	453	105%	9

11.4.913 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 88% on the Liverpool Street approach with an associated queue length of 15 PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 108% on the Liverpool Street approach with an associated queue length of eight PCU.

11.4.914 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 90% on the A5066 Oldfield Road (south) approach with an associated queue length of 12 PCU. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 108% on the Liverpool Street approach with an associated queue length of eight PCU.

11.4.915 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 95% on the A5066 Oldfield Road (south) approach with an associated queue length of 12 PCU. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 105% on the Liverpool Street approach and an associated queue length of nine PCU.

11.4.916 The junction analysis indicates that the junction will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A6 Piccadilly/Paton Street

11.4.917 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. Paton Street is a one-way entry arm into the junction. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-376.

Table 11-376: 2018 baseline performance at A6 Piccadilly/Paton Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6 Piccadilly (north)	68	3%	0
Paton Street	0	0%	0
A6 Piccadilly (south)	18	1%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 PM peak hour (17:00–18:00) baseline results		
A6 Piccadilly (north)	72	4%	0
Paton Street	117	18%	0
A6 Piccadilly (south)	16	1%	0

11.4.918 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.919 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-377. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-377: Future baseline performance at A6 Piccadilly/Paton Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6 Piccadilly (north)	78	4%	0
Paton Street	60	9%	0
A6 Piccadilly (south)	18	1%	0
	2030 PM peak hour (17:00–18:00)		
A6 Piccadilly (north)	77	4%	0
Paton Street	205	32%	0
A6 Piccadilly (south)	14	1%	0

11.4.920 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

A665 Great Ancoats Street/Old Mill Street/Store Street

11.4.921 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-378.

Table 11-378: 2018 baseline performance at A665 Great Ancoats Street/Old Mill Street/Store Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Old Mill Street	558	60%	11
A665 Great Ancoats Street (south)	1,561	58%	17
Store Street	85	13%	2
A665 Great Ancoats Street (north)	1,325	61%	18
	2018 PM peak hour (17:00–18:00) baseline results		
Old Mill Street	123	41%	3
A665 Great Ancoats Street (south)	1,862	56%	12
Store Street	250	63%	6

Approach	Flow, PCU/hr	VoC	Queue, PCU
A665 Great Ancoats Street (north)	1,490	54%	14

11.4.922 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.923 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-379. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-379: Future baseline performance at A665 Great Ancoats Street/Old Mill Street/Store Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Old Mill Street	605	71%	12
A665 Great Ancoats Street (south)	1,644	63%	18
Store Street	192	34%	4
A665 Great Ancoats Street (north)	1,697	79%	23
	2030 PM peak hour (17:00–18:00)		
Old Mill Street	242	87%	6
A665 Great Ancoats Street (south)	2,349	70%	16
Store Street	268	93%	6
A665 Great Ancoats Street (north)	1,432	54%	14

11.4.924 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 79% on the A665 Great Ancoats Street (north) approach with an associated queue length of 23 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 93% on the Store Street approach with an associated queue length of six PCU.

Every Street/Carruthers Street

11.4.925 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-380.

Table 11-380: 2018 baseline performance at Every Street/Carruthers Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Every Street (north)	611	35%	0
Every Street (south)	187	10%	0
Carruthers Street	117	43%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Every Street (north)	334	33%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU
Every Street (south)	371	19%	0
Carruthers Street	226	75%	1

11.4.926 In the 2018 baseline the assessment shows that this junction operates within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 75% on the Carruthers Street approach with an associated queue length of one PCU.

11.4.927 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-381. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-381: Future baseline performance at Every Street/Carruthers Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Every Street (north)	889	51%	0
Every Street (south)	259	13%	0
Carruthers Street	20	9%	0
	2030 PM peak hour (17:00–18:00)		
Every Street (north)	436	42%	0
Every Street (south)	385	20%	0
Carruthers Street	198	71%	1

11.4.928 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

A34 Bridge Street/St Mary's Parsonage

11.4.929 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-382.

Table 11-382: 2018 baseline performance at A34 Bridge Street/St Mary's Parsonage junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
St Mary's Parsonage	35	21%	1
A34 Bridge Street (east)	356	21%	5
A34 Bridge Street (west)	406	32%	4
	2018 PM peak hour (17:00–18:00) baseline results		
St Mary's Parsonage	62	24%	1
A34 Bridge Street (east)	399	27%	7
A34 Bridge Street (west)	454	43%	7

11.4.930 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.931 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-383. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-383: Future baseline performance at A34 Bridge Street/St Mary's Parsonage junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
St Mary's Parsonage	149	89%	3	145	86%	3
A34 Bridge Street (east)	493	29%	8	482	29%	7
A34 Bridge Street (west)	538	43%	6	591	47%	6
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
St Mary's Parsonage	100	38%	2	108	41%	2
A34 Bridge Street (east)	472	31%	6	485	32%	6
A34 Bridge Street (west)	471	45%	8	481	45%	8

11.4.932 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 89% on the St Mary's Parsonage approach with an associated queue length of three PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.933 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 86% on the St Mary's Parsonage approach with an associated queue length of three PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A6 Dale Street/A62 Lever Street

11.4.934 This junction is a four-arm signal controlled crossroads junction with signal controlled pedestrian crossing facilities. Lever Street (north) and Dale Street (east) are one-way exit arms from the junction and therefore are not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-384.

Table 11-384: 2018 baseline performance at A6 Dale Street/A62 Lever Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A62 Lever Street (south)	236	21%	3
A6 Dale Street (west)	526	80%	5
	2018 PM peak hour (17:00–18:00) baseline results		
A62 Lever Street (south)	247	28%	4
A6 Dale Street (west)	561	75%	3

11.4.935 The assessment shows that this junction is nearing capacity in the 2018 baseline with a maximum VoC of 80% on the A6 Dale Street (west) approach in the AM peak hour with an associated queue length of five PCU. In the PM peak hour, the maximum VoC of 75% is on the A6 Dale Street (west) approach with a queue length of three PCU.

11.4.936 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-385. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-385: Future baseline performance at A6 Dale Street/A62 Lever Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A62 Lever Street (south)	215	20%	3	214	19%	3	213	19%	3
A6 Dale Street (west)	524	83%	4	534	84%	5	538	85%	5
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A62 Lever Street (south)	231	27%	3	231	26%	3	230	26%	3
A6 Dale Street (west)	536	72%	3	538	72%	3	544	73%	3

11.4.937 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 83% on the A6 Dale Street (west) approach with an associated queue length of four PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

11.4.938 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 84% on the A6 Dale Street (west) approach with an associated queue length of five PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.939 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 85% on the A6 Dale Street (west) approach with an associated queue length of five PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A664 High Street/A6 Church Street

11.4.940 This junction is a three-arm signal controlled T-junction with controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-386.

Table 11-386: 2018 baseline performance at A664 High Street/A6 Church Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		

Approach	Flow, PCU/hr	VoC	Queue, PCU
A664 High Street (north)	549	106%	7
A6 Church Street	109	22%	2
A664 High Street (south)	426	87%	7
	2018 PM peak hour (17:00–18:00) baseline results		
A664 High Street (north)	463	107%	7
A6 Church Street	126	30%	2
A664 High Street (south)	550	95%	8

11.4.941 This junction operates over capacity in the 2018 baseline with a maximum VoC of 106% on the A664 High Street (north) approach in the AM peak hour with an associated queue length of seven PCU. In the PM peak hour, the maximum VoC of 107% is on the A664 High Street (north) approach with a queue length of seven PCU.

11.4.942 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-387. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-387: Future baseline performance at A664 High Street/A6 Church Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A664 High Street (north)	549	106%	7
A6 Church Street	104	21%	1
A664 High Street (south)	351	72%	6
	2030 PM peak hour (17:00–18:00)		
A664 High Street (north)	463	107%	7
A6 Church Street	121	29%	2
A664 High Street (south)	550	93%	8

11.4.943 This junction operates over capacity in the 2030 future baseline with a maximum VoC of 106% on the A664 High Street (north) approach in the AM peak hour with an associated queue length of seven PCU. In the PM peak hour, the maximum VoC of 107% is on the A664 High Street (north) approach with a queue length of seven PCU.

A6 Crescent/A6 Chapel Street/A5066 Adelphi Street/A5066 Oldfield Road

11.4.944 This junction is a four-arm signal controlled staggered crossroads with controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-388.

Table 11-388: 2018 baseline performance at A6 Crescent/A5066 Adelphi Street/A5066 Oldfield Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		

Approach	Flow, PCU/hr	VoC	Queue, PCU
A5066 Adelphi Street	174	54%	4
A6 Crescent (east)	807	51%	12
A5066 Oldfield Road	240	47%	5
A6 Crescent (west)	949	58%	14
	2018 PM peak hour (17:00–18:00) baseline results		
A5066 Adelphi Street	176	54%	4
A6 Crescent (east)	1,302	82%	20
A5066 Oldfield Road	151	25%	3
A6 Crescent (west)	966	59%	15

11.4.945 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 82% on the A6 Crescent (east) approach with an associated queue length of 20 PCU.

11.4.946 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-389. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-389: Future baseline performance at A6 Crescent/A5066 Adelphi Street/A5066 Oldfield Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A5066 Adelphi Street	214	66%	5	260	81%	6	295	92%	6
A6 Crescent (east)	978	62%	14	1,049	66%	15	1,096	70%	16
A5066 Oldfield Road	376	73%	8	380	74%	8	363	70%	8
A6 Crescent (west)	1,331	81%	19	1,404	86%	20	1,399	86%	20
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A5066 Adelphi Street	224	69%	6	268	82%	7	285	88%	7
A6 Crescent (east)	1,429	89%	22	1,429	89%	22	1,429	89%	22
A5066 Oldfield Road	191	32%	4	196	33%	4	246	41%	6
A6 Crescent (west)	1,107	67%	17	1,129	69%	18	1,165	71%	18

11.4.947 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 81% on the A6 Crescent (west) approach with an associated queue length of 19 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a

maximum VoC of 89% on the A6 Crescent (east) approach with an associated queue length of 22 PCU.

11.4.948 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 86% on the A6 Crescent (west) approach with an associated queue length of 20 PCU. In the PM peak hour, the maximum VoC of 89% is on the A6 Crescent (east) approach with a queue length of 22 PCU.

11.4.949 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 92% on the A5066 Adelphi Street approach with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 89% is on the A6 Crescent (east) approach with a queue length of 22 PCU.

A6 Chapel Street/St Stephen Street

11.4.950 This junction is a three-arm priority (give-way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-390.

Table 11-390: 2018 baseline performance at A6 Chapel Street/St Stephen Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
St Stephen Street	395	97%	4
A6 Chapel Street (east)	712	18%	0
A6 Chapel Street (west)	1,000	17%	0
	2018 PM peak hour (17:00–18:00) baseline results		
St Stephen Street	165	39%	0
A6 Chapel Street (east)	571	14%	0
A6 Chapel Street (west)	963	16%	0

11.4.951 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 97% on the St Stephen Street approach with an associated queue length of four PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.952 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-391. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-391: Future baseline performance at A6 Chapel Street/St Stephen Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
St Stephen Street	292	105%	5	184	107%	3	78	109%	2
A6 Chapel Street (east)	842	21%	0	881	22%	0	885	22%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A6 Chapel Street (west)	1,544	26%	0	1,640	41%	0	1,601	101%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
St Stephen Street	79	19%	0	48	72%	1	58	86%	1
A6 Chapel Street (east)	605	15%	0	593	15%	0	590	15%	0
A6 Chapel Street (west)	1,005	17%	0	950	100%	0	968	102%	0

11.4.953 In the 2030 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 105% on the St Stephen Street approach with an associated queue length of five PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

11.4.954 In the 2038 future baseline, this junction operates over capacity with a maximum VoC of 107% on the St Stephen Street approach in the AM peak hour with an associated queue length of three PCU. In the PM peak hour, the maximum VoC of 100% is on the A6 Chapel Street (west) approach with no queue.

11.4.955 In the 2046 future baseline, this junction operates over capacity with a maximum VoC of 109% on the St Stephen Street approach in the AM peak hour with an associated queue length of two PCU. In the PM peak hour, the maximum VoC of 102% is on the A6 Chapel Street (west) approach with no queue.

A6042 Trinity Way/A6 Chapel Street/A34 Trinity Way

11.4.956 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-392.

Table 11-392: 2018 baseline performance at A6042 Trinity Way/A6 Chapel Street/A34 Trinity Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6042 Trinity Way (north)	638	57%	13
A6 Chapel Street (east)	337	97%	8
A34 Trinity Way (south)	1,307	56%	22
A6 Chapel Street (west)	1,394	62%	21
	2018 PM peak hour (17:00–18:00) baseline results		
A6042 Trinity Way (north)	604	52%	12
A6 Chapel Street (east)	609	71%	8
A34 Trinity Way (south)	974	48%	18
A6 Chapel Street (west)	1,127	57%	17

11.4.957 In the AM peak hour, this junction operates close to capacity in the 2018 baseline with a maximum VoC of 97% on the A6 Chapel Street (east) approach with an associated queue length of eight PCU. In the PM peak hour, the assessment shows that this junction is well within capacity in the 2018 baseline.

11.4.958 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-393. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-393: Future baseline performance at A6042 Trinity Way/A6 Chapel Street/A34 Trinity Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A6042 Trinity Way (north)	1,046	93%	20	1,098	98%	21	1,136	101%	22
A6 Chapel Street (east)	357	104%	9	362	106%	9	354	108%	8
A34 Trinity Way (south)	1,526	68%	26	1,521	68%	26	1,526	68%	26
A6 Chapel Street (west)	1,823	80%	27	1,811	79%	26	1,660	73%	24
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A6042 Trinity Way (north)	789	68%	16	800	69%	16	789	68%	16
A6 Chapel Street (east)	865	112%	13	927	111%	14	915	111%	13
A34 Trinity Way (south)	1,227	62%	23	1,326	67%	24	1,411	72%	26
A6 Chapel Street (west)	1,078	61%	16	990	56%	15	1,009	57%	15

11.4.959 In the 2030 future baseline, this junction operates over capacity with a maximum VoC of 104% on the A6 Chapel Street (east) approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 112% is on the A6 Chapel Street (east) approach with a queue length of 13 PCU.

11.4.960 In the 2038 future baseline, this junction operates over capacity with a maximum VoC of 106% on the A6 Chapel Street (east) approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 111% is on the A6 Chapel Street (east) approach with a queue length of 14 PCU.

11.4.961 In the 2046 future baseline, this junction operates over capacity with a maximum VoC of 108% on the A6 Chapel Street (east) approach in the AM peak hour with an associated queue length of eight PCU. In the PM peak hour, the maximum VoC of 111% is on the A6 Chapel Street (east) approach with a queue length of 13 PCU.

A6 Chapel Street/New Bailey Street

11.4.962 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2016 existing baseline AM and PM peak hours using LinSig software and is shown in Table 11-394.

Table 11-394: 2016 baseline performance at A6 Chapel Street/New Bailey Street junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2016 AM peak hour (08:00–09:00) baseline results		
Bloom Street (left, ahead and right)	56	39%	2
A6 Chapel Street (east) (nearside) (left and ahead)	127	61%	4
A6 Chapel Street (east) (offside) (ahead and right)	138	57%	4
New Bailey Street (left, ahead, and right)	217	60%	5
A6 Chapel Street (west) (nearside) (left and ahead)	328	57%	8
A6 Chapel Street (west) (offside) (ahead and right)	332	60%	8
	2016 PM peak hour (17:00–18:00) baseline results		
Bloom Street (left, ahead and right)	43	14%	1
A6 Chapel Street (east) (nearside) (left and ahead)	148	57%	4
A6 Chapel Street (east) (offside) (ahead and right)	154	54%	4
New Bailey Street (left, ahead, and right)	394	55%	7
A6 Chapel Street (west) (nearside) (left and ahead)	140	44%	4
A6 Chapel Street (west) (offside) (ahead and right)	170	54%	5

11.4.963 The assessment shows that this junction operates well within capacity in the 2016 baseline.

11.4.964 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-395. As the junction is only affected by operation of the Proposed Scheme, future baseline results are presented for 2038 and 2046 only.

Table 11-395: Future baseline performance at A6 Chapel Street/New Bailey Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Bloom Street (left, ahead and right)	67	59%	2	73	59%	2
A6 Chapel Street (east) (nearside) (left and ahead)	137	66%	4	204	98%	12
A6 Chapel Street (east) (offside) (ahead and right)	131	54%	4	131	54%	4
New Bailey Street (left, ahead, and right)	291	72%	6	322	72%	6
A6 Chapel Street (west) (nearside) (left and ahead)	609	105%	39	557	96%	22
A6 Chapel Street (west) (offside) (ahead and right)	582	104%	36	529	96%	21

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Bloom Street (left, ahead and right)	49	42%	1	55	46%	2
A6 Chapel Street (east) (nearside) (left and ahead)	197	76%	7	206	79%	7
A6 Chapel Street (east) (offside) (ahead and right)	220	77%	7	230	81%	8
New Bailey Street (left, ahead, and right)	774	106%	43	747	98%	22
A6 Chapel Street (west) (nearside) (left and ahead)	183	57%	5	191	60%	5
A6 Chapel Street (west) (offside) (ahead and right)	180	57%	5	191	60%	5

11.4.965 In the 2038 future baseline, the junction operates over capacity with a maximum DoS of 105% on the nearside lane of the A6 Chapel Street (west) approach in the AM peak hour with an associated queue length of 39 PCU. In the PM peak hour, the maximum DoS of 106% is on the New Bailey Street approach with a queue length of 43 PCU.

11.4.966 In the 2046 future baseline, the assessment shows that this junction operates close to capacity with a maximum DoS of 98% on the nearside lane of the A6 Chapel Street (east) approach in the AM peak hour with an associated queue length of 12 PCU. In the PM peak hour, the maximum DoS of 98% is on the New Bailey Street approach with a queue length of 22 PCU.

A6 Blackfriars Street/Parsonage

11.4.967 This junction is a three-arm priority (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-396.

Table 11-396: 2018 baseline performance at A6 Blackfriars Street/Parsonage junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6 Blackfriars Street (east)	329	18%	0
Parsonage	80	13%	0
A6 Blackfriars Street (west)	339	54%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A6 Blackfriars Street (east)	240	13%	0
Parsonage	265	41%	0
A6 Blackfriars Street (west)	330	49%	0

11.4.968 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.969 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-397. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-397: Future baseline performance at A6 Blackfriars Street/Parsonage junction

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A6 Blackfriars Street (east)	358	19%	0	368	20%	0	401	21%	0
Parsonage	162	28%	0	162	28%	0	236	41%	0
A6 Blackfriars Street (west)	538	92%	2	553	95%	2	570	101%	4
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A6 Blackfriars Street (east)	274	15%	0	285	16%	0	318	17%	0
Parsonage	315	49%	0	314	49%	0	333	54%	0
A6 Blackfriars Street (west)	279	42%	0	316	49%	0	340	55%	0

11.4.970 In the 2030 future baseline, this junction operates close to capacity in the AM peak hour with a maximum VoC of 92% on the A6 Blackfriars Street (west) approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

11.4.971 In the 2038 future baseline, this junction operates close to capacity in the AM peak hour with a maximum VoC of 95% on the A6 Blackfriars Street (west) approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.972 In the 2046 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 101% on the A6 Blackfriars Street (west) approach with an associated queue length of four PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A6 Crescent/Irwell Place

11.4.973 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The Irwell Place approach is a minor arm and is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-398.

Table 11-398: 2018 baseline performance at A6 Crescent/Irwell Place junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		

Approach	Flow, PCU/hr	VoC	Queue, PCU
A6 Crescent (east)	544	47%	6
Irwell Place	-	-	-
A6 Crescent (west)	857	59%	6
	2018 PM peak hour (17:00–18:00) baseline results		
A6 Crescent (east)	770	67%	9
Irwell Place	-	-	-
A6 Crescent (west)	884	64%	7

11.4.974 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.975 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-399. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-399: 2030 future baseline performance at A6 Crescent/Irwell Place junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6 Crescent (east)	715	62%	8
Irwell Place	-	-	-
A6 Crescent (west)	1,219	85%	9
	2030 PM peak hour (17:00–18:00)		
A6 Crescent (east)	902	78%	10
Irwell Place	-	-	-
A6 Crescent (west)	1,005	73%	8

11.4.976 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 85% on the A6 Crescent (west) approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 future baseline with a maximum VoC of 78% on the A6 Crescent (east) approach with a queue length of 10 PCU.

A5186 Langworthy Road/Liverpool Street

11.4.977 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-400.

Table 11-400: 2018 baseline performance at A5186 Langworthy Road/Liverpool Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5186 Langworthy Road (north)	421	69%	7
Liverpool Street (east)	390	33%	6
A5186 Langworthy Road (south)	203	43%	4

Approach	Flow, PCU/hr	VoC	Queue, PCU
Liverpool Street (west)	138	40%	3
	2018 PM peak hour (17:00–18:00) baseline results		
A5186 Langworthy Road (north)	273	47%	5
Liverpool Street (east)	445	34%	7
A5186 Langworthy Road (south)	306	56%	6
Liverpool Street (west)	94	29%	2

11.4.978 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.979 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-401. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-401: Future baseline performance at A5186 Langworthy Road/Liverpool Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A5186 Langworthy Road (north)	534	91%	9
Liverpool Street (east)	495	43%	8
A5186 Langworthy Road (south)	215	57%	4
Liverpool Street (west)	109	20%	2
	2030 PM peak hour (17:00–18:00)		
A5186 Langworthy Road (north)	382	67%	7
Liverpool Street (east)	503	39%	8
A5186 Langworthy Road (south)	357	72%	7
Liverpool Street (west)	110	44%	2

11.4.980 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 91% on the A5186 Langworthy Road (north) approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

A665 Great Ancoats Street/Lever Street/George Leigh Street

11.4.981 This junction is a four-arm signal controlled crossroads junction with signal controlled pedestrian crossing facilities. George Leigh Street is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-402.

Table 11-402: 2018 baseline performance at A665 Great Ancoats Street/Lever Street/George Leigh Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		

Approach	Flow, PCU/hr	VoC	Queue, PCU
A665 Great Ancoats Street (north)	1,413	35%	11
A665 Great Ancoats Street (south)	1,152	35%	13
Lever Street	255	33%	6
	2018 PM peak hour (17:00–18:00) baseline results		
A665 Great Ancoats Street (north)	1,341	37%	14
A665 Great Ancoats Street (south)	1,484	51%	15
Lever Street	532	47%	11

11.4.982 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.983 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-403. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-403: Future baseline performance at A665 Great Ancoats Street/Lever Street/George Leigh Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A665 Great Ancoats Street (north)	1,355	48%	21
A665 Great Ancoats Street (south)	1,076	57%	5
Lever Street	329	71%	7
	2030 PM peak hour (17:00–18:00)		
A665 Great Ancoats Street (north)	1,299	51%	16
A665 Great Ancoats Street (south)	1,380	81%	3
Lever Street	380	60%	8

11.4.984 In the 2030 future baseline, the assessment shows that this junction operates within capacity with a maximum VoC of 71% on the Lever Street approach in the AM peak hour with an associated queue length of seven PCU. In the PM peak hour, the maximum VoC of 81% is on the A665 Great Ancoats Street (south) approach with a queue length of three PCU.

A5185 Stott Lane/A57 Eccles New Road

11.4.985 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-404.

Table 11-404: 2018 baseline performance at A5185 Stott Lane/A57 Eccles New Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5185 Stott Lane	191	54%	4
A57 Eccles New Road (east)	115	8%	1
A57 Eccles New Road (west)	468	24%	5
	2018 PM peak hour (17:00–18:00) baseline results		

Approach	Flow, PCU/hr	VoC	Queue, PCU
A5185 Stott Lane	197	51%	4
A57 Eccles New Road (east)	252	19%	2
A57 Eccles New Road (west)	150	9%	2

11.4.986 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.987 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-405. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-405: Future baseline performance at A5185 Stott Lane/A57 Eccles New Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A5185 Stott Lane	293	83%	6
A57 Eccles New Road (east)	152	11%	1
A57 Eccles New Road (west)	753	38%	9
	2030 PM peak hour (17:00–18:00)		
A5185 Stott Lane	239	62%	5
A57 Eccles New Road (east)	393	29%	3
A57 Eccles New Road (west)	285	17%	3

11.4.988 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 83% on the A5185 Stott Lane approach with an associated queue length of six PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

A6041 Chapel Street/A6 Blackfriars Street/A6 Chapel Street/A6041 Blackfriars Road

11.4.989 This junction is a five-arm signal controlled crossroads with controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-406.

Table 11-406: 2017 baseline performance at A6041 Chapel Street/A6 Blackfriars Street/A6 Chapel Street/A6041 Blackfriars Road junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
Blackfriars Road (ahead, left and right)	454	57%	7
Salford Approach (ahead, right and left)	3	2%	0
Chapel Street East (ahead and right)	150	52%	2
Blackfriars Street (ahead, left and right)	242	35%	4
Chapel Street West (ahead, left and right)	209	49%	3

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2017 PM peak hour (17:00–18:00) baseline results		
Blackfriars Road (ahead, left and right)	311	46%	5
Salford Approach (ahead, right and left)	24	14%	1
Chapel Street East (ahead and right)	133	38%	2
Blackfriars Street (ahead, left and right)	283	45%	5
Chapel Street West (ahead, left and right)	266	45%	4

11.4.990 The assessment shows that this junction operates well within capacity in the 2017 baseline.

11.4.991 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-407. As the junction is only affected by operation of the Proposed Scheme and not construction, future baseline results are presented for 2038 and 2046 only.

Table 11-407: Future baseline performance at A6041 Chapel Street/A6 Blackfriars Street/A6 Chapel Street/A6041 Blackfriars Road junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
Blackfriars Road (ahead, left and right)	543	71%	10	528	70%	10
Salford Approach (ahead, right and left)	3	2%	0	3	2%	0
Chapel Street East (ahead and right)	158	81%	3	156	74%	2
Blackfriars Street (ahead, left and right)	401	58%	7	499	71%	10
Chapel Street West (ahead, left and right)	461	101%	19	430	95%	11
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
Blackfriars Road (ahead, left and right)	404	56%	6	436	64%	6
Salford Approach (ahead, right and left)	25	15%	1	24	14%	1
Chapel Street East (ahead and right)	135	43%	2	135	38%	2
Blackfriars Street (ahead, left and right)	348	55%	6	390	62%	7
Chapel Street West (ahead, left and right)	269	45%	4	256	44%	3

11.4.992 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum DoS of 101% on the Chapel Street West (ahead, left and right) approach with an associated queue length of 19 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2038 future baseline.

11.4.993 In the 2046 future baseline, the assessment shows that this junction is at capacity in the AM peak hour with a maximum DoS of 95% on the Chapel Street West (ahead, left and right) approach with an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2046 future baseline.

A56 Chapel Street/A56 Victoria Bridge Street

11.4.994 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities). The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-408.

Table 11-408: 2018 baseline performance at A56 Chapel Street/A56 Victoria Bridge Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A56 Chapel Street (east)	554	100%	9
A56 Victoria Bridge Street	93	38%	2
A56 Chapel Street (west)	96	56%	2
	2018 PM peak hour (17:00–18:00) baseline results		
A56 Chapel Street (east)	275	96%	6
A56 Victoria Bridge Street	83	20%	0
A56 Chapel Street (west)	289	103%	6

11.4.995 This junction operates over capacity in the 2018 baseline with a maximum VoC of 100% on the A56 Chapel Street (east) approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 103% is on the A56 Chapel Street (west) approach with a queue length of six PCU.

11.4.996 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-409. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-409: Future baseline performance at A56 Chapel Street/A56 Victoria Bridge Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A56 Chapel Street (east)	581	105%	9	598	108%	9
A56 Victoria Bridge Street	84	35%	2	82	34%	2
A56 Chapel Street (west)	178	103%	4	185	107%	4
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A56 Chapel Street (east)	265	92%	5	264	92%	5
A56 Victoria Bridge Street	78	19%	0	78	19%	0
A56 Chapel Street (west)	338	121%	6	338	121%	6

11.4.997 In the 2038 future baseline this junction operates over capacity with a maximum VoC of 105% on the A56 Chapel Street (east) approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 121% is on the A56 Chapel Street (west) approach with a queue length of six PCU.

11.4.998 In the 2046 future baseline, this junction operates over capacity with a maximum VoC of 108% on the A56 Chapel Street (east) approach in the AM peak hour with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 121% is on the A56 Chapel Street (west) approach with a queue length of six PCU.

11.4.999 The junction analysis indicates that the junction will be operating over its capacity in the 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A6042 Trinity Way/A6041 Blackfriars Road

11.4.1000 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities). The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-410.

Table 11-410: 2018 baseline performance at A6042 Trinity Way/A6041 Blackfriars Road junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6042 Trinity Way (north)	501	30%	7
A6041 Blackfriars Road (east)	357	36%	6
A6042 Trinity Way (south)	1,042	58%	14
A6041 Blackfriars Road (west)	636	34%	11
	2018 PM peak hour (17:00–18:00) baseline results		
A6042 Trinity Way (north)	647	31%	9
A6041 Blackfriars Road (east)	636	102%	11
A6042 Trinity Way (south)	1,256	75%	20
A6041 Blackfriars Road (west)	712	67%	13

11.4.1001 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 102% on the A6041 Blackfriars Road (east) approach with an associated queue length of 11 PCU.

11.4.1002 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-411. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-411: Future baseline performance at A6042 Trinity Way/A6041 Blackfriars Road junction

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A6042 Trinity Way (north)	630	38%	9	741	44%	10	853	51%	12

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
A6041 Blackfriars Road (east)	732	82%	12	701	87%	11	684	91%	11
A6042 Trinity Way (south)	1,015	57%	14	1,037	58%	14	998	56%	13
A6041 Blackfriars Road (west)	843	58%	14	1,006	71%	17	1,194	87%	20
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A6042 Trinity Way (north)	746	36%	11	752	36%	11	739	36%	11
A6041 Blackfriars Road (east)	631	106%	11	631	106%	11	631	106%	11
A6042 Trinity Way (south)	1,435	86%	22	1,455	87%	22	1,477	88%	22
A6041 Blackfriars Road (west)	763	72%	13	841	80%	15	886	84%	15

11.4.1003 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 82% on the A6041 Blackfriars Road (east) approach with an associated queue length of 12 PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 106% on the A6041 Blackfriars Road (east) approach with an associated queue length of 11 PCU.

11.4.1004 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 87% on the A6041 Blackfriars Road (east) approach with an associated queue length of 11 PCU. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 106% on the A6041 Blackfriars Road (east) approach with an associated queue length of 11 PCU.

11.4.1005 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 91% on the A6041 Blackfriars Road (east) approach with an associated queue length of 11 PCU. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 106% on the A6041 Blackfriars Road (east) approach with an associated queue length of 11 PCU.

A665 Miller Street/A664 Corporation Street/Corporation Street

11.4.1006 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. Corporation Street is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-412.

Table 11-412: 2018 baseline performance at A665 Miller Street/A664 Corporation Street/Corporation Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A665 Miller Street	973	36%	12
A6042 Corporation Street	109	18%	2
A665 Cheetham Hill Road	1,180	51%	9
	2018 PM peak hour (17:00–18:00) baseline results		
A665 Miller Street	1,349	58%	17
A6042 Corporation Street	195	29%	4
A665 Cheetham Hill Road	1,536	74%	12

11.4.1007 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.1008 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-413. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-413: Future baseline performance at A665 Miller Street/A664 Corporation Street/Corporation Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A665 Miller Street	1,148	42%	14	1,109	41%	13	1,111	41%	13
A6042 Corporation Street	98	16%	2	102	17%	2	110	18%	2
A665 Cheetham Hill Road	1,309	59%	10	1,336	60%	10	1,378	62%	10
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A665 Miller Street	1,358	60%	17	1,365	62%	17	1,372	62%	17
A6042 Corporation Street	260	39%	6	263	39%	6	265	39%	6
A665 Cheetham Hill Road	1,793	81%	14	1,893	86%	15	1,956	88%	16

11.4.1009 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 81% on the A665 Cheetham Hill Road approach with an associated queue length of 14 PCU.

11.4.1010 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction

operates close to capacity in the 2038 future baseline with a maximum VoC of 86% on the A665 Cheetham Hill Road approach with an associated queue length of 15 PCU.

11.4.1011 In the 2046 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 88% on the A665 Cheetham Hill Road approach with an associated queue length of 16 PCU.

A6 Broad Street/B6186 Frederick Road

11.4.1012 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-414 .

Table 11-414: 2018 baseline performance at A6 Broad Street/B6186 Frederick Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6 Broad Street (north)	1,986	61%	28
B6186 Frederick Road	324	29%	6
A6 Broad Street (south)	989	31%	6
	2018 PM peak hour (17:00–18:00) baseline results		
A6 Broad Street (north)	1,128	51%	19
B6186 Frederick Road	878	53%	16
A6 Broad Street (south)	1,907	62%	9

11.4.1013 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.1014 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-415. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-415: Future baseline performance at A6 Broad Street/B6186 Frederick Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A6 Broad Street (north)	2,185	67%	31	2,183	67%	31
B6186 Frederick Road	803	71%	16	935	82%	18
A6 Broad Street (south)	1,106	35%	8	1,147	36%	8
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A6 Broad Street (north)	1,351	61%	23	1,481	67%	25
B6186 Frederick Road	892	54%	17	931	56%	17
A6 Broad Street (south)	2,326	75%	14	2,394	77%	15

11.4.1015 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction

operates within capacity in the 2038 future baseline with a maximum VoC of 75% on the A6 Broad Street (south) approach with an associated queue length of 14 PCU.

11.4.1016 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 82% on the B6186 Frederick Road approach in the AM peak hour with an associated queue length of 18 PCU. In the PM peak hour, the maximum VoC of 77% is on the A6 Broad Street (south) approach with a queue length of 15 PCU.

A6041 Blackfriars Road/A5066 Silk Street/St Simon Street

11.4.1017 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The St Simon Street approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-416.

Table 11-416: 2018 baseline performance at A6041 Blackfriars Road/A5066 Silk Street/St Simon Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6041 Blackfriars Road (north)	1,252	63%	11
St Simon Street	-	-	-
A6041 Blackfriars Road (south)	178	27%	2
A5066 Silk Street	227	43%	4
	2018 PM peak hour (17:00–18:00) baseline results		
A6041 Blackfriars Road (north)	763	55%	8
St Simon Street	-	-	-
A6041 Blackfriars Road (south)	803	93%	10
A5066 Silk Street	683	86%	12

11.4.1018 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 93% on the A6041 Blackfriars Road (south) approach with an associated queue length of 10 PCU.

11.4.1019 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-417. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-417: Future baseline performance at A6041 Blackfriars Road/A5066 Silk Street/St Simon Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6041 Blackfriars Road (north)	1,321	71%	11
St Simon Street	-	-	-

Approach	Flow, PCU/hr	VoC	Queue, PCU
A6041 Blackfriars Road (south)	302	46%	4
A5066 Silk Street	312	59%	5
	2030 PM peak hour (17:00–18:00)		
A6041 Blackfriars Road (north)	734	53%	7
St Simon Street	-	-	-
A6041 Blackfriars Road (south)	820	95%	10
A5066 Silk Street	730	91%	13

11.4.1020 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 95% on the A6041 Blackfriars Road (south) approach with an associated queue length of 10 PCU.

A5186 Langworthy Road/Seedley Road

11.4.1021 This junction is a four-arm signal controlled crossroad junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-418.

Table 11-418: 2018 baseline performance at Seedley Road/A5186 Langworthy Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5186 Langworthy Road (north)	854	90%	11
Seedley Road (east)	179	81%	4
A5186 Langworthy Road (south)	241	31%	3
Seedley Road (west)	193	67%	4
	2018 PM peak hour (17:00–18:00) baseline results		
A5186 Langworthy Road (north)	568	71%	7
Seedley Road (east)	222	80%	4
A5186 Langworthy Road (south)	284	34%	3
Seedley Road (west)	151	49%	3

11.4.1022 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 90% on the A5186 Langworthy Road (north) approach in the AM peak hour with an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 80% on the Seedley Road (east) approach with an associated queue length of four PCU.

11.4.1023 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-419. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-419: Future baseline performance at Seedley Road/A5186 Langworthy Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A5186 Langworthy Road (north)	843	93%	12
Seedley Road (east)	209	69%	5
A5186 Langworthy Road (south)	160	28%	2
Seedley Road (west)	256	66%	6
	2030 PM peak hour (17:00–18:00)		
A5186 Langworthy Road (north)	568	85%	8
Seedley Road (east)	441	68%	9
A5186 Langworthy Road (south)	167	32%	2
Seedley Road (west)	182	43%	3

11.4.1024 In the 2030 future baseline, the assessment shows that this junction operates close to capacity with a maximum VoC of 93% on the A5186 Langworthy Road (north) approach in the AM peak hour with an associated queue length of 12 PCU. In the PM peak hour, the maximum VoC of 85% is on the A5186 Langworthy Road (north) approach with a queue length of eight PCU.

A576 Eccles Old Road/A5186 Langworthy Road

11.4.1025 This junction is a four-arm signalised controlled crossroads with controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-420.

Table 11-420: 2018 baseline performance at B5186 Langworthy Road/A576 Eccles Old Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5186 Langworthy Road (north)	678	48%	8
A576 Eccles Old Road (east)	371	75%	6
A5186 Langworthy Road (south)	386	85%	5
A576 Eccles Old Road (west)	693	78%	9
	2018 PM peak hour (17:00–18:00) baseline results		
A5186 Langworthy Road (north)	627	35%	7
A576 Eccles Old Road (east)	400	54%	6
A5186 Langworthy Road (south)	373	75%	4
A576 Eccles Old Road (west)	247	42%	4

11.4.1026 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 85% on the A5186 Langworthy Road (south) approach with an associated queue length of five PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum DoS of 75% on the A5186 Langworthy Road (south) approach with an associated queue length of four PCU.

11.4.1027 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-421. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-421: Future baseline performance at B5186 Langworthy Road/A576 Eccles Old Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A5186 Langworthy Road (north)	552	53%	13	546	53%	13	633	61%	14
A576 Eccles Old Road (east)	500	44%	11	507	45%	11	510	45%	11
A5186 Langworthy Road (south)	224	68%	4	302	85%	5	340	84%	6
A576 Eccles Old Road (west)	880	64%	13	874	63%	14	892	64%	15
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A5186 Langworthy Road (north)	443	40%	9	463	42%	9	462	42%	9
A576 Eccles Old Road (east)	504	44%	11	514	45%	11	539	47%	11
A5186 Langworthy Road (south)	175	83%	5	172	85%	4	177	88%	5
A576 Eccles Old Road (west)	608	43%	9	624	45%	9	668	48%	10

11.4.1028 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 83% on the A5186 Langworthy Road (south) approach with an associated queue length of five PCU.

11.4.1029 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 85% on the A5186 Langworthy Road (south) approach with an associated queue length of five PCU. In the PM peak hour, the maximum VoC of 85% is on the A5186 Langworthy Road (south) approach with an associated queue length of four PCU.

11.4.1030 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 84% on the A5186 Langworthy Road (south) approach with an associated queue length of six PCU. In the PM peak hour, this junction operates close to capacity in the 2046 future baseline with a maximum DoS of 88%

on the A5186 Langworthy Road (south) approach with an associated queue length of five PCU.

A56 Bury New Road/Sherborne Street

11.4.1031 This junction is a four-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The Sherborne Street (east) approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-422.

Table 11-422: 2018 baseline performance at A56 Bury New Road/Sherborne Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A56 Bury New Road	1,170	75%	0
Sherborne Street (east)	-	-	-
A56 Great Ducie Street	548	28%	0
Sherborne Street (west)	81	93%	3
	2018 PM peak hour (17:00–18:00) baseline results		
A56 Bury New Road	743	52%	0
Sherborne Street (east)	-	-	-
A56 Great Ducie Street	1,510	77%	0
Sherborne Street (west)	44	95%	2

11.4.1032 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 93% on the Sherborne Street (west) approach in the AM peak hour with an associated queue length of three PCU. In the PM peak hour, the maximum VoC of 95% is on the Sherborne Street (west) approach with a queue length of two PCU.

11.4.1033 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-423. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-423: Future baseline performance at A56 Bury New Road/Sherborne Street junction

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A56 Bury New Road	1,278	82%	0	1,327	85%	0	1,395	89%	0
Sherborne Street (east)	-	-	-	-	-	-	-	-	-
A56 Great Ducie Street	679	34%	0	692	35%	0	720	36%	0
Sherborne Street (west)	49	82%	2	42	80%	2	37	88%	2

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2030 PM peak hour (17:00–18:00)			2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
A56 Bury New Road	817	52%	0	873	44%	0	906	45%	0
Sherborne Street (east)	-	-	-	-	-	-	-	-	-
A56 Great Ducie Street	1,491	76%	0	1,542	79%	0	1,587	81%	0
Sherborne Street (west)	43	104%	2	34	104%	2	32	106%	2

11.4.1034 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 82% on the A56 Bury New Road approach with a queue length of two PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 104% on the Sherborne Street (west) approach with an associated queue length of two PCU.

11.4.1035 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 85% on the A56 Bury New Road approach with no queue. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 104% on the Sherborne Street (west) approach with an associated queue length of two PCU.

11.4.1036 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 89% on the A56 Bury New Road approach with no queue. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 106% on the Sherborne Street (west) approach with an associated queue length of two PCU.

B6186 Frederick Road/Seaford Road/Broughton Road East

11.4.1037 This junction is a four-arm signal controlled junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-424.

Table 11-424: 2018 baseline performance at B6186 Frederick Road/Seaford Road/Broughton Road East junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Seaford Road	169	81%	4
B6186 Fredrick Road (east)	466	55%	6
B6186 Frederick Road (west)	528	67%	8
Broughton Road East	128	21%	3
	2018 PM peak hour (17:00–18:00) baseline results		

Approach	Flow, PCU/hr	VoC	Queue, PCU
Seaford Road	60	78%	1
B6186 Fredrick Road (east)	881	89%	7
B6186 Frederick Road (west)	514	67%	6
Broughton Road East	27	9%	0

11.4.1038 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 81% on the Seaford Road approach with an associated queue length of four PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 89% on the B6186 Fredrick Road (east) approach with an associated queue length of seven PCU.

11.4.1039 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-425. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-425: Future baseline performance at B6186 Frederick Road/Seaford Road/Broughton Road East junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Seaford Road	182	88%	4	187	90%	4	189	92%	4
B6186 Fredrick Road (east)	652	73%	8	719	81%	9	771	84%	9
B6186 Frederick Road (west)	618	78%	9	676	85%	10	722	91%	11
Broughton Road East	232	36%	5	267	42%	6	295	46%	6
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Seaford Road	62	80%	1	62	81%	1	65	85%	1
B6186 Fredrick Road (east)	859	98%	7	844	100%	7	852	100%	7
B6186 Frederick Road (west)	648	84%	7	721	93%	8	745	96%	8
Broughton Road East	37	12%	1	43	14%	1	48	15%	1

11.4.1040 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 88% on the Seaford Road approach with an associated queue length of four PCU. In the PM peak hour, the maximum VoC of 98% is on the B6186 Fredrick Road (east) approach with a queue length of seven PCU.

11.4.1041 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 90% on the Seaford Road approach with an associated queue length of four PCU. In the PM peak hour, the assessment shows

that this junction operates over capacity in the 2038 future baseline with a maximum VoC of 100% on the B6186 Fredrick Road (east) approach with an associated queue length of seven PCU.

11.4.1042 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 92% on the Seaford Road approach with an associated queue length of four PCU. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 100% on the B6186 Fredrick Road (east) approach with an associated queue length of seven PCU.

11.4.1043 The junction analysis indicates that the junction will be operating over its capacity in the 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A576 Broughton Road/A576 Cromwell Road/Lissadel Street

11.4.1044 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-426.

Table 11-426: 2018 baseline performance at A576 Broughton Road/A576 Cromwell Road/Lissadel Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A576 Cromwell Road (north)	1,030	73%	0
Lissadel Street (east)	89	18%	2
A576 Broughton Road (south)	995	57%	7
	2018 PM peak hour (17:00–18:00) baseline results		
A576 Cromwell Road (north)	779	55%	2
Lissadel Street (east)	249	54%	5
A576 Broughton Road (south)	828	41%	5

11.4.1045 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.1046 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-427. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-427: Future baseline performance at A576 Broughton Road/A576 Cromwell Road/Lissadel Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A576 Cromwell Road (north)	1,112	79%	2
Lissadel Street (east)	103	21%	2
A576 Broughton Road (south)	1,076	64%	7

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 PM peak hour (17:00–18:00)		
A576 Cromwell Road (north)	842	59%	2
Lissadel Street (east)	275	59%	6
A576 Broughton Road (south)	972	50%	6

11.4.1047 In the AM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 79% on the A576 Cromwell Road (north) approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

A56 Bury New Road/B6180 Waterloo Road

11.4.1048 This junction is a three-arm priority give way T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-428.

Table 11-428: 2018 baseline performance at A56 Bury New Road/B6180 Waterloo Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A56 Bury Road (north)	837	21%	0
B6180 Waterloo Road	342	89%	2
A56 Bury Road (south)	498	21%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A56 Bury Road (north)	538	13%	0
B6180 Waterloo Road	264	80%	1
A56 Bury Road (south)	1,281	51%	0

11.4.1049 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 89% on the B6180 Waterloo Road approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 80% on the B6180 Waterloo Road approach with an associated queue length of one PCU.

11.4.1050 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-429. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-429: Future baseline performance at A56 Bury New Road/B6180 Waterloo Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A56 Bury Road (north)	964	24%	0	1,033	26%	0	1,140	29%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
B6180 Waterloo Road	316	90%	2	297	90%	2	263	89%	2
A56 Bury Road (south)	636	27%	0	659	28%	0	698	30%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A56 Bury Road (north)	539	13%	0	568	14%	0	603	15%	0
B6180 Waterloo Road	323	86%	2	339	88%	2	339	92%	2
A56 Bury Road (south)	1,288	51%	0	1,349	52%	0	1,412	53%	0

11.4.1051 In the 2030 future baseline, the assessment shows that this junction operates close to capacity with a maximum VoC of 90% on the B6180 Waterloo Road approach in the AM peak hour with an associated queue length of two PCU. In the PM peak hour, the maximum VoC of 86% is on the B6180 Waterloo Road approach with a queue length of two PCU.

11.4.1052 In the 2038 future baseline, the assessment shows that this junction operates close to capacity with a maximum VoC of 90% on the B6180 Waterloo Road approach in the AM peak hour with an associated queue length of two PCU. In the PM peak hour, the maximum VoC of 88% is on the B6180 Waterloo Road approach with a queue length of two PCU.

11.4.1053 In the 2046 future baseline, the assessment shows that this junction operates close to capacity with a maximum VoC of 89% on the B6180 Waterloo Road approach in the AM peak hour with an associated queue length of two PCU. In the PM peak hour, the maximum VoC of 92% is on the B6180 Waterloo Road approach with a queue length of two PCU.

A576 Cromwell Road/Langley Road South

11.4.1054 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-430.

Table 11-430: 2018 baseline performance at A576 Cromwell Road/Langley Road South junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Langley Road South	50	4%	1
A576 Cromwell Road (east)	980	88%	11
A576 Cromwell Road (west)	906	86%	8
	2018 PM peak hour (17:00–18:00) baseline results		
Langley Road South	11	1%	0
A576 Cromwell Road (east)	768	64%	8
A576 Cromwell Road (west)	877	78%	7

11.4.1055 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 88% on the A576 Cromwell Road (east) approach with an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 78% on the A576 Cromwell Road (west) approach with an associated queue length of seven PCU.

11.4.1056 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-431. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-431: Future baseline performance at A576 Cromwell Road/Langley Road South junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Langley Road South	207	18%	3
A576 Cromwell Road (east)	905	79%	10
A576 Cromwell Road (west)	979	93%	9
	2030 PM peak hour (17:00–18:00)		
Langley Road South	9	1%	0
A576 Cromwell Road (east)	833	69%	9
A576 Cromwell Road (west)	1,027	92%	8

11.4.1057 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 93% on the A576 Cromwell Road (west) approach with an associated queue length of nine PCU. In the PM peak hour, the maximum VoC of 92% is on the A576 Cromwell Road (west) approach with a queue length of eight PCU.

A56 Bury New Road/Waterloo Road/Broughton Lane

11.4.1058 This junction is a four-arm signal controlled crossroads with controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-432.

Table 11-432: 2018 baseline performance at A56 Bury New Road/Waterloo Road/Broughton Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A56 Bury New Road (north)	976	29%	8
Waterloo Road	294	56%	6
A56 Bury New Road (south)	364	10%	3
Broughton Lane	149	63%	3
	2018 PM peak hour (17:00–18:00) baseline results		
A56 Bury New Road (north)	605	22%	6
Waterloo Road	75	19%	2

Approach	Flow, PCU/hr	VoC	Queue, PCU
A56 Bury New Road (south)	1,047	31%	10
Broughton Lane	321	101%	7

11.4.1059 In the 2018 baseline the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 101% on the Broughton Lane approach with an associated queue length of seven PCU.

11.4.1060 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-433. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-433: Future baseline performance at A56 Bury New Road/Waterloo Road/Broughton Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A56 Bury New Road (north)	1,088	33%	9	1,153	36%	10	1,254	39%	11
Waterloo Road	311	59%	7	335	66%	7	333	72%	7
A56 Bury New Road (south)	496	13%	4	511	14%	4	572	16%	5
Broughton Lane	187	80%	4	206	89%	5	226	97%	5
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A56 Bury New Road (north)	611	23%	6	642	24%	6	680	26%	7
Waterloo Road	111	27%	2	158	39%	3	190	47%	4
A56 Bury New Road (south)	1,046	31%	10	1,128	33%	11	1,208	35%	12
Broughton Lane	340	106%	7	346	107%	7	354	110%	7

11.4.1061 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 80% on the Broughton Lane approach with an associated queue length of four PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 106% on the Broughton Lane approach with an associated queue length of seven PCU.

11.4.1062 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 89% on the Broughton Lane approach with an associated queue length of five PCU. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 107% on the Broughton Lane approach and an associated queue length of seven PCU.

11.4.1063 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 97% on the Broughton Lane approach with an associated queue length of five PCU. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 110% on the Broughton Lane approach with an associated queue length of seven PCU.

11.4.1064 The junction analysis indicates that the junction will be operating over its capacity in the 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

B6186 Camp Street/B6186 Fredrick Road/Lower Broughton Road

11.4.1065 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-434.

Table 11-434: 2018 baseline performance at B6186 Camp Street/B6186 Fredrick Road/Lower Broughton Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Lower Broughton Road (north)	252	26%	4
B6186 Camp Street	349	45%	5
Lower Broughton Road (south)	260	50%	5
B6186 Frederick Road	535	28%	5
	2018 PM peak hour (17:00–18:00) baseline results		
Lower Broughton Road (north)	94	5%	1
B6186 Camp Street	324	59%	7
Lower Broughton Road (south)	841	83%	11
B6186 Frederick Road	316	30%	5

11.4.1066 The assessment shows that this junction operates well within capacity in the 2018 baseline in the AM Peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 83% on the Lower Broughton Road (south) approach in the PM peak hour with an associated queue length of 11 PCU.

11.4.1067 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-435. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-435: Future baseline performance at B6186 Camp Street/B6186 Fredrick Road/Lower Broughton Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			2038 AM peak hour (08:00–09:00)			2046 AM peak hour (08:00–09:00)		
Lower Broughton Road (north)	269	28%	5	271	28%	5	245	25%	4
B6186 Camp Street	425	55%	6	487	63%	7	555	71%	8
Lower Broughton Road (south)	396	82%	7	412	90%	7	420	92%	7
B6186 Frederick Road	583	31%	5	645	36%	6	683	39%	7
	2030 PM peak hour (17:00–18:00)			2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
Lower Broughton Road (north)	96	5%	1	131	7%	2	151	8%	2
B6186 Camp Street	316	58%	6	326	60%	7	345	63%	7
Lower Broughton Road (south)	935	95%	12	947	98%	13	958	100%	13
B6186 Frederick Road	429	40%	7	487	45%	8	510	48%	9

11.4.1068 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 82% on the Lower Broughton Road (south) approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 95% on the Lower Broughton Road (south) approach with a queue length of 12 PCU.

11.4.1069 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 90% on the Lower Broughton Road (south) approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity with a maximum VoC of 98% is on the Lower Broughton Road (south) approach with a queue length of 13 PCU.

11.4.1070 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 92% on the Lower Broughton Road (south) approach with an associated queue length of seven PCU. In the PM peak hour, this junction operates over capacity with a maximum VoC of 100% on the Lower Broughton Road (south) approach with a queue length of 13 PCU.

11.4.1071 The junction analysis indicates that the junction will be operating over its capacity in the 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A5066 Great Clowes Street/B6186 Camp Street/B6187 Great Clowes Street/B6186 Upper Camp Street

11.4.1072 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-436.

Table 11-436: 2018 baseline performance at A5066 Great Clowes Street/B6186 Camp Street/B6187 Great Clowes Street/B6186 Upper Camp Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5066 Great Clowes Street (north)	821	50%	11
B6186 Upper Camp Street	259	48%	5
A5066 Great Clowes Street (south)	129	21%	3
B6186 Camp Street	184	39%	4
	2018 PM peak hour (17:00–18:00) baseline results		
A5066 Great Clowes Street (north)	506	41%	7
B6186 Upper Camp Street	127	28%	3
A5066 Great Clowes Street (south)	577	104%	10
B6186 Camp Street	199	46%	4

11.4.1073 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 104% on the A5066 Great Clowes Street (south) approach with an associated queue length of 10 PCU.

11.4.1074 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-437. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-437: Future baseline performance at A5066 Great Clowes Street/B6186 Camp Street/B6187 Great Clowes Street/B6186 Upper Camp Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A5066 Great Clowes Street (north)	870	53%	12	892	55%	12
B6186 Upper Camp Street	266	47%	5	273	47%	6
A5066 Great Clowes Street (south)	111	18%	3	127	21%	3
B6186 Camp Street	175	37%	4	153	33%	3
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A5066 Great Clowes Street (north)	462	38%	6	480	39%	7

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
B6186 Upper Camp Street	133	29%	3	157	34%	3
A5066 Great Clowes Street (south)	707	110%	12	731	112%	13
B6186 Camp Street	258	57%	5	272	62%	5

11.4.1075 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 110% on the A5066 Great Clowes Street (south) approach with an associated queue length of 12 PCU.

11.4.1076 In the 2046 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 112% on the A5066 Great Clowes Street (south) approach with an associated queue length of 13 PCU.

A5066 Great Clowes Street/Fenney Street

11.4.1077 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. Fenney Street is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-438.

Table 11-438: 2018 baseline performance at A5066 Great Clowes Street/Fenney Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5066 Great Clowes Street (north)	868	44%	0
A5066 Great Clowes Street (south)	309	100%	5
	2018 PM peak hour (17:00–18:00) baseline results		
A5066 Great Clowes Street (north)	588	30%	0
A5066 Great Clowes Street (south)	708	103%	3

11.4.1078 This junction operates over capacity in the 2018 baseline with a maximum VoC of 100% on the A5066 Great Clowes Street (south) approach in the AM peak hour with an associated queue length of five PCU. In the PM peak hour, the maximum VoC of 103% is on the A5066 Great Clowes Street (south) approach with a queue length of three PCU.

11.4.1079 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-439. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-439: Future baseline performance at A5066 Great Clowes Street/Fenney Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A5066 Great Clowes Street (north)	905	46%	0
A5066 Great Clowes Street (south)	296	101%	5
	2030 PM peak hour (17:00–18:00)		
A5066 Great Clowes Street (north)	559	29%	0
A5066 Great Clowes Street (south)	755	102%	2

11.4.1080 This junction operates over capacity in the 2030 future baseline with a maximum VoC of 101% on the A5066 Great Clowes Street (south) approach in the AM peak hour with an associated queue length of five PCU. In the PM peak hour, the maximum VoC of 102% is on the A5066 Great Clowes Street (south) approach with a queue length of two PCU.

A56 Bury Road/Fenney Street/Appian Way

11.4.1081 This junction is a four-arm priority controlled (give way) crossroads with no controlled pedestrian crossing facilities. The Appian Way approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-440.

Table 11-440: 2018 baseline performance at A56 Bury Road/Fenney Street/Appian Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A56 Bury Road (north)	994	25%	0
Appian Way	-	-	-
A56 Bury Road (south)	324	8%	0
Fenney Street (west)	242	94%	3
	2018 PM peak hour (17:00–18:00) baseline results		
A56 Bury Road (north)	463	12%	0
Appian Way	-	-	-
A56 Bury Road (south)	969	24%	0
Fenney Street (west)	204	87%	2

11.4.1082 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 94% on the Fenney Street (west) approach in the AM peak hour with an associated queue length of three PCU. In the PM peak hour, the maximum VoC of 87% is on the Fenney Street (west) approach with a queue length of two PCU.

11.4.1083 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-441. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-441: Future baseline performance at A56 Bury Road/Fenney Street/Appian Way junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A56 Bury Road (north)	1,096	27%	0	1,168	29%	0	1,260	32%	0
Appian Way	-	-	-	-	-	-	-	-	-
A56 Bury Road (south)	412	10%	0	450	11%	0	469	12%	0
Fenney Street (west)	208	91%	3	191	89%	2	183	88%	2
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A56 Bury Road (north)	494	12%	0	511	13%	0	541	14%	0
Appian Way	-	-	-	-	-	-	-	-	-
A56 Bury Road (south)	976	24%	0	1,057	26%	0	1,103	28%	0
Fenney Street (west)	182	79%	2	181	84%	2	166	82%	2

11.4.1084 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 91% on the Fenney Street (west) approach with an associated queue length of three PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 79% on the Fenney Street (west) approach with an associated queue length of two PCU.

11.4.1085 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 89% on the Fenney Street (west) approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2038 future baseline with a maximum VoC of 84% on the Fenney Street (west) approach with an associated queue length of two PCU.

11.4.1086 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 88% on the Fenney Street (west) approach with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2046 future baseline with a maximum VoC of 82% on the Fenney Street (west) approach with an associated queue length of two PCU.

A576 Great Cheetham Street West/A5066 Great Clowes Street/B6187 Great Clowes Street

11.4.1087 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-442.

Table 11-442: 2018 baseline performance at A576 Great Cheetham Street West/A5066 Great Clowes Street/B6187 Great Clowes Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B6187 Great Clowes Street	549	69%	11
A576 Great Cheetham Street West (east)	690	48%	10
A5066 Great Clowes Street	13	1%	0
A576 Great Cheetham Street West (west)	674	62%	12
	2018 PM peak hour (17:00–18:00) baseline results		
B6187 Great Clowes Street	181	55%	4
A576 Great Cheetham Street West (east)	747	60%	11
A5066 Great Clowes Street	335	19%	4
A576 Great Cheetham Street West (west)	356	104%	7

11.4.1088 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 104% on the A576 Great Cheetham Street West (west) approach with an associated queue length of seven PCU.

11.4.1089 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-443. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-443: Future baseline performance at A576 Great Cheetham Street West/A5066 Great Clowes Street/B6187 Great Clowes Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
B6187 Great Clowes Street	595	74%	12	610	76%	12	622	78%	12
A576 Great Cheetham Street West (east)	724	51%	11	731	51%	11	726	51%	11
A5066 Great Clowes Street	10	1%	0	10	1%	0	11	2%	0
A576 Great Cheetham Street West (west)	759	73%	13	795	84%	14	689	99%	12

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 PM peak hour (17:00–18:00)			2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
B6187 Great Clowes Street	182	55%	4	193	59%	4	206	63%	5
A576 Great Cheetham Street West (east)	722	58%	11	717	58%	11	717	58%	11
A5066 Great Clowes Street	375	21%	5	459	26%	6	482	27%	6
A576 Great Cheetham Street West (west)	356	109%	7	376	120%	7	372	118%	7

11.4.1090 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 109% on the A576 Great Cheetham Street West (west) approach with an associated queue length of seven PCU.

11.4.1091 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 84% on the A576 Great Cheetham Street West (west) approach with an associated queue length of 14 PCU. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 120% on the A576 Great Cheetham Street West (west) approach with an associated queue length of seven PCU.

11.4.1092 In the 2046 future baseline, this junction operates close to capacity in the AM peak hour with a maximum VoC of 99% on the A576 Great Cheetham Street West (west) approach with an associated queue length of 12 PCU. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 118% on the A576 Great Cheetham Street West (west) approach with an associated queue length of seven PCU.

11.4.1093 The junction analysis indicates that the junction will be operating over its capacity in 2030, 2038 and 2046 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could to a degree be reduced by signal optimisation.

A572 Worsley Road/B5231 Folly Lane

11.4.1094 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-444.

Table 11-444: 2018 baseline performance at A572 Worsley Road/B5231 Folly Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A572 Worsley Road (east)	746	20%	0
B5231 Folly Lane	375	39%	2
A572 Worsley Road (west)	518	19%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A572 Worsley Road (east)	906	24%	0
B5231 Folly Lane	485	61%	5
A572 Worsley Road (west)	493	15%	0

11.4.1095 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.1096 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-445. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 11-445: Future baseline performance at A572 Worsley Road/B5231 Folly Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A572 Worsley Road (east)	1,011	27%	0	1,074	29%	0
B5231 Folly Lane	476	72%	2	493	74%	2
A572 Worsley Road (west)	975	92%	1	1,002	100%	1
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A572 Worsley Road (east)	1,010	27%	0	1,037	28%	0
B5231 Folly Lane	597	79%	4	627	83%	5
A572 Worsley Road (west)	730	26%	0	777	29%	0

11.4.1097 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 92% on the A572 Worsley Road (west) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2038 future baseline with a maximum VoC of 79% on the B5231 Folly Lane approach with an associated queue length of four PCU.

11.4.1098 In the 2046 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 100% on the A572 Worsley Road (west) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2046 future baseline with a maximum VoC of 83% on the B5231 Folly Lane approach with an associated queue length of five PCU.

A580 East Lancashire Road/A572 Worsley Road

11.4.1099 This junction is a four-arm signal controlled crossroads with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-446.

Table 11-446: 2018 baseline performance at A580 East Lancashire Road/A572 Worsley Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A580 East Lancashire Road (north)	2,180	87%	47
A572 Worsley Road (east)	638	70%	14
A580 East Lancashire Road (south)	1,365	53%	22
A572 Worsley Road (west)	754	81%	15
	2018 PM peak hour (17:00–18:00) baseline results		
A580 East Lancashire Road (north)	1,443	56%	26
A572 Worsley Road (east)	679	65%	16
A580 East Lancashire Road (south)	2,702	100%	28
A572 Worsley Road (west)	768	74%	19

11.4.1100 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 87% on the A580 East Lancashire Road (north) approach with an associated queue length of 47 PCU. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 100% on the A580 East Lancashire Road (south) approach with an associated queue length of 28 PCU.

11.4.1101 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-447. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-447: Future baseline performance at A580 East Lancashire Road/A572 Worsley Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A580 East Lancashire Road (north)	2,575	104%	54
A572 Worsley Road (east)	840	92%	18
A580 East Lancashire Road (south)	1,665	65%	29
A572 Worsley Road (west)	799	87%	16
	2030 PM peak hour (17:00–18:00)		
A580 East Lancashire Road (north)	1,754	69%	27
A572 Worsley Road (east)	727	70%	17
A580 East Lancashire Road (south)	2,734	101%	28
A572 Worsley Road (west)	858	83%	21

11.4.1102 In the 2030 future baseline this junction operates over capacity with a maximum VoC of 104% on the A580 East Lancashire Road (north) approach in the AM peak hour with an

associated queue length of 54 PCU. In the PM peak hour, the maximum VoC of 101% is on the A580 East Lancashire Road (south) approach with a queue length of 28 PCU.

A665 Cheetham Hill Road/B6180 Waterloo Road/Greenhill Road

11.4.1103 This junction is a five-arm signal controlled crossroads junction with signal controlled pedestrian crossing facilities. The Halliwell Lane approach is a minor arm that is not included within the SATURN model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-448.

Table 11-448: 2018 baseline performance at A665 Cheetham Hill Road/B6180 Waterloo Road/Greenhill Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Greenhill Road	256	45%	6
A665 Cheetham Hill Road (south)	528	51%	10
B6180 Waterloo Road	161	38%	4
Halliwell Lane	-	-	-
A665 Cheetham Hill Road (north)	1,235	54%	14
	2018 PM peak hour (17:00–18:00) baseline results		
Greenhill Road	3	0%	0
A665 Cheetham Hill Road (south)	1,332	72%	19
B6180 Waterloo Road	193	27%	4
Halliwell Lane	-	-	-
A665 Cheetham Hill Road (north)	794	51%	9

11.4.1104 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.1105 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-449. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-449: Future baseline performance at A665 Cheetham Hill Road/B6180 Waterloo Road/Greenhill Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Greenhill Road	317	56%	7
A665 Cheetham Hill Road (south)	551	53%	10
B6180 Waterloo Road	170	43%	4
Halliwell Lane	-	-	-
A665 Cheetham Hill Road (north)	1,281	55%	14
	2030 PM peak hour (17:00–18:00)		
Greenhill Road	24	4%	1

Approach	Flow, PCU/hr	VoC	Queue, PCU
A665 Cheetham Hill Road (south)	1,315	80%	18
B6180 Waterloo Road	232	33%	5
Halliwell Lane	-	-	-
A665 Cheetham Hill Road (north)	952	66%	11

11.4.1106 In the 2030 future baseline the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 80% on the A665 Cheetham Hill Road (south) approach with an associated queue length of 18 PCU.

Moor Lane/Littleton Road/Kersal Vale Road

11.4.1107 This junction is a three-arm priority controlled (give way) roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-450.

Table 11-450: 2018 baseline performance at Moor Lane/Littleton Road/Kersal Vale Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Kersal Vale Road	559	53%	0
Moor Lane	122	16%	0
Littleton Road	246	25%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Kersal Vale Road	295	28%	0
Moor Lane	144	15%	0
Littleton Road	593	60%	0

11.4.1108 The assessment shows that this junction operates well within capacity in the 2018 baseline.

11.4.1109 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-451. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 11-451: Future baseline performance at Moor Lane/Littleton Road/Kersal Vale Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Kersal Vale Road	416	39%	0	352	34%	0	294	29%	0
Moor Lane	220	26%	0	268	30%	0	300	33%	0
Littleton Road	293	30%	0	330	34%	0	364	37%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Kersal Vale Road	336	34%	0	382	39%	0	391	41%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
Moor Lane	169	18%	0	176	20%	0	224	25%	0
Littleton Road	798	83%	0	837	87%	1	873	92%	1

11.4.1110 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 83% on the Littleton Road approach with no queue.

11.4.1111 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 87% on the Littleton Road approach with an associated queue length of one PCU.

11.4.1112 In the 2046 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 92% on the Littleton Road approach with an associated queue length of one PCU.

A56 Bury New Road/Singleton Road/Moor Lane

11.4.1113 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-452.

Table 11-452: 2018 baseline performance at A56 Bury New Road/Singleton Road/Moor Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A56 Bury New Road (north)	901	44%	14
Singleton Road	273	65%	8
A56 Bury New Road(south)	461	31%	7
Moor Lane	367	66%	10
	2018 PM peak hour (17:00–18:00) baseline results		
A56 Bury New Road (north)	821	50%	13
Singleton Road	302	53%	8
A56 Bury New Road(south)	936	70%	15
Moor Lane	418	83%	12

11.4.1114 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 83% on the Moor Lane approach with an associated queue length of 12 PCU.

11.4.1115 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-453. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-453: Future baseline performance at A56 Bury New Road/Singleton Road/Moor Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A56 Bury New Road (north)	1,035	50%	16
Singleton Road	311	74%	9
A56 Bury New Road(south)	524	37%	8
Moor Lane	377	68%	11
	2030 PM peak hour (17:00–18:00)		
A56 Bury New Road (north)	919	57%	15
Singleton Road	330	58%	9
A56 Bury New Road(south)	954	74%	15
Moor Lane	457	91%	13

11.4.1116 In the AM peak hour, the assessment shows that this junction operates well within capacity in the in the 2030 future baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 91% on the Moor Lane approach with an associated queue length of 13 PCU.

A6044 Hilton Lane/A6044 Rainsough Brow/Kersal Road

11.4.1117 This junction is a three-arm priority controlled (give way) roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 11-454.

Table 11-454: 2018 baseline performance at A6044 Hilton Lane/A6044 Rainsough Brow/Kersal Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A6044 Hilton Lane	538	27%	0
Kersal Road	283	71%	1
A6044 Rainsough Brow	607	56%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A6044 Hilton Lane	379	19%	0
Kersal Road	176	57%	0
A6044 Rainsough Brow	938	86%	0

11.4.1118 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates

close to capacity in the 2018 baseline with a maximum VoC of 86% on the A6044 Rainsough Brow approach with no queue.

11.4.1119 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 11-455. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 11-455: Future baseline performance at A6044 Hilton Lane/A6044 Rainsough Brow/Kersal Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A6044 Hilton Lane	671	34%	0
Kersal Road	237	72%	1
A6044 Rainsough Brow	734	70%	0
	2030 PM peak hour (17:00–18:00)		
A6044 Hilton Lane	437	22%	0
Kersal Road	176	63%	1
A6044 Rainsough Brow	1,106	87%	0

11.4.1120 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour with a maximum VoC of 72% on the Kersal Road approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 87% on the A6044 Rainsough Brow approach with no queue.

Accidents and safety

11.4.1121 Accident records have been obtained from the information provided by the DfT.

11.4.1122 Within the MA06 area, a total of 264 accidents occurred over the three-year period July 2016 – June 2019, of which 220 (83%) were recorded as slight, 39 (15%) as serious and 5 (2%) as fatal. There were 39 accidents involving non-motorised users (i.e. pedestrians, cyclists, equestrians or mobility scooters).

11.4.1123 Within the MA07 area, a total of 2,219 accidents occurred over the three-year period July 2016 – June 2019, of which 1820 (82%) were recorded as slight, 374 (17%) as serious and 25 (1%) as fatal. There were 403 accidents involving non-motorised users (i.e. pedestrians, cyclists, equestrians or mobility scooters).

11.4.1124 Within the MA08 area, a total of 1,356 accidents occurred over the three-year period July 2016 – June 2019, of which 1131 (83%) were recorded as slight, 212 (16%) as serious and 13 (1%) as fatal. There were 313 accidents involving non-motorised users (i.e. pedestrians, cyclists, equestrians or mobility scooters).

11.4.1125 The Background Information and Data (BID): Transport Assessment policy and data (BID TR-004-00001) illustrates the location of accidents, including their severity, recorded in the MA06, MA07 and MA08 areas over the three years between July 2016 and June 2019.

11.4.1126 No accident clusters were identified in the MA06 area (i.e. locations recording nine or more accidents over the three years for which data were analysed).

11.4.1127 There were 15 accident clusters identified in the MA07 area and these were:

- A6010 Wilmslow Road/A6010 Wilbraham Road/B5093 Moseley Road/B5093 Wilmslow Road junction - in total there were nine accidents, of which one was classified as serious and eight were classified as slight;
- B5117 Wilmslow Road/Walmer Street junction - in total there were 10 accidents, of which two were classified as serious and eight were classified as slight;
- B5218 Chorlton Road/B5219 Moss Lane West/B5218 Upper Chorlton Road/Withington Road junction - in total there were 10 accidents, of which four were classified as serious and six were classified as slight;
- A635 Ashton Old Road/A6010 Alan Turing Way/A6010 Pottery Lane junction - in total there were 11 accidents, of which four were classified as serious and seven were classified as slight;
- Parkhouse Street/Greenside Street junction - in total there were 10 accidents, all of which were classified as slight;
- A662 Ashton New Road/Clayton Lane/Clayton Street junction - in total there were 11 accidents, of which three were classified as serious and eight were classified as slight;

- A6188 Manchester Road/B6167 Sandy Lane/Tiviot Way/Lancashire Hill/Belmont Way junction - in total there were nine accidents, of which two were classified as serious and seven were classified as slight;
- B5166 Styal Road/Finney Lane/Simonsway junction - in total there were nine accidents, all of which were classified as slight;
- A6 Stockport Road (between B5093 Albert Road and Cromwell Grove) - in total there were 12 accidents, of which two were classified as serious and 10 were classified as slight;
- A34 Birchfields Road (between Meldon Road and Birch Hall Lane) - in total there were nine accidents, all of which were classified as slight;
- A5103 Princess Parkway/B5167 Palatine Road junction - in total there were 11 accidents, all of which were classified as slight;
- A5145 Barlow Moor Road/A5103 Princess Road - in total there were nine accidents, all of which were classified as slight;
- A5103 Princess Road/A6010 Wilbraham Road junction - in total there were nine accidents, all of which were classified as slight;
- B5117 Wilmslow Road (between B5219 Moss Lane East and Banff Road) - in total there were 12 accidents, of which five were classified as serious and seven were classified as slight; and
- M60 junction 24 - M67/A57 Manchester Road junction - in total there were 15 accidents, of which one was classified as serious and 14 were classified as slight.

11.4.1128 There were 12 accident clusters identified in the MA08 area and these were:

- Fountain Street/York Street junction - in total there were 10 accidents, of which one was classified as serious and nine were classified as slight;
- A57 Hyde Road/A6 Stockport Road/A6 Ardwick Green Street/Brunswick Street/Higher Ardwick junction - in total there were 12 accidents, of which two were classified as serious and 10 were classified as slight;
- A34 Oxford Road (between B6469 Whitworth Street and Charles Street) - in total there were 13 accidents, of which one was classified as serious and 12 were classified as slight;
- A6 Chapel Street/A34 Trinity Way/A6042 Trinity Way/Chapel Street junction - in total there were nine accidents, of which on resulted in a fatality, one was classified as serious and seven were classified as slight;
- A6042 Trinity Way/A6041 Blackfriars Road junction - in total there were 10 accidents, of which one resulted in a fatality, three were classified as serious and six were classified as slight;
- A57(M) Mancunian Way/A56 Chester Road/A5067 Chorlton Road (Deansgate Interchange) junction - in total there were 11 accidents, all of which were classified as slight;
- A664 Rochdale Road/Moston Lane/Factory Lane junction - in total there were nine accidents, all of which were classified as slight;

- M602 junction 3/A57 Regent Road/A57 Eccles New Road/A5063 Albion Way/A5063 Trafford Road junction - in total there were 17 accidents, of which three were classified as serious and 14 were classified as slight;
- A34 Princess Street (between A5103 Portland Street and Bloom Street) - in total there were 10 accidents, of which one was classified as serious and nine were classified as slight;
- Portland Street (between Charlotte Street and Minshull Street) - in total there were nine accidents, all of which were classified as slight;
- A665 Great Ancoats Street (between A62 Newton Street and Redhill Street) - in total there were 11 accidents, of which two were classified as serious and nine were classified as slight; and
- A665 Cheetham Hill Road (between Bignor Street and Brideoak Street) - in total there were 11 accidents, all of which were classified as slight.

11.4.1129 No issues have been identified for the operation of the future baseline network as a result of changes to the highway network or travel demands, and the accident and safety records for the existing baseline are assumed to provide a relevant basis for assessment.

Parking and loading

MA06

11.4.1130 Within MA06, there is off-street parking at a number of locations including at Manchester Airport, where there is parking for both airport passengers and staff, as well as parking associated with the nearby hotels and World Freight Terminal. Parking at the Holiday Inn Express Manchester Airport, located off Runger Lane, and parking at Building 319 World Cargo Centre, located off Avro Way, is expected to be affected by the Proposed Scheme.

11.4.1131 There is also on-street parking along many roads in the MA06 area, including:

- Millington Lane - informal parking associated with The Children's Adventure Farm Trust;
- Brickhill Lane - informal parking associated with Ashley Plant Hire and Reclamation Ltd; and
- Mill Lane layby.

11.4.1132 Sunnyside Nursery School is located on Back Lane which is a construction traffic route in the MA06 area. Pick-up and drop-off at school start and finish times have the potential to cause traffic flow issues along the road.

11.4.1133 Compared to the existing baseline, no changes to parking are assumed in the future baseline.

MA07

11.4.1134 Within MA07, there is off-street parking at a number of locations. Parking at The Christie Hospital (Car Park D), located off the B5093 Wilmslow Road, and the Fallowfield Retail Park, located off the A34 Birchfields Road, is expected to be affected by the Proposed Scheme. The Fallowfield Retail Park also serves as a school pick-up and drop-off facility for Birchfields Primary School to the north.

11.4.1135 There is also on-street parking along many roads in the MA07 area, including the following roads which are on construction traffic routes (ordered by road class and south to north):

- A34 Kingsway;
- A5145 Barlow Moor Road;
- A635 Ashton Old Road/Manchester Road;
- B5167 Palatine Road;
- B5093 Wilmslow Road;
- B5093 Moseley Road;
- Tatton Grove;
- Marriott Street; and
- Gorton Road.

11.4.1136 There are also loading bays along construction traffic routes within the MA07 area. These are located on the following roads:

- A5145 Barlow Moor Road; and
- B5093 Wilmslow Road.

11.4.1137 Birchfields Primary School (accessed via Lytham Road) is located just off Birchfields Road which is part of the construction traffic route in MA07. The Rocking Horse Nursery and Pre-school (accessed via Booth Road) is located just off the A635 Manchester Road which is also part of the construction traffic route in MA07. Pick-up/drop-off at school start and finish times has the potential to cause traffic flow issues along these roads.

11.4.1138 Compared to the existing baseline, no changes to parking are assumed in the future baseline.

MA08

11.4.1139 Within MA08, there is off-street parking at a number of locations, particularly in proximity to the existing Manchester Piccadilly Station, that is expected to be affected by the Proposed Scheme. This includes:

- Manchester Piccadilly Station multi-storey car park on Boad Street;
- NCP car park on Store Street (temporary planning consent);
- NCP Car Park Manchester on Sheffield Street (Sheffield Street North);

- Sheffield Street South (informal) car park;
- Network Rail Ramp accessed from Ducie Street via the Gateway House Car Park or from Boad Street via a bridge from the Station Long-Stay Car Park;
- Network Rail undercroft on Boad Street located underneath the Network Rail Ramp;
- Gateway House car park, located below Gateway House;
- Travis Street car park, accessed off Adair Street (temporary planning consent); and
- Baird Street car park.

11.4.1140 There is also off-street parking at a customer car park for a furniture retailer on the A665 Great Ancoats Street, which is expected to be affected by the Proposed Scheme.

11.4.1141 There is on-street parking along many roads in the MA08 area, including:

- Helmet Street;
- Adair Street;
- Travis Street;
- Store Street;
- St. Andrew's Street;
- St. Andrew's Square; and
- Baird Street.

11.4.1142 Provision for the servicing of the existing Manchester Piccadilly Station takes place from an entrance off Ducie Street via the Network Rail long stay car park and the main service access off Boad Street.

11.4.1143 Both the NCP car park on Store Street and the Travis Street car park have temporary planning consent, which are due to expire in advance of the start of construction of the Proposed Scheme in 2025. In line with MCC's aspiration to reduce the amount of parking in the city centre, it is assumed that these car parks will no longer be operational at the time of construction of the Proposed Scheme and these car parks are not considered in the future baseline.

11.5 Public transport

11.5.1 The MA06 area is well served by public transport with rail (via Mobberley, Ashley, Hale, Altrincham, Navigation Road, Manchester Airport and Styal stations) and many bus routes operating in the area.

11.5.2 The MA07 area is well served by public transport with rail (via Stockport, Burnage, Gatley and Levenshulme), Metrolink (including all stops between East Didsbury and Trafford Bar on the East Didsbury Line; all stops between Shadowmoss and Trafford Bar on the Airport Line; and all stops between Ashton-under-Lyne and Etihad Campus on the Ashton Line) and many bus routes operating in the area.

11.5.3 The MA08 area is well served by public transport with rail (via Manchester Piccadilly Station as well as Manchester Victoria and Manchester Oxford Road stations), Metrolink (including all stops between Cornbrook and Deansgate - Castlefield on the Altrincham Line, between Piccadilly Gardens and Holt Town on the Ashton Line, all stops between Deansgate - Castlefield and Bury on the Bury Line, all stops between Exchange Quay and Eccles on the Eccles Line, and between Victoria and Rochdale on the Rochdale Line) and many bus routes operating in the area.

11.5.4 The following section describes the rail and bus routes in the area.

Rail network

11.5.5 Manchester Piccadilly Station is the main rail gateway for Manchester to London, the South East, the South West, the West Midlands, the North West, the North East, Wales and Scotland. It also serves several urban and rural areas in the Greater Manchester area as well as commuter destinations located further afield such as Stockport, Wigan, Bolton, Rochdale and Warrington.

11.5.6 Manchester Piccadilly Station benefits from four public entrances/exits. The Piccadilly and city centre entrance/exit is located on the western frontage of the station and forms the main access. It is open 24 hours a day. The entrance provides access to/from the A6 London Road and Ducie Street via Station Approach and Aytoun Street and Piccadilly Place via the A6 London Road footbridge. It is accessed from within the station by a walkway. The Fairfield Street entrance/exit is located on the southern frontage of the station and is open 24 hours a day. The entrance provides access to/from Fairfield Street. It is accessed from within the station by walkway, lift, escalators and stairs. In addition to the two main accesses above, there are two smaller entrances. An entrance/exit is located on the northern frontage of the station that provides access to Gateway House, the NR Ramp and Manchester Piccadilly Station Long-Stay car parks. Sheffield Street can be accessed via the Manchester Piccadilly Station Long-Stay Car Park. This entrance is open for 24 hours a day. A lift is also found on the south-west frontage of the station. The lift provides direct access into the concourse to Platforms 13 and 14.

11.5.7 Located within the north-western section of the station and before the gateline are several retail and food outlets and services catering for rail users such as seating, ticket machines, a ticket office, toilets, left luggage and an information kiosk.

11.5.8 There are 14 platforms in total with 12 terminus platforms and two through platforms. The platforms are accessed beyond a singular gateline. Platforms 1-12 are accessed directly behind the gateline. A ramped walkway is provided up towards a satellite concourse to Platforms 13 and 14. Passengers can access Platforms 13 and 14 from the satellite concourse via stairs and via the lift found on the south-west frontage of the station.

11.5.9 Platforms 1-4 are terminus platforms predominantly used by Northern services to Marple, New Mills, Rose Hill and Sheffield. Platforms 5-9 are terminus platforms predominantly served by Avanti West Coast and Cross Country services to London, Birmingham, Scotland

and the South West. Platforms 10-12 are terminus platforms predominantly served by Northern, TransPennine Express services to Crewe, Manchester Airport, Buxton, Chester and Newport. Platforms 13-14 are through platforms predominantly served by Northern, Transport for Wales, East Midlands Trains and TransPennine Express services to/from Manchester Airport, Liverpool, Scotland and Norwich.

11.5.10 Approximately 30.4 million passengers used Manchester Piccadilly Station in 2018. Table 11-456 shows corresponding daily passenger arrivals and departures of approximately 55,312 and 55,276 respectively[1]. Table 11-457 indicates that in excess of 5,400 passengers alight from rail services in the AM peak hour (08:00–09:00), whilst in excess of 4,800 passengers board rail services. In the PM peak hour (17:00–18:00), in excess of 5,600 passengers alight from rail services, whilst in excess of 6,100 passengers board rail services.

11.5.11 Table 11-456 shows the forecast growth in daily rail passengers, based on PLANET forecasts, of 13% between 2018 and 2038 and 16% between 2018 and 2046. The total daily long-distance rail passenger use is forecast to increase from 47,982 in the 2018 future baseline to 56,421 in 2038 (18% increase) and to 58,756 in 2046 (22% increase). Table 11-457 shows the corresponding growth during the peak periods.

Table 11-456: Manchester Piccadilly Station growth in daily rail passengers – baseline and future baseline

Passenger type	Daily (16 hour) rail passengers - 2018 baseline	Daily (16 hour) rail passengers - 2038 baseline	Difference 2018–2038 (%)	Daily (16 hour) rail passengers - 2046 baseline	Difference 2018–2046 (%)
Boarding long distance	24,064	28,435	18%	29,617	23%
Alighting long distance	23,918	27,986	17%	29,139	22%
Total long distance	47,982	56,421	18%	58,756	22%
Boarding suburban	31,248	34,080	9%	34,458	10%
Alighting suburban	31,358	34,435	10%	34,840	11%
Total suburban	62,606	68,514	9%	69,299	11%
Total rail boarding	55,312	62,515	13%	64,076	16%
Total rail alighting	55,276	62,421	13%	63,979	16%
Total rail	110,588	124,936	13%	128,055	16%

[1] PLANET Framework Model PFMv9.6 Department for Transport, 2018.

Table 11-457: Manchester Piccadilly Station growth in peak period rail passengers - baseline and future baseline

Passenger type	AM peak hour (08:00–09:00) rail passengers - 2018 baseline	AM peak hour (08:00–09:00) rail passengers - 2038 baseline	AM peak hour (08:00–09:00) rail passengers - 2046 baseline	PM peak hour (17:00–18:00) rail passengers - 2018 baseline	PM peak hour (17:00–18:00) rail passengers - 2038 baseline	PM peak hour (17:00–18:00) rail passengers - 2046 baseline
Boarding long distance	2,108	2,491	2,594	2,664	3,148	3,279
Alighting long distance	2,351	2,751	2,864	2,460	2,879	2,997
Total long distance	4,459	5,241	5,458	5,124	6,027	6,276
Boarding suburban	2,737	2,985	3,018	3,459	3,773	3,815
Alighting suburban	3,082	3,384	3,424	3,225	3,542	3,584
Total suburban	5,819	6,370	6,443	6,685	7,315	7,398
Total rail boarding	4,845	5,476	5,613	6,124	6,921	7,094
Total rail alighting	5,433	6,135	6,288	5,686	6,420	6,581
Total rail	10,278	11,611	11,901	11,809	13,341	13,675
Total rail % difference from 2018 baseline	-	13%	16%	-	13%	16%

11.5.12 Mode share analysis has been undertaken to support assessment of the forecast demand on the transport network.

11.5.13 Access and egress mode shares for Manchester Piccadilly High Speed station, have been derived from interview surveys undertaken for long-distance passengers at the existing Manchester Piccadilly Station. Surveys were undertaken in July 2018. Table 11-458 shows the proportional mode share for each mode for the baseline.

Table 11-458: Manchester Piccadilly Station baseline mode share for long distance rail passengers

Mode	% Mode share - boarders	% Mode share - alighters
AM peak		
Bus	6%	5%
Other rail	31%	22%
Metrolink	18%	12%
Taxi/private hire	14%	15%
Private car (park and ride)	12%	1%
Private car (kiss and ride)	10%	15%

Mode	% Mode share - boarders	% Mode share - alighters
Walk/cycle	9%	29%
PM peak		
Bus	5%	6%
Other rail	22%	31%
Metrolink	12%	18%
Taxi/private hire	15%	14%
Private car (park and ride)	1%	12%
Private car (kiss and ride)	15%	10%
Walk/cycle	29%	9%
Daily		
Bus	5%	5%
Other rail	28%	29%
Metrolink	13%	12%
Taxi/private hire	15%	16%
Private car (park and ride)	6%	8%
Private car (kiss and ride)	14%	13%
Walk/cycle	19%	17%

11.5.14 Table 11-458 indicates that the largest onward mode share for existing Manchester Piccadilly Station passengers boarding in the AM peak and alighting in the PM peak is other rail. Walk/cycle is the largest mode share for passengers alighting in the AM peak and boarding in the PM peak. The daily mode shares indicate that other rail is the largest onward mode share for both boarding and alighting.

11.5.15 As Manchester Airport High Speed station will be a new station, there are no directly comparable baseline data. Surveys at Stockport Station were taken as a proxy due to its location in the south of Greater Manchester and being serviced by long-distance services. To understand the likely travel behaviour mode shares were also informed by analysis of data from Birmingham International Station, as this was considered representative of an interchange station, and Manchester Airport passenger and staff mode shares from 2010 and 2016. Table 11-459 shows the proportion of actual mode share for each mode.

Table 11-459: Manchester Airport High Speed station proxy baseline mode share for long distance rail passengers

Mode	% Mode share - boarders	% Mode share - alighters
AM peak		
Bus	5%	17%
Other rail	0%	0%
Metrolink	0%	0%
Taxi/private hire	3%	23%
Private car (park and ride)	85%	16%
Private car (kiss and ride)	4%	34%

Mode	% Mode share - boarders	% Mode share - alighters
Walk/cycle	3%	10%
PM peak		
Bus	17%	5%
Local rail	0%	0%
Metrolink	0%	0%
Taxi/private hire	22%	3%
Private car (park and ride)	17%	84%
Private car (kiss and ride)	33%	5%
Walk/cycle	11%	3%
Daily		
Bus	12%	12%
Local rail	0%	0%
Metrolink	0%	0%
Taxi/private hire	14%	12%
Private car (park and ride)	46%	53%
Private car (kiss and ride)	21%	18%
Walk/cycle	7%	6%

Local bus services

MA06

11.5.16 There are 12 bus services operating on five roads that will be crossed or affected by the route of the Proposed Scheme in the MA06 area. There are also bus stops primarily located to serve the main built-up area. The bus routes that could be affected by the Proposed Scheme include:

- A538 Wilmslow Road: route 88 (Altrincham - Wilmslow - Knutsford - Macclesfield);
- A538 Hale Road: route 88 (Altrincham - Wilmslow - Knutsford - Macclesfield); route 283 (Altrincham - Hale - Hale Barns - Well Green Circular); route 288 (East Didsbury - Altrincham - Manchester Airport); route 741 (Bowdon - Hale Barns - Bowker Vale - Cheetham Hill); route 760 (Warburton - Loreto Grammar School); route 766 (Davyhulme - Flixton - Chorlton); route 763 (Burnage - St Ambrose College); route 782 (Bowden Vale - Sale Grammar School); and route 869 Burnage - Didsbury - Gatley - Wythenshawe - Hale Barns);
- Runger Lane/Thorley Lane: route 103 (Manchester - Moss Side - Wythenshawe - Peel Hall - Manchester Airport); route 288 (East Didsbury - Altrincham - Manchester Airport); and route 313 (Stockport - Adswood - Cheadle Hulme - Manchester Airport - World Freight Terminal);
- Enterprise Way (at the junction with Thorley Lane): route 43 (Manchester - Withington - Northenden - Wythenshaw - Manchester Airport); route 103 (Manchester - Moss Side -

Wythenshawe - Peel Hall - Manchester Airport); and route 313 (Stockport - Adswood - Cheadle Hulme - Manchester Airport - World Freight Terminal); and

- High Elm Road: route 760 (Warburton - Loreto Grammar School); route 782 (Hale Barns - Sale Grammar School).

11.5.17 Buses are operated by Stagecoach, Diamond and D&G Bus within the MA06 area.

11.5.18 Since it is not possible to forecast how bus routes may change in the future, it has been assumed that bus routes for the future years of assessment will be the same as those currently operating.

MA07

11.5.19 There are 57 bus services operating on 14 roads that will be crossed or affected by the route of the Proposed Scheme in the MA07 area. There are also bus stops primarily located to serve the main built up areas. Where bus services and stops are expected to be affected by either the construction or operation of the Proposed Scheme, these are referred to in the relevant assessment sections. The bus routes that could be affected by the Proposed Scheme include:

- A560 Altrincham Road: route 11A (Stockport - Altrincham); route 288 (East Didsbury - Altrincham - Manchester Airport) and route X5 (Stockport - Sale);
- A5103 Princess Parkway/Princess Road: route 101 (Manchester - Wythenshawe); route 103 (Manchester Airport - Manchester); route 108 (Timperley - Manchester); route 288 (Manchester Airport - Altrincham - East Didsbury); route 763 (St Ambrose College - Burnage); route 766 (St Ambrose College - Flixton - Davyhulme); and route X5 (Stockport - Sale);
- A5145 Barlow Moor Road: route 23 (Stockport - The Trafford Centre); route 86 (Manchester - Chorlton); route 111 (Manchester - Withington Community Hospital - Southern Cemetery); route 172 (Newton Health - Chorlton); route 288 (Manchester Airport - Altrincham - East Didsbury); and route 743 (Heald Green - Loreto College);
- A5145 Wilmslow Road: route 23 (Stockport - The Trafford Centre); route 42 (Stockport - Withington - Manchester); route 42A (Manchester - East Didsbury - Reddish); route 42B (Woodford - Bramhall - Manchester); route 42C (Handforth Dean - Piccadilly Gardens); route 142 (Manchester - Fallowfield - East Didsbury); route 171 (Withington Hospital - Levenshulme - Newton Heath); route 288 (Manchester Airport - Altrincham - East Didsbury);
- A34 Kingsway/A34 Birchfields Road/A34 Anson Road: route 42B (Woodford - Bramhall - Manchester); route 42C (Manchester - Cheadle - Handforth); route 50 (MediaCityUK - Manchester - East Didsbury); route 51 (East Didsbury - Media City); route 750 (Barlow High School - Manchester); route 751 (Manchester - Barlow High School) and route 869 (Burnage - Didsbury - Gatley - Wythenshawe - Hale Barns;
- A6010 Pottery Lane: route 53 (Cheetham Hill - Rusholme - Old Trafford - Pendleton) and route 733 (Cheetham Hill - West Gorton - Longsight - Whalley Range);

- A6 Stockport Road: route 192 (Manchester City Centre - Stockport - Heaviley - Hazel Grove); route 733 (Whalley Range - Moss Side - Longsight - Cheetham Hill); route X92 (Hazel Grove - Heaviley - Stockport - Manchester City Centre);
- A57 Hyde Road: route 201 (Manchester City Centre - Denton - Hyde - Hattersley); route 202 (Manchester City Centre - Haughton Green - Hyde - Gee Cross); route 203 (Manchester - Debdale Park - Reddish - Stockport); route 205 (Manchester City Centre - Debdale Park - Denton - Dane Bank);
- A635 Ashton Old Road: route 7; (Stockport - Reddish - Gorton - Ashton); route 7A (Stockport - Reddish - Gorton - Ashton); route 7B (Stockport - Reddish - Droylsden - Ashton); route 171 (Withington Hospital - Levenshulme - Newton Heath); route 172 (Newton Health - Chorlton); route 219 (Manchester - Guide Bridge - Stalybridge); route 220 (Manchester - Audenshaw - Stalybridge); route 221 (Manchester - Openshaw - Dukinfield); route 703 (Abbey Hey - Openshaw - Clayton - Holt Town - Collyhurst); route 704 (Abbey Hey - Droylsden - Clayton - Moston - Harpurhey); route 707 (Fairfield - Gorton - Debdale Park - Denton - Dane Bank); route 719 (Beswick - Audenshaw - Guide Bridge - Hooley Hill - Denton); route 725 (Trinity High School - Manchester); route 747 (Haughton Green - Denton - Audenshaw - Fairfield); route 768 (Abbey Hey - Fairfield - Greenside - Droylsden - Littlemoss); route Y1 (St Peter’ s High School - Newton Heath); route Y2 (St Peter’ s High School - Beswick); route Y3 (St Peter’s High School - Harpurhey); and route Y4 (St Peter’ s High School - Moss Side);
- A662 Ashton New Road: route 216 (Manchester - Clayton - Droylsden - Ashton - Stalybridge); route 230 (Ashton-under-Lyne - Droylsden - Piccadilly Gardens); route 231 (Ashton-under-Lyne - Hurst - Droylsden - Piccadilly Gardens);
- B5167 Palatine Road: route 41 (Sale - Manchester - Middleton); route 43 (Manchester - Northenden - Wythenshawe - Manchester Airport); route 103 (Manchester - Moss - Side Wythenshawe - Manchester Airport); route 143 (Manchester - Fallowfield - West Didsbury); route 147 (Piccadilly Rail Station - West Didsbury); route 288 (Manchester Airport - Altrincham - East Didsbury); route 743 (Heald Green - Loreto College); and route 763 (St Ambrose College - Burnage);
- B5093 Wilmslow Road: route 41 (Sale - Manchester - Middleton); route 42 (Stockport - Withington - Manchester); route 42A (Manchester - East Didsbury - Reddish); route 42B (Woodford - Bramhall -Manchester); route 42C (Handforth Dean - Heald Green - Cheadle - Manchester); route 43 (Manchester - Withington - Wythenshawe - Manchester Airport); route 142 (Manchester - Fallowfield - East Didsbury); route 143 (Manchester - Fallowfield - West Didsbury); route 147 (Piccadilly Rail Station - West Didsbury); and route 743 (Heald Green - Loreto College);
- B5093 Moseley Road: route 150 (Gorton - Stretford - Trafford Centre); route 171 (Withington Hospital - Levenshulme - Newton Heath); route 750 (Barlow High School - Manchester); and route 763 (St Ambrose College - Burnage); and
- Church Road: route 43 (Manchester - Withington - Wythenshawe - Manchester Airport); route 103 (Manchester Airport - Wythenshawe - Manchester); and route 743 (Heald Green - Loreto College).

11.5.20 Buses are operated by Go North West, Stagecoach, Magic Bus (Stagecoach), Diamond Bus and D&G Bus within the MA07 area.

11.5.21 Since it is not possible to forecast how bus routes may change in the future, it has been assumed that bus routes for the future years of assessment will be the same as those currently operating.

MA08

11.5.22 There are 34 bus services that operate on 12 roads that are crossed or affected by the route of the Proposed Scheme in the MA08 area. Where bus services and stops are expected to be affected by either the construction or operation of the Proposed Scheme, these are referred to in the relevant assessment sections. The bus routes that could be affected by the Proposed Scheme include:

- A34 Upper Brook Street: route 50 (East Didsbury - Victoria Park - Manchester - Salford Quays - MediaCityUK), route 51 (East Didsbury - Media City), and school route 751 (Burnage High School - Manchester);
- A57 Regent Road: route 33 (Manchester - Eccles - Worsley) and route 33b (Manchester - Eccles - Worsley);
- A635 Ashton Old Road: route 219 (Manchester - Openshaw - Guide Bridge - Ashton - Stalybridge), route 220 (Manchester - Openshaw - Audenshaw - Dukinfield - Stalybridge), route 221 (Manchester - Openshaw - Audenshaw - Dukinfield), school route 725 (Ryder Brow - Trinity Church of England High School) and school route Y1 (Newton Heath - St Peters High School);
- A635 Fairfield Street/B6469 Fairfield Street: route 147 (Manchester Piccadilly Station - West Didsbury), 219 (Manchester - Openshaw - Guide Bridge - Ashton - Stalybridge), route 220 (Manchester - Openshaw - Audenshaw - Dukinfield - Stalybridge), and route 221 (Manchester - Openshaw - Audenshaw - Dukinfield);
- A665 Great Ancoats Street: route 216 (Manchester - Clayton - Droylsden - Ashton - Stalybridge), route 217 (Piccadilly Gardens - Droylsden - Ashton-under-Lyne), route 230 (Ashton - Droylsden - Clayton - Manchester) and route 231 (Ashton - Hartshead - Droylsden - Clayton - Manchester);
- A662 Pollard Street: route 216 (Manchester - Clayton - Droylsden - Ashton - Stalybridge);
- A6 Downing Street/London Road/Piccadilly: route 192 (Hazel Grove - Stepping Hill - Stockport - Levenshulme - Longsight - Manchester), route 201 (Hattersley - Hyde - Denton - Gorton - Manchester), route 202 (Manchester - Gorton - Denton - Haughton Green - Hyde - Gee Cross), route 203 (Manchester - Reddish - Belle Vue - Stockport), route 204 (Hyde - Haughton Green - Denton - Gorton - Manchester), route 205 (Denton - Dane Bank - West Gorton - Manchester), route 206 (Gee Cross - Hyde - Haughton Green - Denton - West Gorton - Manchester), route 219 (Manchester - Openshaw - Guide Bridge - Ashton - Stalybridge), and route X92 (Hazel Grove - Stockport - Manchester);

- A6 Whitworth Street: route 192 (Hazel Grove - Stepping Hill - Stockport - Levenshulme - Longsight - Manchester), route 201 (Hattersley - Hyde - Denton - Gorton - Manchester), route 202 (Manchester - Gorton - Denton - Haughton Green - Hyde - Gee Cross), route 203 (Manchester - Reddish - Belle Vue - Stockport), route 205 (Denton - Dane Bank - West Gorton - Manchester), and route X92 (Hazel Grove - Stockport - Manchester);
- A6 Aytoun Street: route 192 (Hazel Grove - Stepping Hill - Stockport - Levenshulme - Longsight - Manchester), route 201 (Hattersley - Hyde - Denton - Gorton - Manchester), route 202 (Manchester - Gorton - Denton - Haughton Green - Hyde - Gee Cross), route 203 (Manchester - Reddish - Belle Vue - Stockport), route 204 (Hyde - Haughton Green - Denton - Gorton - Manchester), route 205 (Denton - Dane Bank - West Gorton - Manchester), route 206 (Gee Cross - Hyde - Haughton Green - Denton - West Gorton - Manchester), and route X92 (Hazel Grove - Stockport - Manchester);
- Booth Street West: route 53 (Salford - Old Trafford - Cheetham Hill), route 85 (Chorlton - Whalley Range - Hulme - Piccadilly Gardens), route 85A (Arrowfield Estate - Chorlton - Hulme - Piccadilly Gardens), route 86 (Chorlton - Piccadilly Gardens), route 250 (Piccadilly Gardens - Trafford Park - The Trafford Centre), route 253 (Partington - Carrington - Stretford - Piccadilly Gardens) and route 263 (Piccadilly Gardens - Hulme - Stretford - Sale - Altrincham);
- Higher Cambridge Street: route 101 (Wythenshawe - Baguley Northenden - Moss Side - Hulme - Manchester), route 103 (Wythenshawe - Baguley Northenden - Moss Side - Hulme - Manchester) and route 108 (Timperley - Brooklands - Northern Moor - Northenden - Moss Side - Manchester), school route 724 and school route 725; and
- Travis Street: route 147 (West Didsbury - Withington - Fallowfield - Ancoats).

11.5.23 Buses are operated by Go North West, Stagecoach, Magic Bus (Stagecoach) and Diamond Bus within the MA08 area.

11.5.24 Since it is not possible to forecast how bus routes may change in the future, it has been assumed that bus routes for the future years of assessment will be the same as those currently operating.

Public transport interchanges

MA06

11.5.25 Public transport interchanges within MA06 include Manchester Airport and its station. Manchester Airport Station is located immediately north of Manchester Airport Terminal 1. From here, local and regional rail routes are available, as well as access to Metrolink routes that operate within Greater Manchester. Manchester Airport Station also includes bus stands for access to local bus routes and national coach services. Taxi and private vehicle pick-up and drop-off facilities are located outside the airport terminal buildings, the nearest being Terminal 1.

11.5.26 It is not expected that any major public transport interchange facilities in MA06 will be affected by the Proposed Scheme.

11.5.27 Compared to the existing baseline, no changes to public transport interchanges are assumed in the future baseline.

MA07

11.5.28 Public transport interchanges within MA07 include the Ashton-under-Lyne interchange. This proves access to local bus routes, the Eccles to Ashton-under-Lyne Metrolink route, and local and regional rail routes via Ashton-under-Lyne rail station.

11.5.29 Compared to the existing baseline, no changes to public transport interchanges are assumed in the future baseline.

MA08

11.5.30 Alongside the existing Manchester Piccadilly Station, there are other public transport interchanges within MA08, including at Piccadilly Gardens Bus Station, Shudehill Interchange, Manchester Coach Station and Manchester Victoria Station. Piccadilly Gardens Bus Station is approximately 750m walk distance north-west of Manchester Piccadilly Station and provides access to a number of bus routes and Metrolink routes across the city centre and Greater Manchester. Shudehill Interchange is located approximately 1.5km walk distance north-west of Manchester Piccadilly Station, approximately 400m south-east of Manchester Victoria Station. Shudehill Interchange also comprises a bus station and Metrolink stop that provides access across the city centre and to routes across Greater Manchester. Manchester Victoria Station is located approximately 1.6km walk distance north-west of Manchester Piccadilly Station and provides access to a number of bus routes and Metrolink routes across the city centre and Greater Manchester.

11.5.31 Compared to the existing baseline, no changes to public transport interchanges are assumed in the future baseline.

11.6 Pedestrians, cyclists and equestrians

MA06

11.6.1 There are roadside footways adjacent to many of the roads in the built-up areas of Mobberley, Rostherne, Ashley, Warburton Green, Hale Barns, Hale, Altrincham, and Timperley. In rural areas, where there is no formal roadside footway provision adjacent to roads, non-motorised user numbers are generally low. There is a network of advisory cycle

routes[2], two National Cycle Network (NCN) regional routes and a number of PRoW in the vicinity of the Proposed Scheme.

MA07

11.6.2 There are roadside footways adjacent to many of the roads in the built-up areas of Cheadle Hulme, Gatley, Cheadle, Wythenshawe, Sale, Didsbury, Heaton Moor, Withington, Burnage, Reddish, Stretford, Old Trafford, Levenshulme, Rusholme, Gorton and Droylsden. There is a network of advisory cycle routes, a number of NCN national and regional routes and a number of PRoW in the vicinity of the Proposed Scheme.

MA08

11.6.3 There are roadside footways adjacent to many of the roads in Manchester city centre. There is a network of advisory cycle routes, a number of NCN national and regional routes and a number of PRoW in the vicinity of the Proposed Scheme.

11.6.4 The following sections identify the pedestrian, cycle and equestrian facilities in the study area.

Pedestrian facilities

MA06

11.6.5 Roads with roadside footways in the MA06 area include:

- A538 Hale Road/Wilmslow Road;
- Runger Lane;
- Thorley Lane; and
- Enterprise Way.

11.6.6 In the rural part of the MA06 area, some roads do not have formal roadside footway provision adjacent to roads. These include:

- Ashley Road;
- Millington Lane;
- Lamb Lane;
- Castle Mill Lane;
- Brickhill Lane;
- Sunbank Lane; and
- Hasty Lane.

[2] Advisory cycle routes are locally promoted routes for use by cyclists that do not generally have any formal cycle infrastructure provision, such as cycle lanes.

11.6.7 The route of the Proposed Scheme will cross four roads with roadside footways within the Hulseheath to Manchester Airport area. These are the A538 Hale Road, Ashley Road, Hasty Lane and Thorley Lane.

11.6.8 In addition, there are a number of PRoW in the MA06 area, including 20 PRoW in the vicinity of the Proposed Scheme:

- Footpath Millington 2/1, between Peacock Lane and Footpath Millington 3/2;
- Footpath Millington 3/3, between Boothbank Lane and Millington Hall Lane;
- Footpath Millington 4/1, between Footpath Millington 3/3 and Millington Lane;
- Footpath Millington 5/2, between Footpath Millington 3/3 and Millington Lane;
- Footpath Millington 7/4, between Hope Cottage and Coe Lane;
- Footpath Millington 8/1, between Footpath Millington 6 and Hope Cottage;
- Footpath Rostherne 13/1, between Yarwoodheath Lane and Tom Lane;
- Footpath Rostherne 4/1, between Yarwoodheath Lane and Cherry Tree Lane;
- Footpath Rostherne 5/1, between Footpath Ashley 3/1 and Birkinheath Lane;
- Footpath Ashley 3/1, between Footpath Rostherne 5/1 and Ashley Road;
- Footpath Ashley 6/5, between Ashley Road and Mobberley Road;
- Footpath Ashley 7/1, between Footpath Ashley 6 and Footpath Mobberley 70/1;
- Footpath Ashley 8/1, between Lamb Lane and Mobberley Road;
- Footpath Ashley 10/1, between Castle Mill Lane and River Bollin;
- Footpath Ringway 7, between Hasty Lane and Footpath Hale 16;
- Footpath Ringway 9, between Footpath Ringway 13 and A538 Hale Road;
- Footpath Ringway 11, between Sunbank Lane and Footpath Ringway 10;
- Footpath Ringway 12, between Footpath Ringway 14 and Sunbank Lane;
- Footpath Ringway 14, between Footpath Ringway 12 and Footpath Hale 10; and
- Footpath Hale 16, between Footpath Ringway 7 and Brooks Drive.

11.6.9 There are pedestrian crossing facilities on some key roads in the MA06 area including signalised pedestrian crossings at the M56 junction 6/A538 Wilmslow Road junction on Runger Lane and A538 Wilmslow Road westbound approaches and the Hasty Lane underpass that provides a traffic-free route east to west below the M56 main line (north of junction 6).

11.6.10 There are proposals for changes to the pedestrian network with a new junction at M56 junction 6 proposed as part of the Manchester Airport Rainbow Works scheme, which is expected to open in 2025. This scheme will provide signalised crossing facilities for pedestrians. These have been taken into account in the future baseline.

MA07

11.6.11 Roads with roadside footways in the MA07 area include:

- B5167 Palatine Road;
- B5093 Wilmslow Road;
- Birchfields Road;
- Lytham Road;
- A665 Midland Street;
- Hooper Street;
- Glenbarry Street; and
- Rondin Road.

11.6.12 The route of the Proposed Scheme will cross one road with roadside footways within the Davenport Green to Ardwick area. This is the A665 Midland Street. The remainder of the route in the Davenport Green to Ardwick area will be in tunnel.

11.6.13 In addition to roadside footways, there are a number of PRoW in the MA07 area, including three in the vicinity of the Proposed Scheme:

- Footpath Manchester 211, between River Mersey (Footpath Manchester 212) and B5167 Palatine Road;
- Footpath Manchester 212, between River Mersey (Footpath Manchester 229) and River Mersey (Footpath Manchester 211); and
- Footpath Manchester 156, between Fallowfield Campus and A5079 Kingsway.

11.6.14 TfGM plan to introduce a network of active travel routes across Greater Manchester known as the Bee Network. Committed changes to pedestrian facilities and routes relevant to the assessment of the area that have been taken into account in the future baseline include:

- Heatons Cycle Link – a new cycle route through the Heatons that also includes wider paths and new road crossing facilities for pedestrians (and cyclists) (expected to open 2021); and
- Offerton to Stockport Beeway – a new cycling and walking route from Offerton to Stockport town centre (expected to open 2021).

MA08

11.6.15 Roads with roadside footways in the MA08 area include:

- A665 Chancellor Lane;
- A635 Ashton Old Road;
- A665 Pin Mill Brow;
- A635 Mancunian Way;
- Cresbury Street;
- Dark Lane;
- Adlington Street;

- William Street;
- Mill Green Street;
- North Western Street;
- Coronation Square;
- Crane Street;
- Raven Street;
- Elbe Street;
- Blackett Street;
- St. Andrew's Street;
- St. Andrew's Square;
- Sheffield Street;
- Adair Street;
- Baird Street;
- Sparkle Street;
- Store Street;
- Helmet Street;
- Travis Street; and
- Boad Street.

11.6.16 The route of the Proposed Scheme will cross 12 roads with roadside footways within the Manchester Piccadilly Station area. These are the A665 Chancellor Lane, the A635 Fairfield Street/Ring Road, William Street, Raven Street, Elbe Street, Helmet Street, St. Andrew's Street, Travis Street, Sheffield Street, Baird Street, Boad Street and Store Street.

11.6.17 Whilst there are PRoW in MA08, there are no PRoW in Manchester city centre and the Proposed Scheme is unlikely to affect PRoW further afield. Consequently, PRoW have not been considered further in the assessment of MA08.

11.6.18 There are a number of key pedestrian crossing facilities providing connectivity between the existing Manchester Piccadilly Station and the city centre. They include signalised pedestrian crossings at the A6 Piccadilly/Ducie Street/Auburn Street junction north of the Station Approach entrance and the A6 London Road/B6469 Fairfield Street junction south of the station entrance. In addition, the London Road pedestrian footbridge allows a traffic-free route from the Station Approach entrance across the A6 London Road.

11.6.19 TfGM plan to introduce a network of active travel routes across Greater Manchester known as the Bee Network. Committed changes to pedestrian facilities and routes relevant to the assessment of the area that have been taken into account in the future baseline include:

- Trafford Road Corridor - a new cycling and walking route from Ordsall to Salford Quays (expected to open 2021/2022);

- Liverpool Street Corridor - a new cycling and walking route between Salford and Manchester city centre (expected to open 2021/2022); and
- Northern Quarter improvements - the introduction of quiet streets, pavement widening and no through traffic to encourage walking (and cycling) journeys to Manchester Piccadilly Station.

Cycle facilities

MA06

11.6.20 In MA06, there is a network of advisory cycle routes and these include the following roads:

- A560 Stockport Road/Shaftesbury Avenue/Altrincham Road, connecting Altrincham to Baguley and Regional Route 85;
- Hasty Lane connecting Hale to the Airport and Regional Route 85, with an underpass beneath the M56; and
- Thorley Lane, connecting Hale to the Airport and Regional Route 85, with an overbridge over the M56.

11.6.21 In addition, two regional routes on the NCN pass through the area. These are:

- Regional Route 70, the Cheshire Cycleway, which runs from east to west through the MA06 area between Bollington and Neston, connecting the settlements of Wilmslow, Ashley, Rostherne and High Legh and;
- Regional Route 85, the Manchester Airport Orbital Cycleway, which runs from south to north through the MA06 area between Wilmslow and Woodhouse Park (in MA07), connecting Hale Barns and Manchester Airport.

11.6.22 Whilst there are future plans for TfGM to introduce a network of active travel routes across Greater Manchester known as the Bee Network, as many of these schemes are not yet committed, including those in the vicinity of the proposed Manchester Airport High Speed Station, compared to the existing baseline, no changes are assumed to cycle facilities in the future baseline.

MA07

11.6.23 In MA07, there is a network of advisory cycle routes and these include the following roads:

- A5145 Barlow Moor Road, connecting Chorlton and West Didsbury;
- B5167 Palatine Road, connecting West Didsbury and Withington;
- B5093 Wilmslow Road, connecting Didsbury and Withington (physical segregation);
- A5145 Parrs Wood Lane, connecting the East Didsbury Metrolink station and the East Didsbury Mainline railway station;
- A34 Birchfields Road, connecting Levenshulme to Rusholme; and

- A635 Ashton Old Road, connecting Ardwick to Manchester city centre and National Route 60.

11.6.24 In addition, six national routes and two regional routes on the NCN pass through the area. These are:

- National Route 6, which runs from east to west through the MA07 area between Reddish and Chorlton-cum-Hardy, connecting the areas of North Reddish, Levenshulme, Burnage, Fallowfield and Chorlton-cum-Hardy. Between Fallowfield and Chorlton-cum-Hardy, the route also follows a south to north alignment, connecting the areas of Whalley Range, Hulme and Manchester city centre (in MA08) and beyond;
- National Route 55, which runs in sections. In MA07 it connects Didsbury in the west to Stockport in the to the east as an alternative on road route to the parallel National Route 62 which runs along the River Mersey;
- National Route 60, which runs from south to north-west through the MA07 area between Reddish and Harpurhey and Crumpsall (in MA08), connecting the communities of North Reddish, Gorton, Openshaw and Harpurhey;
- The Fallowfield Loop, an urban route between Chorlton-cum-Hardy to Fairfield, which runs through MA07 along sections of National Routes 6 and 60;
- National Route 62, which forms part of the west and central sections of the Trans Pennine Trail, connecting Fleetwood in Lancashire with Selby in North Yorkshire. Within MA07, National Route 62 connects the areas of Reddish, Stockport, Didsbury, Northenden, Stretford and beyond;
- National Route 558, which runs from south to north through the MA07 area between Heald Green and Cheadle Heath. It connects Regional Route 85 to National Route 62, connecting the communities of Heald Green, Cheadle and Cheadle Heath;
- Regional Route 82, which runs from south to north through the MA07 area between Altrincham and Eccles (in MA08), connecting the communities of Altrincham, Sale, Stretford, and Eccles; and
- Regional Route 85, which runs from south to north through the MA07 area between Manchester Airport (in MA06) and Chorlton-cum-Hardy, connecting the communities of Didsbury, Barlow Moor and Chorlton-cum-hardy.

11.6.25 TfGM plan to introduce a network of active travel routes across Greater Manchester known as the Bee Network. Committed changes to the cycle network relevant to the assessment of the area include:

- Heatons Cycle Link - a new route through the Heatons linking National Route 62 with the Fallowfield Loop including new road crossing facilities for cyclists (and pedestrians) (expected to open 2021);
- Offerton to Stockport Beeway - a new cycling and walking route from Offerton to Stockport town centre (expected to open 2021); and

- Chorlton Busy Beeway - a new cycle route from Chorlton to Manchester city centre linking National Route 55 to National Routes 6 and 60, Salford Quays, the Fallowfield Loop and the Wilmslow Road Corridor (expected to open 2021).

MA08

11.6.26 In MA08, there is a network of advisory cycle routes in Manchester city centre, those in the immediate vicinity of Manchester Piccadilly are as follows:

- A6 London Road, connecting Manchester Piccadilly Station and the city centre to Ardwick Green;
- B6469 Fairfield Street, connecting Manchester Piccadilly Station and the city centre to Ardwick;
- Store Street, which forms part of National Route 66, connecting Manchester Piccadilly Station and New Islington; and
- Ducie Street, connecting the A6 London Road / Piccadilly to National Route 66.

11.6.27 There are also cycle lanes in the vicinity of Manchester Piccadilly Station on the A6 London Road, A665 Pin Mill Brow and the A635 Ashton Old Road.

11.6.28 In addition, four national routes and one regional route on the NCN pass through the area. These are:

- National Route 6, which follows a north to south alignment through MA08, connecting the areas of Moss Side and Hulme in the south to Kersal and beyond in the north;
- National Route 55, which runs in sections. In MA08, it runs from east to west between National Route 6/Salford Central Station and Salford. It provides a route parallel to the M602 through Salford;
- National Route 60, which runs from south to north-west through the MA08 area between Reddish (in MA07) and Harpurhey and Crumpsall, connecting the communities of North Reddish, Gorton, Openshaw and Harpurhey;
- National Route 66, which runs from the A6 London Road, west of Manchester Piccadilly Station to Failsworth in the north-west; and
- Regional Route 86, which runs from the east of Manchester city centre to Clayton Vale in the north-east.

11.6.29 TfGM plan to introduce a network of active travel routes across Greater Manchester known as the Bee Network. Committed changes to the cycle network relevant to the assessment of the area that have been taken into account in the future baseline include:

- Trafford Road Corridor - a new cycling and walking route from Ordsall to Salford Quays (expected to open 2021/2022);
- Liverpool Street Corridor - a new cycling and walking route between Salford and Manchester city centre (expected to open 2021/2022);

- Northern Quarter improvements - the introduction of quiet streets, pavement widening and no through traffic to encourage cycling (and walking) journeys to Manchester Piccadilly Station; and
- Chorlton Busy Beeway - a new cycle route from Chorlton to Manchester city centre linking National Route 55 to National Routes 6 and 60, Salford Quays, the Fallowfield Loop and the Wilmslow Road Corridor (expected to open 2021).

Equestrian facilities

11.6.30 There are no bridleways or Byways Open to All Traffic (BOAT) in the vicinity of the Proposed Scheme in MA06, MA07 or MA08. Consequently, this topic has not been considered further in this assessment.

11.7 Waterways and canals

11.7.1 Navigable waterways in MA06 include the Bridgewater Canal and the River Bollin.

11.7.2 Navigable waterways in MA07 include the Manchester Ship Canal, the Ashton Canal and the Bridgewater Canal.

11.7.3 Navigable Waterways in MA08 include the Manchester Ship Canal, the Rochdale Canal, the Ashton Canal and the Bridgewater Canal.

11.7.4 It is not expected that there will be any effects on navigable waterways in MA06, MA07 or MA08 during construction or operation of the Proposed Scheme. Consequently, this topic has not been considered further in this assessment.

11.8 Air transport

11.8.1 Manchester Airport is located within MA06, adjacent to the boundary with MA07. The airport operates two full-length runways from three terminals. The airport is primarily accessed from the strategic road network via the M56 junctions 5 and 6 and access by public transport is via the existing Manchester Airport Station, which provides access to rail, Metrolink, bus and coach services.

11.8.2 The alignment of the Proposed Scheme passes to the west of Manchester Airport on the western side of the M56. The Proposed Scheme and construction of Manchester Airport High Speed station is expected to improve access to the airport.

11.8.3 The Proposed Scheme is unlikely to affect air transport facilities. Consequently, this topic has not been considered further in this assessment.

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