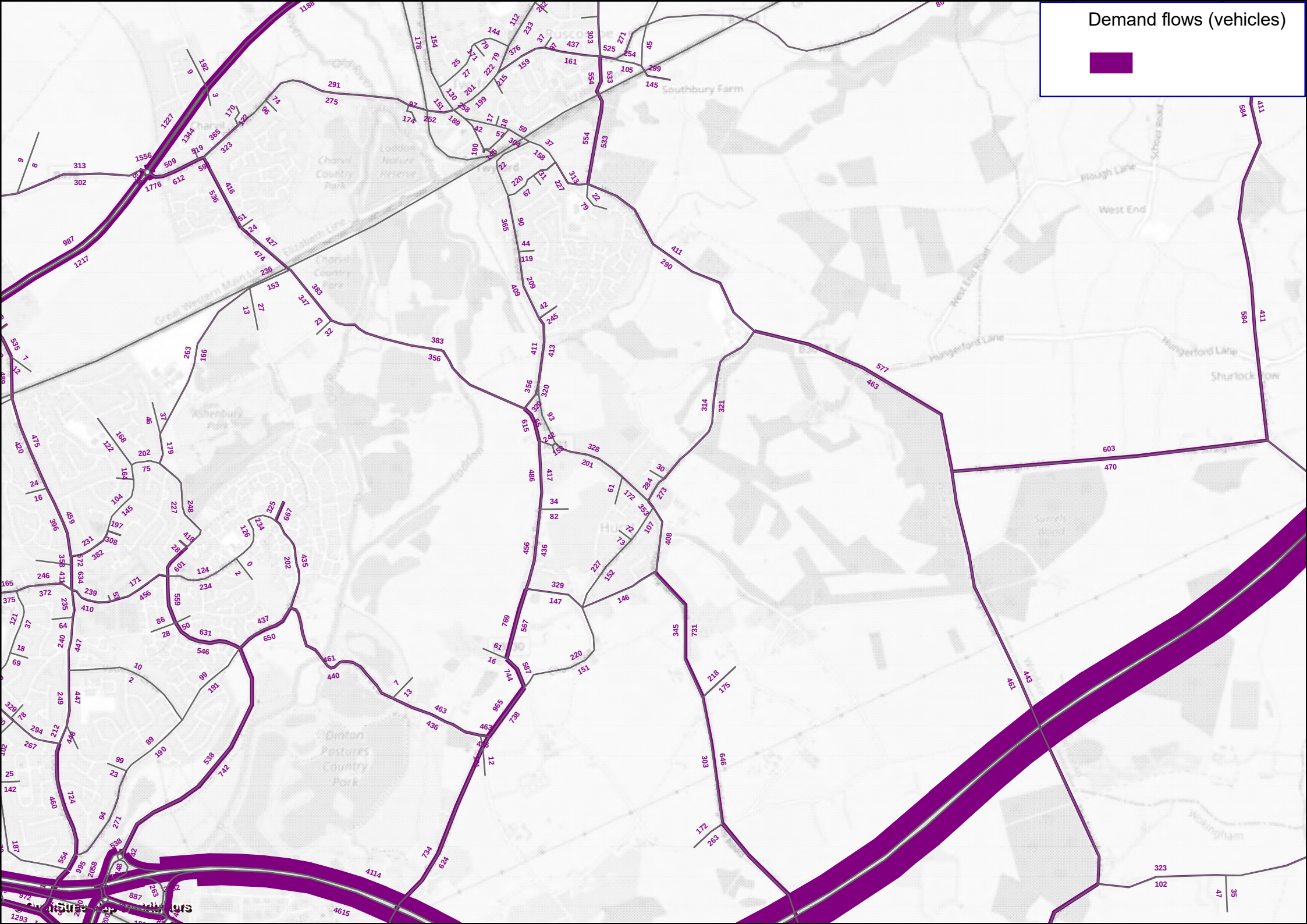
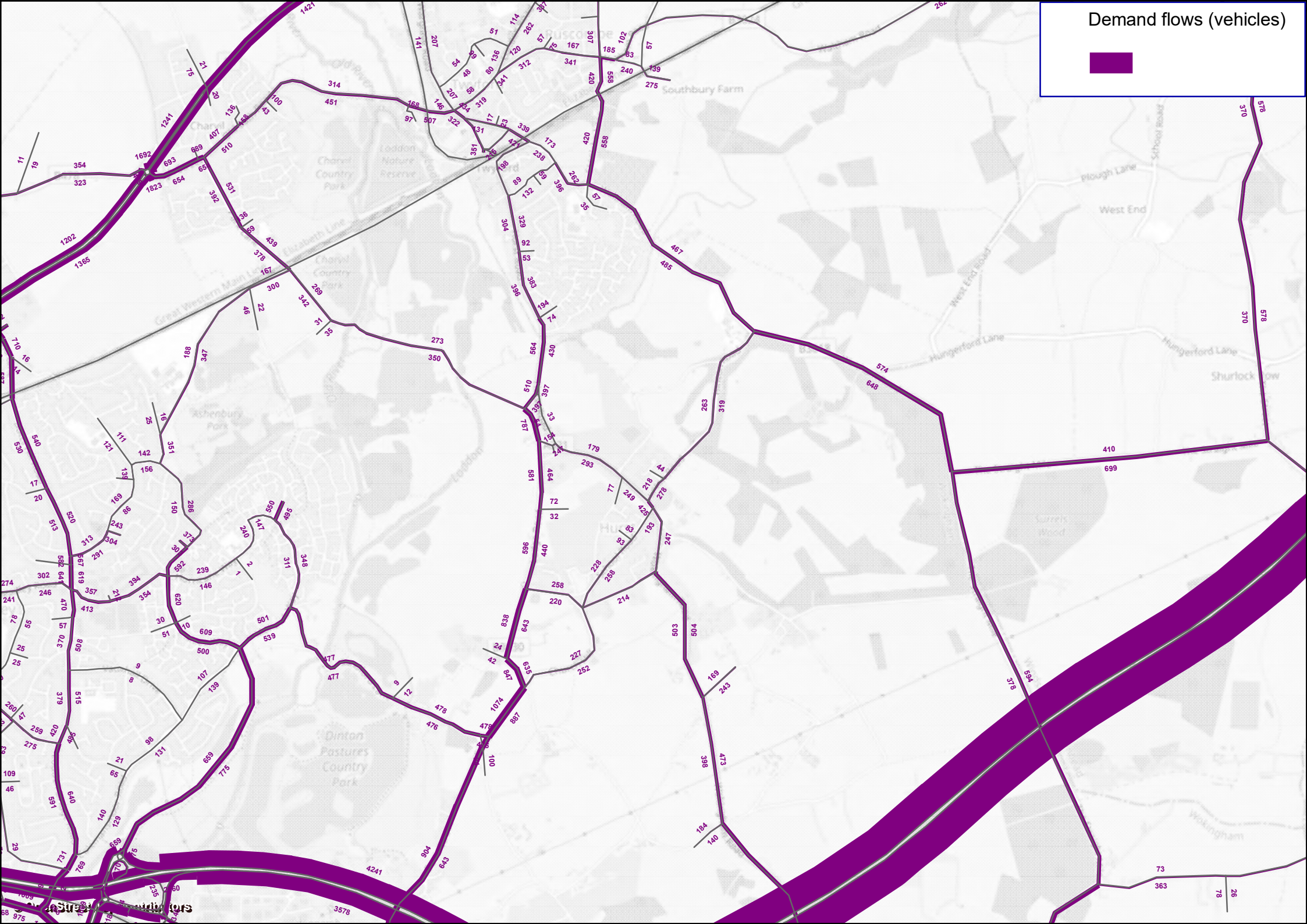


Demand flows (vehicles)



Demand flows (vehicles)



APPENDIX H.Junctions 10 Modelling Results

Junctions 10															
PICADY 10 - Priority Intersection Module															
Version: 10.1.0.1820															
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Filename: Broadwater Lane_Lodge Road.j10

Path: T:\Projects\19000 Series\19328\TB - Tape Lane Hurst\Tech\Junction Assessments\Picady\i-Transport Updated Motion Models

Report generation date: 14/02/2024 14:48:24

- »2026 Baseline, AM
- »2026 Baseline, PM
- »2026 with Dev, AM
- »2026 with Dev, PM
- »2038 Baseline, AM
- »2038 Baseline, PM
- »2038 with Dev, AM
- »2038 with Dev , PM

Summary of junction performance

	AM								PM							
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2026 Baseline															
Stream B-AC	D1	1.2	11.56	0.55	B	9.73	A	54 %	D2	2.8	20.40	0.75	C	16.74	C	15 %
Stream C-AB		1.2	11.47	0.54	B			[Stream B-AC]		1.7	15.18	0.63	C			[Stream B-AC]
	2026 with Dev															
Stream B-AC	D3	1.3	11.85	0.56	B	9.94	A	51 %	D4	2.9	20.91	0.75	C	17.22	C	14 %
Stream C-AB		1.3	11.59	0.54	B			[Stream B-AC]		1.8	15.69	0.65	C			[Stream B-AC]
	2038 Baseline															
Stream B-AC	D5	1.1	11.22	0.54	B	9.64	A	55 %	D6	3.2	22.23	0.77	C	18.22	C	12 %
Stream C-AB		1.3	11.73	0.55	B			[Stream C-AB]		2.1	16.80	0.67	C			[Stream B-AC]
	2038 with Dev															
Stream B-AC	D7	1.2	11.42	0.54	B	9.80	A	54 %	D8	3.3	23.30	0.78	C	19.03	C	10 %
Stream C-AB		1.3	11.87	0.56	B			[Stream C-AB]		2.2	17.41	0.68	C			[Stream B-AC]

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	23/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\basingstoke.hotdesk
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2026 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2026 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D3	2026 with Dev	AM	ONE HOUR	07:45	09:15	15	✓
D4	2026 with Dev	PM	ONE HOUR	16:45	18:15	15	✓
D5	2038 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D6	2038 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D7	2038 with Dev	AM	ONE HOUR	07:45	09:15	15	✓
D8	2038 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2026 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		9.73	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	54	Stream B-AC	9.73	A

Arms

Arms

Arm	Name	Description	Arm type
A	Broadwater Lane South		Major
B	Lodge Road		Minor
C	Broadwater Lane North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Broadwater Lane North	6.35			120.4	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Lodge Road	One lane	3.65	144	63

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	593	0.106	0.269	0.169	0.384
B-C	707	0.107	0.270	-	-
C-B	644	0.246	0.246	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2026 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Broadwater Lane South		ONE HOUR	✓	53	100.000
B - Lodge Road		ONE HOUR	✓	345	100.000
C - Broadwater Lane North		ONE HOUR	✓	396	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	53
	B - Lodge Road	0	0	345
	C - Broadwater Lane North	88	308	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	0
	B - Lodge Road	0	0	0
	C - Broadwater Lane North	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.55	11.56	1.2	B	317	475
C-AB	0.54	11.47	1.2	B	300	450
C-A					63	95
A-B					0	0
A-C					49	73

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	260	65	696	0.373	257	0.0	0.6	8.165	A
C-AB	241	60	658	0.366	238	0.0	0.6	8.533	A
C-A	57	14			57				
A-B	0	0			0				
A-C	40	10			40				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	310	78	694	0.447	309	0.6	0.8	9.339	A
C-AB	292	73	667	0.438	291	0.6	0.8	9.570	A
C-A	64	16			64				
A-B	0	0			0				
A-C	48	12			48				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	380	95	691	0.550	378	0.8	1.2	11.450	B
C-AB	367	92	681	0.539	366	0.8	1.2	11.354	B
C-A	69	17			69				
A-B	0	0			0				
A-C	58	15			58				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	380	95	691	0.550	380	1.2	1.2	11.564	B
C-AB	367	92	682	0.539	367	1.2	1.2	11.468	B
C-A	69	17			69				
A-B	0	0			0				
A-C	58	15			58				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	310	78	694	0.447	312	1.2	0.8	9.456	A
C-AB	292	73	667	0.438	294	1.2	0.8	9.703	A
C-A	64	16			64				
A-B	0	0			0				
A-C	48	12			48				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	260	65	696	0.373	261	0.8	0.6	8.286	A
C-AB	241	60	658	0.366	242	0.8	0.6	8.667	A
C-A	57	14			57				
A-B	0	0			0				
A-C	40	10			40				

2026 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		16.74	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	15	Stream B-AC	16.74	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2026 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Broadwater Lane South		ONE HOUR	✓	52	100.000
B - Lodge Road		ONE HOUR	✓	469	100.000
C - Broadwater Lane North		ONE HOUR	✓	385	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From				
	A - Broadwater Lane South	0	0	52
	B - Lodge Road	0	0	469
	C - Broadwater Lane North	23	362	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From				
	A - Broadwater Lane South	0	0	0
	B - Lodge Road	1	0	0
	C - Broadwater Lane North	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.75	20.40	2.8	C	430	646
C-AB	0.63	15.18	1.7	C	338	508
C-A					15	22
A-B					0	0
A-C					48	72

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	353	88	696	0.507	349	0.0	1.0	10.257	B
C-AB	276	69	642	0.430	273	0.0	0.7	9.687	A
C-A	14	4			14				
A-B	0	0			0				
A-C	39	10			39				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	422	105	694	0.607	420	1.0	1.5	13.016	B
C-AB	331	83	643	0.515	330	0.7	1.1	11.454	B
C-A	15	4			15				
A-B	0	0			0				
A-C	47	12			47				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	516	129	691	0.747	511	1.5	2.7	19.470	C
C-AB	409	102	646	0.633	406	1.1	1.7	14.884	B
C-A	15	4			15				
A-B	0	0			0				
A-C	57	14			57				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	516	129	691	0.747	516	2.7	2.8	20.402	C
C-AB	409	102	646	0.633	409	1.7	1.7	15.180	C
C-A	15	4			15				
A-B	0	0			0				
A-C	57	14			57				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	422	105	694	0.607	427	2.8	1.6	13.688	B
C-AB	331	83	643	0.515	333	1.7	1.1	11.730	B
C-A	15	4			15				
A-B	0	0			0				
A-C	47	12			47				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	353	88	696	0.507	355	1.6	1.1	10.626	B
C-AB	276	69	642	0.430	277	1.1	0.8	9.917	A
C-A	14	4			14				
A-B	0	0			0				
A-C	39	10			39				

2026 with Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		9.94	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	51	Stream B-AC	9.94	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2026 with Dev	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Broadwater Lane South		ONE HOUR	✓	53	100.000
B - Lodge Road		ONE HOUR	✓	352	100.000
C - Broadwater Lane North		ONE HOUR	✓	399	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	53
	B - Lodge Road	0	0	352
	C - Broadwater Lane North	88	311	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	0
	B - Lodge Road	0	0	0
	C - Broadwater Lane North	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.56	11.85	1.3	B	323	485
C-AB	0.54	11.59	1.3	B	303	455
C-A					63	95
A-B					0	0
A-C					49	73

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	265	66	696	0.381	263	0.0	0.6	8.260	A
C-AB	243	61	658	0.369	241	0.0	0.6	8.577	A
C-A	57	14			57				
A-B	0	0			0				
A-C	40	10			40				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	316	79	694	0.456	316	0.6	0.8	9.491	A
C-AB	295	74	667	0.442	294	0.6	0.8	9.641	A
C-A	64	16			64				
A-B	0	0			0				
A-C	48	12			48				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	388	97	691	0.561	386	0.8	1.2	11.729	B
C-AB	371	93	682	0.544	369	0.8	1.3	11.471	B
C-A	68	17			68				
A-B	0	0			0				
A-C	58	15			58				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	388	97	691	0.561	387	1.2	1.3	11.852	B
C-AB	371	93	682	0.544	371	1.3	1.3	11.595	B
C-A	68	17			68				
A-B	0	0			0				
A-C	58	15			58				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	316	79	694	0.456	318	1.3	0.9	9.620	A
C-AB	295	74	667	0.442	297	1.3	0.9	9.777	A
C-A	64	16			64				
A-B	0	0			0				
A-C	48	12			48				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	265	66	696	0.381	266	0.9	0.6	8.388	A
C-AB	243	61	658	0.369	244	0.9	0.6	8.716	A
C-A	57	14			57				
A-B	0	0			0				
A-C	40	10			40				

2026 with Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		17.22	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	14	Stream B-AC	17.22	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2026 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Broadwater Lane South		ONE HOUR	✓	52	100.000
B - Lodge Road		ONE HOUR	✓	473	100.000
C - Broadwater Lane North		ONE HOUR	✓	392	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	52
	B - Lodge Road	0	0	473
	C - Broadwater Lane North	23	369	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	0
	B - Lodge Road	1	0	0
	C - Broadwater Lane North	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.75	20.91	2.9	C	434	651
C-AB	0.65	15.69	1.8	C	345	518
C-A					15	22
A-B					0	0
A-C					48	72

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	356	89	696	0.511	352	0.0	1.0	10.341	B
C-AB	281	70	642	0.438	278	0.0	0.8	9.822	A
C-A	14	3			14				
A-B	0	0			0				
A-C	39	10			39				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	425	106	694	0.613	423	1.0	1.5	13.182	B
C-AB	337	84	643	0.525	336	0.8	1.1	11.683	B
C-A	15	4			15				
A-B	0	0			0				
A-C	47	12			47				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	521	130	691	0.753	516	1.5	2.8	19.898	C
C-AB	417	104	646	0.645	414	1.1	1.8	15.355	C
C-A	15	4			15				
A-B	0	0			0				
A-C	57	14			57				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	521	130	691	0.753	520	2.8	2.9	20.910	C
C-AB	417	104	646	0.645	417	1.8	1.8	15.689	C
C-A	15	4			15				
A-B	0	0			0				
A-C	57	14			57				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	425	106	694	0.613	430	2.9	1.6	13.897	B
C-AB	337	84	643	0.525	340	1.8	1.2	11.993	B
C-A	15	4			15				
A-B	0	0			0				
A-C	47	12			47				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	356	89	696	0.511	358	1.6	1.1	10.725	B
C-AB	281	70	642	0.438	283	1.2	0.8	10.066	B
C-A	14	3			14				
A-B	0	0			0				
A-C	39	10			39				

2038 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		9.64	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	55	Stream C-AB	9.64	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2038 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Broadwater Lane South		ONE HOUR	✓	55	100.000
B - Lodge Road		ONE HOUR	✓	336	100.000
C - Broadwater Lane North		ONE HOUR	✓	408	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	55
	B - Lodge Road	0	0	336
	C - Broadwater Lane North	93	315	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	0
	B - Lodge Road	0	0	0
	C - Broadwater Lane North	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.54	11.22	1.1	B	308	462
C-AB	0.55	11.73	1.3	B	308	462
C-A					66	99
A-B					0	0
A-C					50	76

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	253	63	696	0.364	251	0.0	0.6	8.053	A
C-AB	247	62	660	0.374	245	0.0	0.6	8.625	A
C-A	60	15			60				
A-B	0	0			0				
A-C	41	10			41				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	302	76	693	0.436	301	0.6	0.8	9.161	A
C-AB	300	75	669	0.448	299	0.6	0.8	9.714	A
C-A	67	17			67				
A-B	0	0			0				
A-C	49	12			49				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	370	92	690	0.536	368	0.8	1.1	11.128	B
C-AB	378	94	685	0.552	376	0.8	1.3	11.603	B
C-A	71	18			71				
A-B	0	0			0				
A-C	61	15			61				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	370	92	690	0.536	370	1.1	1.1	11.224	B
C-AB	378	94	685	0.552	378	1.3	1.3	11.735	B
C-A	71	18			71				
A-B	0	0			0				
A-C	61	15			61				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	302	76	693	0.436	303	1.1	0.8	9.264	A
C-AB	300	75	669	0.448	302	1.3	0.9	9.858	A
C-A	67	17			67				
A-B	0	0			0				
A-C	49	12			49				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	253	63	696	0.364	254	0.8	0.6	8.163	A
C-AB	247	62	660	0.374	248	0.9	0.6	8.767	A
C-A	60	15			60				
A-B	0	0			0				
A-C	41	10			41				

2038 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		18.22	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	12	Stream B-AC	18.22	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2038 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Broadwater Lane South		ONE HOUR	✓	54	100.000
B - Lodge Road		ONE HOUR	✓	482	100.000
C - Broadwater Lane North		ONE HOUR	✓	416	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	54
	B - Lodge Road	0	0	482
	C - Broadwater Lane North	32	384	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	0
	B - Lodge Road	1	0	0
	C - Broadwater Lane North	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.77	22.23	3.2	C	442	663
C-AB	0.67	16.80	2.1	C	362	543
C-A					20	29
A-B					0	0
A-C					50	74

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	363	91	696	0.522	359	0.0	1.1	10.550	B
C-AB	294	74	645	0.456	291	0.0	0.8	10.083	B
C-A	19	5			19				
A-B	0	0			0				
A-C	41	10			41				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	433	108	694	0.625	431	1.1	1.6	13.596	B
C-AB	354	88	647	0.546	352	0.8	1.2	12.142	B
C-A	20	5			20				
A-B	0	0			0				
A-C	49	12			49				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	531	133	691	0.768	525	1.6	3.0	20.997	C
C-AB	439	110	653	0.672	435	1.2	2.0	16.351	C
C-A	19	5			19				
A-B	0	0			0				
A-C	59	15			59				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	531	133	691	0.768	530	3.0	3.2	22.230	C
C-AB	439	110	653	0.672	438	2.0	2.1	16.799	C
C-A	19	5			19				
A-B	0	0			0				
A-C	59	15			59				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	433	108	694	0.625	439	3.2	1.7	14.434	B
C-AB	354	88	648	0.546	357	2.1	1.3	12.537	B
C-A	20	5			20				
A-B	0	0			0				
A-C	49	12			49				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	363	91	696	0.522	365	1.7	1.1	10.974	B
C-AB	294	74	645	0.456	296	1.3	0.9	10.368	B
C-A	19	5			19				
A-B	0	0			0				
A-C	41	10			41				

2038 with Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		9.80	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	54	Stream C-AB	9.80	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2038 with Dev	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Broadwater Lane South		ONE HOUR	✓	55	100.000
B - Lodge Road		ONE HOUR	✓	341	100.000
C - Broadwater Lane North		ONE HOUR	✓	411	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	55
	B - Lodge Road	0	0	341
	C - Broadwater Lane North	93	318	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From	A - Broadwater Lane South	0	0	0
	B - Lodge Road	0	0	0
	C - Broadwater Lane North	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.54	11.42	1.2	B	313	469
C-AB	0.56	11.87	1.3	B	311	467
C-A					66	99
A-B					0	0
A-C					50	76

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	257	64	696	0.369	254	0.0	0.6	8.118	A
C-AB	249	62	660	0.378	247	0.0	0.6	8.668	A
C-A	60	15			60				
A-B	0	0			0				
A-C	41	10			41				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	307	77	693	0.442	306	0.6	0.8	9.266	A
C-AB	303	76	669	0.453	302	0.6	0.9	9.785	A
C-A	66	17			66				
A-B	0	0			0				
A-C	49	12			49				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	375	94	690	0.544	374	0.8	1.2	11.316	B
C-AB	382	95	686	0.557	380	0.9	1.3	11.727	B
C-A	71	18			71				
A-B	0	0			0				
A-C	61	15			61				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	375	94	690	0.544	375	1.2	1.2	11.421	B
C-AB	382	95	686	0.557	382	1.3	1.3	11.865	B
C-A	71	18			71				
A-B	0	0			0				
A-C	61	15			61				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	307	77	693	0.442	308	1.2	0.8	9.377	A
C-AB	303	76	670	0.453	305	1.3	0.9	9.933	A
C-A	66	17			66				
A-B	0	0			0				
A-C	49	12			49				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	257	64	696	0.369	258	0.8	0.6	8.236	A
C-AB	249	62	660	0.378	250	0.9	0.6	8.816	A
C-A	60	15			60				
A-B	0	0			0				
A-C	41	10			41				

2038 with Dev , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		19.03	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	10	Stream B-AC	19.03	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2038 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Broadwater Lane South		ONE HOUR	✓	54	100.000
B - Lodge Road		ONE HOUR	✓	489	100.000
C - Broadwater Lane North		ONE HOUR	✓	424	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From				
	A - Broadwater Lane South	0	0	54
	B - Lodge Road	0	0	489
	C - Broadwater Lane North	33	391	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Broadwater Lane South	B - Lodge Road	C - Broadwater Lane North
From				
	A - Broadwater Lane South	0	0	0
	B - Lodge Road	1	0	0
	C - Broadwater Lane North	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.78	23.30	3.3	C	449	673
C-AB	0.68	17.41	2.2	C	369	554
C-A					20	30
A-B					0	0
A-C					50	74

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	368	92	696	0.529	364	0.0	1.1	10.707	B
C-AB	300	75	645	0.465	296	0.0	0.9	10.223	B
C-A	19	5			19				
A-B	0	0			0				
A-C	41	10			41				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	440	110	694	0.634	437	1.1	1.7	13.912	B
C-AB	361	90	648	0.556	359	0.9	1.2	12.392	B
C-A	20	5			20				
A-B	0	0			0				
A-C	49	12			49				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	538	135	691	0.779	532	1.7	3.2	21.870	C
C-AB	448	112	654	0.684	444	1.2	2.1	16.897	C
C-A	19	5			19				
A-B	0	0			0				
A-C	59	15			59				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	538	135	691	0.779	538	3.2	3.3	23.301	C
C-AB	448	112	654	0.684	447	2.1	2.2	17.414	C
C-A	19	5			19				
A-B	0	0			0				
A-C	59	15			59				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	440	110	694	0.634	446	3.3	1.8	14.864	B
C-AB	361	90	648	0.556	364	2.2	1.3	12.829	B
C-A	20	5			20				
A-B	0	0			0				
A-C	49	12			49				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	368	92	696	0.529	371	1.8	1.2	11.160	B
C-AB	300	75	645	0.465	301	1.3	0.9	10.528	B
C-A	19	5			19				
A-B	0	0			0				
A-C	41	10			41				

Junctions 10															
PICADY 10 - Priority Intersection Module															
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Filename: Lodge Road_Sawpit Lane.j10

Path: T:\Projects\19000 Series\19328\TB - Tape Lane Hurst\Tech\Junction Assessments\Picady\i-Transport Updated Motion Models

Report generation date: 14/02/2024 13:13:44

- »2026 Baseline, AM
- »2026 Baseline, PM
- »2026 with Dev, AM
- »2026 with Dev, PM
- »2038 Baseline, AM
- »2038 Baseline, PM
- »2038 with Dev, AM
- »2038 with Dev, PM

Summary of junction performance

	AM								PM							
	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2026 Baseline															
Stream B-AC	D1	0.3	1.5	8.60	0.25	A	5.83	19 %	D2	0.6	2.6	10.19	0.36	B	4.66	25 %
Stream C-AB		2.8	13.9	12.29	0.66	B		[Stream C-AB]		2.3	12.0	9.40	0.59	A		[Stream C-AB]
	2026 with Dev															
Stream B-AC	D3	0.3	1.1	9.05	0.26	A	5.94	18 %	D4	0.6	2.8	11.06	0.39	B	4.88	22 %
Stream C-AB		2.9	14.5	12.51	0.66	B		[Stream C-AB]		2.5	13.1	9.85	0.61	A		[Stream C-AB]
	2038 Baseline															
Stream B-AC	D5	0.4	1.6	9.18	0.29	A	17.59	0 %	D6	0.7	3.0	11.47	0.42	B	8.85	7 %
Stream C-AB		8.9	45.8	34.20	0.88	D		[Stream C-AB]		5.3	29.2	17.41	0.78	C		[Stream C-AB]
	2038 with Dev															
Stream B-AC	D7	0.4	1.8	9.81	0.30	A	18.58	-1 %	D8	0.8	3.2	12.48	0.45	B	8.91	7 %
Stream C-AB		9.5	47.7	36.46	0.89	E		[Stream C-AB]		5.4	29.3	17.28	0.78	C		[Stream C-AB]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	02/02/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\basingstoke.hotdesk
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75	✓				✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2026 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2026 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D3	2026 with Dev	AM	ONE HOUR	07:45	09:15	15	✓
D4	2026 with Dev	PM	ONE HOUR	16:45	18:15	15	✓
D5	2038 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D6	2038 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D7	2038 with Dev	AM	ONE HOUR	07:45	09:15	15	✓
D8	2038 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2026 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.83	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	19	Stream C-AB	5.83	A

Arms

Arms

Arm	Name	Description	Arm type
A	Lodge Rd (N)		Major
B	Sawpit Rd		Minor
C	Lodge Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Lodge Rd (S)	5.95			165.9	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Sawpit Rd	One lane	3.48	18	16

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	515	0.094	0.237	0.149	0.339
B-C	664	0.102	0.258	-	-
C-B	670	0.260	0.260	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2026 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	383	100.000
B - Sawpit Rd		ONE HOUR	✓	124	100.000
C - Lodge Rd (S)		ONE HOUR	✓	661	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	383
	B - Sawpit Rd	0	0	124
	C - Lodge Rd (S)	414	247	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.25	8.60	0.3	1.5	A	114	171
C-AB	0.66	12.29	2.8	13.9	B	429	643
C-A						178	267
A-B						0	0
A-C						351	527

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	93	23	590	0.158	93	0.0	0.2	7.231	A
C-AB	304	76	802	0.379	301	0.0	0.8	7.164	A
C-A	193	48			193				
A-B	0	0			0				
A-C	288	72			288				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	111	28	575	0.194	111	0.2	0.2	7.755	A
C-AB	404	101	831	0.486	402	0.8	1.3	8.404	A
C-A	190	48			190				
A-B	0	0			0				
A-C	344	86			344				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	137	34	555	0.246	136	0.2	0.3	8.583	A
C-AB	574	143	873	0.657	568	1.3	2.7	11.823	B
C-A	154	39			154				
A-B	0	0			0				
A-C	422	105			422				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	137	34	555	0.246	137	0.3	0.3	8.596	A
C-AB	577	144	876	0.659	577	2.7	2.8	12.291	B
C-A	151	38			151				
A-B	0	0			0				
A-C	422	105			422				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	111	28	575	0.194	112	0.3	0.2	7.774	A
C-AB	407	102	835	0.488	413	2.8	1.4	8.736	A
C-A	187	47			187				
A-B	0	0			0				
A-C	344	86			344				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	93	23	590	0.158	94	0.2	0.2	7.258	A
C-AB	306	77	804	0.381	309	1.4	0.9	7.341	A
C-A	191	48			191				
A-B	0	0			0				
A-C	288	72			288				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.84	0.55	1.00	1.40	1.45			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.24	0.00	0.00	0.24	0.24			N/A	N/A
C-AB	1.33	0.33	1.23	1.87	2.26			N/A	N/A

08:15 - 08:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.32	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	2.73	0.03	0.32	4.35	13.91			N/A	N/A

08:30 - 08:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.32	0.03	0.31	1.14	1.46			N/A	N/A
C-AB	2.82	0.03	0.31	3.69	13.68			N/A	N/A

08:45 - 09:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.24	0.00	0.00	0.24	0.24			N/A	N/A
C-AB	1.42	0.20	1.26	2.25	2.82			N/A	N/A

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.88	0.06	0.73	1.59	1.99			N/A	N/A

2026 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		4.66	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	25	Stream C-AB	4.66	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2026 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	393	100.000
B - Sawpit Rd		ONE HOUR	✓	181	100.000
C - Lodge Rd (S)		ONE HOUR	✓	715	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
From		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
	A - Lodge Rd (N)	0	0	393
	B - Sawpit Rd	0	0	181
	C - Lodge Rd (S)	512	203	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
From		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.36	10.19	0.6	2.6	B	166	249
C-AB	0.59	9.40	2.3	12.0	A	407	610
C-A						249	374
A-B						0	0
A-C						361	541

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	136	34	588	0.232	135	0.0	0.3	7.930	A
C-AB	279	70	851	0.328	276	0.0	0.7	6.256	A
C-A	259	65			259				
A-B	0	0			0				
A-C	296	74			296				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	163	41	573	0.284	162	0.3	0.4	8.756	A
C-AB	380	95	891	0.427	378	0.7	1.2	7.044	A
C-A	263	66			263				
A-B	0	0			0				
A-C	353	88			353				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	199	50	553	0.361	199	0.4	0.6	10.150	B
C-AB	557	139	947	0.588	553	1.2	2.3	9.173	A
C-A	230	58			230				
A-B	0	0			0				
A-C	433	108			433				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	199	50	553	0.361	199	0.6	0.6	10.186	B
C-AB	560	140	950	0.590	560	2.3	2.3	9.401	A
C-A	227	57			227				
A-B	0	0			0				
A-C	433	108			433				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	163	41	573	0.284	163	0.6	0.4	8.799	A
C-AB	383	96	894	0.428	387	2.3	1.2	7.224	A
C-A	260	65			260				
A-B	0	0			0				
A-C	353	88			353				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	136	34	588	0.232	137	0.4	0.3	7.986	A
C-AB	282	70	853	0.330	283	1.2	0.8	6.368	A
C-A	257	64			257				
A-B	0	0			0				
A-C	296	74			296				

Queue Variation Results for each time segment
16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.30	0.00	0.00	0.30	0.30			N/A	N/A
C-AB	0.73	0.55	1.00	1.40	1.45			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.39	0.00	0.00	0.39	0.39			N/A	N/A
C-AB	1.15	0.54	1.09	1.40	1.71			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.55	0.03	0.26	0.55	0.55			N/A	N/A
C-AB	2.28	0.03	0.30	2.28	9.89			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.56	0.03	0.29	1.30	2.61			N/A	N/A
C-AB	2.34	0.03	0.32	3.84	11.99			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.40	0.00	0.00	0.40	0.40			N/A	N/A
C-AB	1.22	0.54	1.14	1.59	1.81			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.31	0.00	0.00	0.31	0.31			N/A	N/A
C-AB	0.77	0.10	0.85	1.42	1.49			N/A	N/A

2026 with Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.94	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	18	Stream C-AB	5.94	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2026 with Dev	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	393	100.000
B - Sawpit Rd		ONE HOUR	✓	126	100.000
C - Lodge Rd (S)		ONE HOUR	✓	665	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
From		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
	A - Lodge Rd (N)	0	0	393
	B - Sawpit Rd	3	0	123
	C - Lodge Rd (S)	418	247	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
From		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.26	9.05	0.3	1.1	A	116	173
C-AB	0.66	12.51	2.9	14.5	B	432	649
C-A						178	267
A-B						0	0
A-C						361	541

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	24	577	0.164	94	0.0	0.2	7.438	A
C-AB	306	77	802	0.381	303	0.0	0.9	7.187	A
C-A	195	49			195				
A-B	0	0			0				
A-C	296	74			296				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	113	28	560	0.202	113	0.2	0.3	8.041	A
C-AB	407	102	832	0.490	405	0.8	1.4	8.453	A
C-A	191	48			191				
A-B	0	0			0				
A-C	353	88			353				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	139	35	537	0.259	138	0.3	0.3	9.030	A
C-AB	579	145	874	0.663	574	1.4	2.8	12.008	B
C-A	153	38			153				
A-B	0	0			0				
A-C	433	108			433				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	139	35	537	0.259	139	0.3	0.3	9.049	A
C-AB	583	146	877	0.665	582	2.8	2.9	12.513	B
C-A	149	37			149				
A-B	0	0			0				
A-C	433	108			433				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	113	28	560	0.202	114	0.3	0.3	8.067	A
C-AB	411	103	835	0.492	417	2.9	1.4	8.803	A
C-A	187	47			187				
A-B	0	0			0				
A-C	353	88			353				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	95	24	577	0.164	95	0.3	0.2	7.471	A
C-AB	308	77	804	0.383	310	1.4	0.9	7.365	A
C-A	192	48			192				
A-B	0	0			0				
A-C	296	74			296				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.85	0.55	1.00	1.40	1.45			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.25	0.00	0.00	0.25	0.25			N/A	N/A
C-AB	1.35	0.31	1.24	1.91	2.39			N/A	N/A

08:15 - 08:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.34	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	2.81	0.03	0.32	4.75	14.53			N/A	N/A

08:30 - 08:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.35	0.03	0.31	1.13	1.13			N/A	N/A
C-AB	2.91	0.03	0.31	3.92	14.23			N/A	N/A

08:45 - 09:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.26	0.00	0.00	0.26	0.26			N/A	N/A
C-AB	1.45	0.19	1.27	2.36	2.90			N/A	N/A

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.20	0.00	0.00	0.20	0.20			N/A	N/A
C-AB	0.89	0.06	0.73	1.64	2.11			N/A	N/A

2026 with Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		4.88	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	22	Stream C-AB	4.88	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2026 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	429	100.000
B - Sawpit Rd		ONE HOUR	✓	186	100.000
C - Lodge Rd (S)		ONE HOUR	✓	726	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	33	396
	B - Sawpit Rd	5	0	181
	C - Lodge Rd (S)	522	204	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.39	11.06	0.6	2.8	B	171	256
C-AB	0.61	9.85	2.5	13.1	A	418	628
C-A						248	372
A-B						30	45
A-C						363	545

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	140	35	573	0.244	139	0.0	0.3	8.268	A
C-AB	285	71	851	0.335	282	0.0	0.8	6.320	A
C-A	261	65			261				
A-B	25	6			25				
A-C	298	75			298				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	167	42	555	0.301	167	0.3	0.4	9.253	A
C-AB	390	97	891	0.437	388	0.8	1.2	7.175	A
C-A	263	66			263				
A-B	30	7			30				
A-C	356	89			356				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	205	51	530	0.386	204	0.4	0.6	11.005	B
C-AB	575	144	949	0.606	570	1.2	2.5	9.576	A
C-A	224	56			224				
A-B	36	9			36				
A-C	436	109			436				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	205	51	530	0.386	205	0.6	0.6	11.059	B
C-AB	579	145	951	0.609	579	2.5	2.5	9.849	A
C-A	220	55			220				
A-B	36	9			36				
A-C	436	109			436				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	167	42	555	0.301	168	0.6	0.4	9.312	A
C-AB	393	98	895	0.439	398	2.5	1.3	7.380	A
C-A	260	65			260				
A-B	30	7			30				
A-C	356	89			356				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	140	35	573	0.244	140	0.4	0.3	8.335	A
C-AB	288	72	853	0.337	290	1.3	0.8	6.437	A
C-A	259	65			259				
A-B	25	6			25				
A-C	298	75			298				

Queue Variation Results for each time segment
16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.32	0.00	0.00	0.32	0.32			N/A	N/A
C-AB	0.76	0.55	1.00	1.40	1.45			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.42	0.00	0.00	0.42	0.42			N/A	N/A
C-AB	1.21	0.54	1.14	1.59	1.81			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.62	0.03	0.26	0.62	0.62			N/A	N/A
C-AB	2.47	0.03	0.30	2.81	11.59			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.62	0.03	0.29	1.25	2.83			N/A	N/A
C-AB	2.54	0.03	0.32	4.27	13.14			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.44	0.00	0.00	0.44	0.44			N/A	N/A
C-AB	1.29	0.53	1.20	1.72	1.90			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.33	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.80	0.09	0.84	1.35	1.35			N/A	N/A

2038 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		17.59	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	0	Stream C-AB	17.59	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2038 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	403	100.000
B - Sawpit Rd		ONE HOUR	✓	143	100.000
C - Lodge Rd (S)		ONE HOUR	✓	749	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	403
	B - Sawpit Rd	0	0	143
	C - Lodge Rd (S)	429	320	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.29	9.18	0.4	1.6	A	131	197
C-AB	0.88	34.20	8.9	45.8	D	575	863
C-A						112	168
A-B						0	0
A-C						370	555

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	27	586	0.184	107	0.0	0.2	7.501	A
C-AB	402	100	806	0.499	397	0.0	1.3	8.743	A
C-A	162	40			162				
A-B	0	0			0				
A-C	303	76			303				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	129	32	571	0.225	128	0.2	0.3	8.134	A
C-AB	537	134	837	0.642	533	1.3	2.4	11.852	B
C-A	136	34			136				
A-B	0	0			0				
A-C	362	91			362				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	157	39	550	0.287	157	0.3	0.4	9.161	A
C-AB	769	192	882	0.872	748	2.4	7.6	26.250	D
C-A	55	14			55				
A-B	0	0			0				
A-C	444	111			444				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	157	39	550	0.287	157	0.4	0.4	9.181	A
C-AB	784	196	890	0.880	778	7.6	8.9	34.197	D
C-A	41	10			41				
A-B	0	0			0				
A-C	444	111			444				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	129	32	571	0.225	129	0.4	0.3	8.161	A
C-AB	552	138	849	0.650	576	8.9	2.8	14.673	B
C-A	122	30			122				
A-B	0	0			0				
A-C	362	91			362				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	27	586	0.184	108	0.3	0.2	7.539	A
C-AB	406	102	810	0.502	412	2.8	1.4	9.255	A
C-A	157	39			157				
A-B	0	0			0				
A-C	303	76			303				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.22	0.00	0.00	0.22	0.22			N/A	N/A
C-AB	1.33	0.55	1.00	1.40	1.45			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.29	0.00	0.00	0.29	0.29			N/A	N/A
C-AB	2.41	0.11	1.02	5.40	7.34			N/A	N/A

08:15 - 08:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.40	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	7.62	0.08	1.55	21.66	33.41			N/A	N/A

08:30 - 08:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.40	0.03	0.31	1.29	1.63			N/A	N/A
C-AB	8.89	0.05	0.60	25.66	45.77			N/A	N/A

08:45 - 09:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.29	0.00	0.00	0.29	0.29			N/A	N/A
C-AB	2.78	0.06	1.06	7.38	11.09			N/A	N/A

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-AB	1.43	0.04	0.36	3.60	7.01			N/A	N/A

2038 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		8.85	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	7	Stream C-AB	8.85	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2038 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	423	100.000
B - Sawpit Rd		ONE HOUR	✓	209	100.000
C - Lodge Rd (S)		ONE HOUR	✓	799	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	423
	B - Sawpit Rd	0	0	209
	C - Lodge Rd (S)	545	254	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.42	11.47	0.7	3.0	B	192	288
C-AB	0.78	17.41	5.3	29.2	C	541	812
C-A						192	288
A-B						0	0
A-C						388	582

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	157	39	582	0.270	156	0.0	0.4	8.422	A
C-AB	365	91	863	0.423	360	0.0	1.1	7.144	A
C-A	237	59			237				
A-B	0	0			0				
A-C	318	80			318				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	188	47	566	0.332	187	0.4	0.5	9.497	A
C-AB	501	125	906	0.553	498	1.1	1.9	8.862	A
C-A	217	54			217				
A-B	0	0			0				
A-C	380	95			380				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	230	58	544	0.423	229	0.5	0.7	11.405	B
C-AB	747	187	968	0.772	735	1.9	5.0	15.550	C
C-A	133	33			133				
A-B	0	0			0				
A-C	466	116			466				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	230	58	544	0.423	230	0.7	0.7	11.470	B
C-AB	757	189	974	0.777	755	5.0	5.3	17.406	C
C-A	123	31			123				
A-B	0	0			0				
A-C	466	116			466				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	188	47	566	0.332	189	0.7	0.5	9.567	A
C-AB	510	128	914	0.558	523	5.3	2.1	9.668	A
C-A	208	52			208				
A-B	0	0			0				
A-C	380	95			380				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	157	39	582	0.270	158	0.5	0.4	8.499	A
C-AB	369	92	866	0.426	372	2.1	1.1	7.391	A
C-A	233	58			233				
A-B	0	0			0				
A-C	318	80			318				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.37	0.00	0.00	0.37	0.37			N/A	N/A
C-AB	1.08	0.55	1.00	1.40	1.45			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.49	0.00	0.00	0.49	0.49			N/A	N/A
C-AB	1.88	0.16	1.48	3.52	4.52			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.72	0.03	0.26	0.72	0.72			N/A	N/A
C-AB	4.95	0.04	0.44	13.74	25.67			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.73	0.03	0.29	1.06	3.00			N/A	N/A
C-AB	5.34	0.04	0.36	12.29	29.16			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.50	0.05	0.48	1.29	1.40			N/A	N/A
C-AB	2.06	0.11	1.44	4.31	5.76			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.38	0.03	0.29	0.70	1.10			N/A	N/A
C-AB	1.15	0.05	0.47	2.75	4.19			N/A	N/A

2038 with Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		18.58	C

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-1	Stream C-AB	18.58	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2038 with Dev	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	420	100.000
B - Sawpit Rd		ONE HOUR	✓	146	100.000
C - Lodge Rd (S)		ONE HOUR	✓	752	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	6	414
	B - Sawpit Rd	3	0	143
	C - Lodge Rd (S)	433	319	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.30	9.81	0.4	1.8	A	134	201
C-AB	0.89	36.46	9.5	47.7	E	579	869
C-A						111	166
A-B						6	8
A-C						380	570

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	110	27	573	0.192	109	0.0	0.2	7.748	A
C-AB	403	101	805	0.501	398	0.0	1.3	8.790	A
C-A	163	41			163				
A-B	5	1			5				
A-C	312	78			312				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	131	33	555	0.237	131	0.2	0.3	8.490	A
C-AB	540	135	837	0.646	536	1.3	2.5	11.993	B
C-A	136	34			136				
A-B	5	1			5				
A-C	372	93			372				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	161	40	529	0.304	160	0.3	0.4	9.761	A
C-AB	776	194	881	0.881	754	2.5	8.0	27.345	D
C-A	52	13			52				
A-B	7	2			7				
A-C	456	114			456				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	161	40	528	0.305	161	0.4	0.4	9.806	A
C-AB	792	198	890	0.889	786	8.0	9.5	36.461	E
C-A	36	9			36				
A-B	7	2			7				
A-C	456	114			456				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	131	33	554	0.237	132	0.4	0.3	8.535	A
C-AB	556	139	849	0.655	582	9.5	2.9	15.157	C
C-A	120	30			120				
A-B	5	1			5				
A-C	372	93			372				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	110	27	573	0.192	110	0.3	0.2	7.793	A
C-AB	408	102	809	0.504	414	2.9	1.4	9.321	A
C-A	158	40			158				
A-B	5	1			5				
A-C	312	78			312				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-AB	1.35	0.55	1.00	1.40	1.45			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.31	0.00	0.00	0.31	0.31			N/A	N/A
C-AB	2.46	0.11	1.03	5.56	7.59			N/A	N/A

08:15 - 08:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.43	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	8.02	0.08	1.92	22.57	34.21			N/A	N/A

08:30 - 08:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.43	0.03	0.31	1.33	1.84			N/A	N/A
C-AB	9.49	0.06	0.96	27.63	47.69			N/A	N/A

08:45 - 09:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.31	0.00	0.00	0.31	0.31			N/A	N/A
C-AB	2.86	0.06	1.05	7.63	11.54			N/A	N/A

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.24	0.00	0.00	0.24	0.24			N/A	N/A
C-AB	1.45	0.04	0.36	3.63	7.22			N/A	N/A

2038 with Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		8.91	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	7	Stream C-AB	8.91	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2038 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	429	100.000
B - Sawpit Rd		ONE HOUR	✓	214	100.000
C - Lodge Rd (S)		ONE HOUR	✓	805	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	3	426
	B - Sawpit Rd	5	0	209
	C - Lodge Rd (S)	554	251	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.45	12.48	0.8	3.2	B	196	295
C-AB	0.78	17.28	5.4	29.3	C	543	814
C-A						196	294
A-B						3	4
A-C						391	586

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	161	40	570	0.283	160	0.0	0.4	8.744	A
C-AB	364	91	867	0.420	360	0.0	1.1	7.086	A
C-A	242	60			242				
A-B	2	0.56			2				
A-C	321	80			321				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	192	48	551	0.349	192	0.4	0.5	10.001	B
C-AB	502	126	911	0.551	499	1.1	1.9	8.779	A
C-A	222	55			222				
A-B	3	0.67			3				
A-C	383	96			383				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	236	59	524	0.449	235	0.5	0.8	12.374	B
C-AB	751	188	974	0.771	738	1.9	5.0	15.428	C
C-A	135	34			135				
A-B	3	0.83			3				
A-C	469	117			469				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	236	59	524	0.450	236	0.8	0.8	12.478	B
C-AB	761	190	980	0.777	759	5.0	5.4	17.283	C
C-A	125	31			125				
A-B	3	0.83			3				
A-C	469	117			469				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	192	48	551	0.349	193	0.8	0.5	10.101	B
C-AB	511	128	919	0.557	525	5.4	2.1	9.580	A
C-A	212	53			212				
A-B	3	0.67			3				
A-C	383	96			383				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	161	40	570	0.283	162	0.5	0.4	8.838	A
C-AB	368	92	870	0.423	372	2.1	1.1	7.331	A
C-A	238	59			238				
A-B	2	0.56			2				
A-C	321	80			321				

Queue Variation Results for each time segment
16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.39	0.00	0.00	0.39	0.39			N/A	N/A
C-AB	1.08	0.55	1.00	1.40	1.45			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.53	0.53	1.00	1.40	1.45			N/A	N/A
C-AB	1.88	0.16	1.48	3.51	4.50			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.80	0.03	0.26	0.80	0.80			N/A	N/A
C-AB	4.98	0.04	0.44	13.83	25.78			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.81	0.03	0.28	1.01	3.23			N/A	N/A
C-AB	5.37	0.04	0.36	12.46	29.33			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.55	0.06	0.62	1.32	1.41			N/A	N/A
C-AB	2.06	0.12	1.45	4.29	5.72			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.40	0.03	0.32	1.06	1.28			N/A	N/A
C-AB	1.15	0.05	0.48	2.74	4.14			N/A	N/A

Junctions 10															
PICADY 10 - Priority Intersection Module															
Version: 10.1.0.1820															
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Filename: Site Access.j10

Path: T:\Projects\19000 Series\19328\TB - Tape Lane Hurst\Tech\Junction Assessments\Picady\i-Transport Updated Motion Models

Report generation date: 14/02/2024 13:16:46

»2026 with Dev, AM

»2026 with Dev, PM

»2038 with Dev, AM

»2038 with Dev, PM

Summary of junction performance

	AM								PM							
	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2026 with Dev															
Stream B-AC	D1	0.1	0.5	8.87	0.09	A	0.48	150 %	D2	0.0	0.5	9.13	0.04	A	0.28	131 %
Stream C-AB		0.0	0.5	5.59	0.01	A		[Stream B-AC]		0.0	0.5	5.87	0.03	A		[Stream B-AC]
	2038 with Dev															
Stream B-AC	D3	0.1	0.5	8.99	0.09	A	0.46	145 %	D4	0.0	0.5	9.43	0.04	A	0.27	117 %
Stream C-AB		0.0	0.5	5.60	0.01	A		[Stream B-AC]		0.0	0.5	5.95	0.04	A		[Stream B-AC]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	12/02/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\basingstoke.hotdesk
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75	✓				✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2026 with Dev	AM	ONE HOUR	07:45	09:15	15	✓
D2	2026 with Dev	PM	ONE HOUR	16:45	18:15	15	✓
D3	2038 with Dev	AM	ONE HOUR	07:45	09:15	15	✓
D4	2038 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2026 with Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.48	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	150	Stream B-AC	0.48	A

Arms

Arms

Arm	Name	Description	Arm type
A	Lodge Ln (N)		Major
B	Site Access		Minor
C	Lodge Ln (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Lodge Ln (S)	6.00		✓	3.50	146.3	✓	5.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	3.00	108	57

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	541	0.099	0.249	0.157	0.356
B-C	660	0.101	0.256	-	-
C-B	752	0.291	0.291	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2026 with Dev	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Ln (N)		ONE HOUR	✓	308	100.000
B - Site Access		ONE HOUR	✓	37	100.000
C - Lodge Ln (S)		ONE HOUR	✓	420	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Ln (N)	B - Site Access	C - Lodge Ln (S)
From	A - Lodge Ln (N)	0	6	302
	B - Site Access	21	0	16
	C - Lodge Ln (S)	412	8	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Ln (N)	B - Site Access	C - Lodge Ln (S)
From	A - Lodge Ln (N)	0	0	0
	B - Site Access	0	0	0
	C - Lodge Ln (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.09	8.87	0.1	0.5	A	34	51
C-AB	0.01	5.59	0.0	0.5	A	7	11
C-A						378	567
A-B						6	8
A-C						277	416

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	28	7	492	0.057	28	0.0	0.1	7.744	A
C-AB	6	2	684	0.009	6	0.0	0.0	5.306	A
C-A	310	78			310				
A-B	5	1			5				
A-C	227	57			227				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	33	8	473	0.070	33	0.1	0.1	8.179	A
C-AB	7	2	671	0.011	7	0.0	0.0	5.420	A
C-A	370	93			370				
A-B	5	1			5				
A-C	271	68			271				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	41	10	447	0.091	41	0.1	0.1	8.862	A
C-AB	9	2	653	0.013	9	0.0	0.0	5.587	A
C-A	454	113			454				
A-B	7	2			7				
A-C	333	83			333				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	41	10	447	0.091	41	0.1	0.1	8.866	A
C-AB	9	2	653	0.013	9	0.0	0.0	5.587	A
C-A	454	113			454				
A-B	7	2			7				
A-C	333	83			333				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	33	8	473	0.070	33	0.1	0.1	8.186	A
C-AB	7	2	671	0.011	7	0.0	0.0	5.421	A
C-A	370	93			370				
A-B	5	1			5				
A-C	271	68			271				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	28	7	492	0.057	28	0.1	0.1	7.754	A
C-AB	6	2	684	0.009	6	0.0	0.0	5.306	A
C-A	310	78			310				
A-B	5	1			5				
A-C	227	57			227				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:30 - 08:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:45 - 09:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

2026 with Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.28	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	131	Stream B-AC	0.28	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2026 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Ln (N)		ONE HOUR	✓	364	100.000
B - Site Access		ONE HOUR	✓	15	100.000
C - Lodge Ln (S)		ONE HOUR	✓	524	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
From		A - Lodge Ln (N)	B - Site Access	C - Lodge Ln (S)
	A - Lodge Ln (N)	0	15	349
	B - Site Access	9	0	6
	C - Lodge Ln (S)	504	20	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
From		A - Lodge Ln (N)	B - Site Access	C - Lodge Ln (S)
	A - Lodge Ln (N)	0	0	0
	B - Site Access	0	0	0
	C - Lodge Ln (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.04	9.13	0.0	0.5	A	14	21
C-AB	0.03	5.87	0.0	0.5	A	18	28
C-A						462	694
A-B						14	21
A-C						320	480

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	3	467	0.024	11	0.0	0.0	7.891	A
C-AB	15	4	672	0.022	15	0.0	0.0	5.478	A
C-A	379	95			379				
A-B	11	3			11				
A-C	263	66			263				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	13	3	444	0.030	13	0.0	0.0	8.363	A
C-AB	18	4	657	0.027	18	0.0	0.0	5.636	A
C-A	453	113			453				
A-B	13	3			13				
A-C	314	78			314				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	411	0.040	16	0.0	0.0	9.124	A
C-AB	22	6	635	0.035	22	0.0	0.0	5.871	A
C-A	555	139			555				
A-B	17	4			17				
A-C	384	96			384				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	411	0.040	17	0.0	0.0	9.126	A
C-AB	22	6	635	0.035	22	0.0	0.0	5.871	A
C-A	555	139			555				
A-B	17	4			17				
A-C	384	96			384				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	13	3	444	0.030	14	0.0	0.0	8.367	A
C-AB	18	4	657	0.027	18	0.0	0.0	5.637	A
C-A	453	113			453				
A-B	13	3			13				
A-C	314	78			314				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	3	467	0.024	11	0.0	0.0	7.895	A
C-AB	15	4	672	0.022	15	0.0	0.0	5.481	A
C-A	379	95			379				
A-B	11	3			11				
A-C	263	66			263				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.03	0.25	0.46	0.48			N/A	N/A
C-AB	0.04	0.03	0.25	0.45	0.48			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

2038 with Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.46	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	145	Stream B-AC	0.46	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2038 with Dev	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Ln (N)		ONE HOUR	✓	314	100.000
B - Site Access		ONE HOUR	✓	36	100.000
C - Lodge Ln (S)		ONE HOUR	✓	435	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Ln (N)	B - Site Access	C - Lodge Ln (S)
	From			
	A - Lodge Ln (N)	0	6	308
	B - Site Access	21	0	15
	C - Lodge Ln (S)	427	8	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Ln (N)	B - Site Access	C - Lodge Ln (S)
	From			
	A - Lodge Ln (N)	0	0	0
	B - Site Access	0	0	0
	C - Lodge Ln (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.09	8.99	0.1	0.5	A	33	50
C-AB	0.01	5.60	0.0	0.5	A	7	11
C-A						392	588
A-B						6	8
A-C						283	424

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	27	7	487	0.056	27	0.0	0.1	7.815	A
C-AB	6	2	683	0.009	6	0.0	0.0	5.317	A
C-A	321	80			321				
A-B	5	1			5				
A-C	232	58			232				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	8	468	0.069	32	0.1	0.1	8.268	A
C-AB	7	2	670	0.011	7	0.0	0.0	5.433	A
C-A	384	96			384				
A-B	5	1			5				
A-C	277	69			277				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	10	440	0.090	40	0.1	0.1	8.983	A
C-AB	9	2	651	0.014	9	0.0	0.0	5.603	A
C-A	470	118			470				
A-B	7	2			7				
A-C	339	85			339				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	10	440	0.090	40	0.1	0.1	8.986	A
C-AB	9	2	651	0.014	9	0.0	0.0	5.603	A
C-A	470	118			470				
A-B	7	2			7				
A-C	339	85			339				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	8	468	0.069	32	0.1	0.1	8.275	A
C-AB	7	2	670	0.011	7	0.0	0.0	5.436	A
C-A	384	96			384				
A-B	5	1			5				
A-C	277	69			277				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	27	7	487	0.056	27	0.1	0.1	7.827	A
C-AB	6	2	683	0.009	6	0.0	0.0	5.319	A
C-A	321	80			321				
A-B	5	1			5				
A-C	232	58			232				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:30 - 08:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:45 - 09:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

2038 with Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.27	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	117	Stream B-AC	0.27	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2038 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Ln (N)		ONE HOUR	✓	386	100.000
B - Site Access		ONE HOUR	✓	15	100.000
C - Lodge Ln (S)		ONE HOUR	✓	556	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Ln (N)	B - Site Access	C - Lodge Ln (S)
From	A - Lodge Ln (N)	0	15	371
	B - Site Access	9	0	6
	C - Lodge Ln (S)	536	20	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Ln (N)	B - Site Access	C - Lodge Ln (S)
From	A - Lodge Ln (N)	0	0	1
	B - Site Access	0	0	0
	C - Lodge Ln (S)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.04	9.43	0.0	0.5	A	14	21
C-AB	0.04	5.95	0.0	0.5	A	18	28
C-A						492	738
A-B						14	21
A-C						340	511

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	3	459	0.025	11	0.0	0.0	8.040	A
C-AB	15	4	666	0.023	15	0.0	0.0	5.526	A
C-A	404	101			404				
A-B	11	3			11				
A-C	279	70			279				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	13	3	434	0.031	13	0.0	0.0	8.567	A
C-AB	18	4	650	0.028	18	0.0	0.0	5.697	A
C-A	482	120			482				
A-B	13	3			13				
A-C	334	83			334				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	398	0.041	16	0.0	0.0	9.431	A
C-AB	22	6	627	0.035	22	0.0	0.0	5.951	A
C-A	590	148			590				
A-B	17	4			17				
A-C	408	102			408				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	398	0.041	17	0.0	0.0	9.433	A
C-AB	22	6	627	0.035	22	0.0	0.0	5.951	A
C-A	590	148			590				
A-B	17	4			17				
A-C	408	102			408				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	13	3	434	0.031	14	0.0	0.0	8.569	A
C-AB	18	4	650	0.028	18	0.0	0.0	5.697	A
C-A	482	120			482				
A-B	13	3			13				
A-C	334	83			334				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	3	459	0.025	11	0.0	0.0	8.046	A
C-AB	15	4	666	0.023	15	0.0	0.0	5.526	A
C-A	404	101			404				
A-B	11	3			11				
A-C	279	70			279				

Queue Variation Results for each time segment
16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.03	0.25	0.46	0.48			N/A	N/A
C-AB	0.04	0.03	0.25	0.45	0.48			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

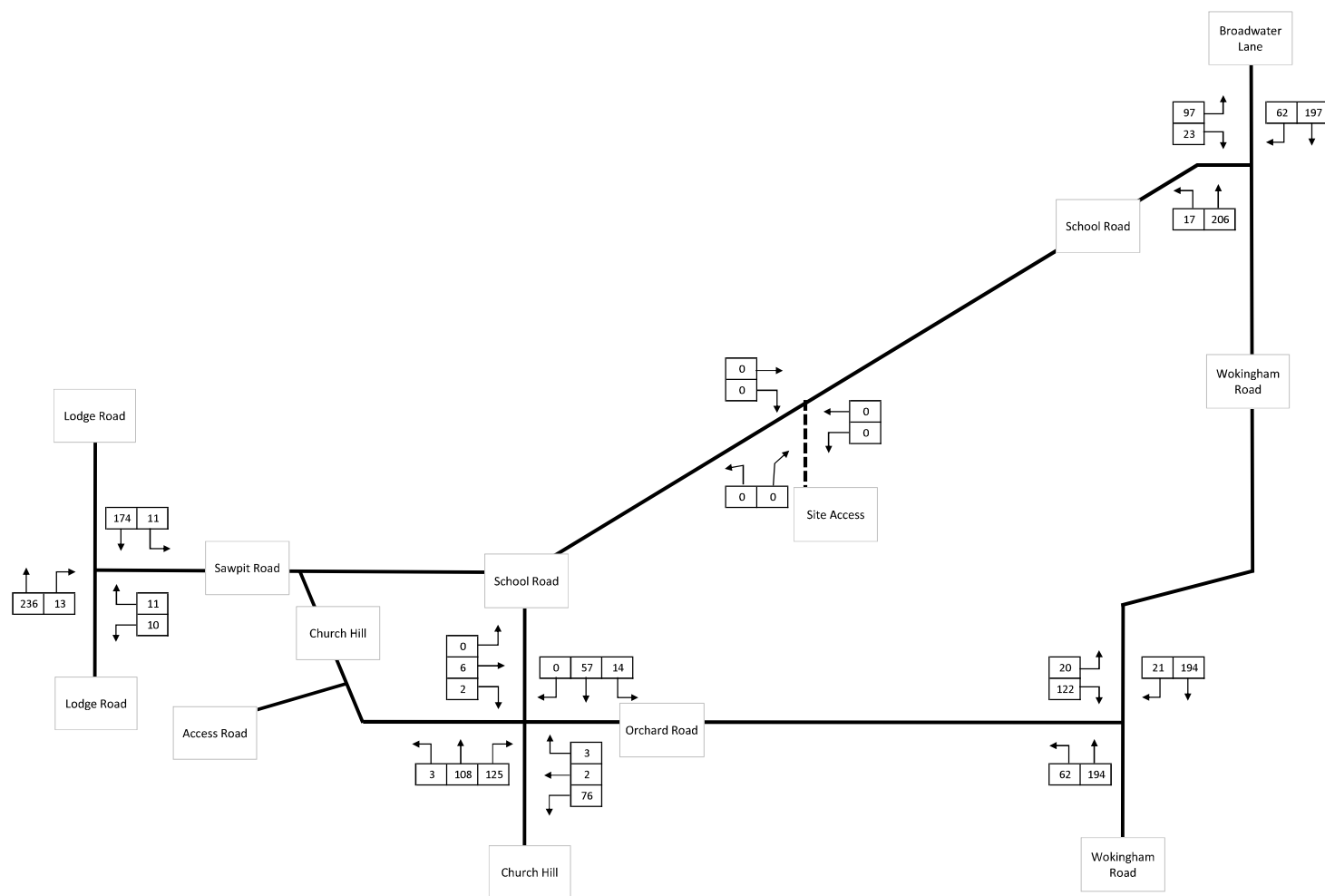
17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

APPENDIX I. Sawpit Road Sensitivity Test – Extracted Baseline Traffic Survey Data (Ref: 230074)



KEY 500 = AM PEAK (08:00-09:00) 500 = PM PEAK (16:45-17:45)	The Square, Basing View, Basingstoke, RG21 4EB Tel: 01256 637940 www.i-transport.co.uk
	Land North of Orchard Road, Hurst
	Figure 1.1
	2022 Observed Traffic Flows - AM Peak Hour

APPENDIX J. Sawpit Road Sensitivity Test – Junctions 10 Modelling Results

Junctions 10															
PICADY 10 - Priority Intersection Module															
Version: 10.1.0.1820															
© Copyright TRL Software Limited, 2023															
For sales and distribution information, program advice and maintenance, contact TRL Software:															
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com															
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution															

Filename: Lodge Road_Sawpit Lane (sensitivity test).j10

Path: T:\Projects\19000 Series\19328\TB - Tape Lane Hurst\Tech\Junction Assessments\Picady\i-Transport Updated Motion Models

Report generation date: 19/07/2024 12:45:39

»2026 with Dev, AM

»2026 with Dev, PM

»2038 with Dev, AM

»2038 with Dev, PM

Summary of junction performance

	AM								PM							
	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity
	2026 with Dev															
Stream B-AC	D3	0.1	0.5	8.00	0.06	A	0.59	275 %	D4	0.0	0.5	7.13	0.04	A	0.71	352 %
Stream C-AB		0.0	0.5	4.90	0.03	A		[Stream B-AC]		0.1	0.5	5.30	0.05	A		[Stream B-AC]
	2038 with Dev															
Stream B-AC	D7	0.1	0.5	8.15	0.06	A	0.60	248 %	D8	0.0	0.5	7.19	0.04	A	0.73	319 %
Stream C-AB		0.0	0.5	4.86	0.03	A		[Stream B-AC]		0.1	0.5	5.30	0.06	A		[Stream B-AC]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	02/02/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\basingstoke.hotdesk
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75	✓				✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2026 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2026 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D3	2026 with Dev	AM	ONE HOUR	07:45	09:15	15	✓
D4	2026 with Dev	PM	ONE HOUR	16:45	18:15	15	✓
D5	2038 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D6	2038 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D7	2038 with Dev	AM	ONE HOUR	07:45	09:15	15	✓
D8	2038 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	✓	D3,D4,D7,D8	100.000	100.000

2026 with Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.59	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	275	Stream B-AC	0.59	A

Arms

Arms

Arm	Name	Description	Arm type
A	Lodge Rd (N)		Major
B	Sawpit Rd		Minor
C	Lodge Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Lodge Rd (S)	5.95			165.9	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Sawpit Rd	One lane	3.48	18	16

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	515	0.094	0.237	0.149	0.339
B-C	664	0.102	0.258	-	-
C-B	670	0.260	0.260	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2026 with Dev	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	207	100.000
B - Sawpit Rd		ONE HOUR	✓	25	100.000
C - Lodge Rd (S)		ONE HOUR	✓	259	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
	From			
	A - Lodge Rd (N)	0	18	189
	B - Sawpit Rd	15	0	10
	C - Lodge Rd (S)	246	13	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
	From			
	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.06	8.00	0.1	0.5	A	23	34
C-AB	0.03	4.90	0.0	0.5	A	17	26
C-A						221	331
A-B						17	25
A-C						173	260

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	19	5	506	0.037	19	0.0	0.0	7.392	A
C-AB	13	3	749	0.017	13	0.0	0.0	4.892	A
C-A	182	45			182				
A-B	14	3			14				
A-C	142	36			142				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	22	6	494	0.046	22	0.0	0.0	7.638	A
C-AB	16	4	765	0.022	16	0.0	0.0	4.807	A
C-A	216	54			216				
A-B	16	4			16				
A-C	170	42			170				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	28	7	477	0.058	27	0.0	0.1	8.003	A
C-AB	22	5	788	0.028	22	0.0	0.0	4.696	A
C-A	263	66			263				
A-B	20	5			20				
A-C	208	52			208				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	28	7	477	0.058	28	0.1	0.1	8.005	A
C-AB	22	5	788	0.028	22	0.0	0.0	4.700	A
C-A	263	66			263				
A-B	20	5			20				
A-C	208	52			208				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	22	6	494	0.046	23	0.1	0.0	7.643	A
C-AB	16	4	765	0.022	17	0.0	0.0	4.812	A
C-A	216	54			216				
A-B	16	4			16				
A-C	170	42			170				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	19	5	506	0.037	19	0.0	0.0	7.396	A
C-AB	13	3	749	0.017	13	0.0	0.0	4.897	A
C-A	182	45			182				
A-B	14	3			14				
A-C	142	36			142				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.05	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

08:30 - 08:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

08:45 - 09:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

2026 with Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.71	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	352	Stream B-AC	0.71	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2026 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	221	100.000
B - Sawpit Rd		ONE HOUR	✓	17	100.000
C - Lodge Rd (S)		ONE HOUR	✓	185	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
From		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
	A - Lodge Rd (N)	0	9	212
	B - Sawpit Rd	6	0	11
	C - Lodge Rd (S)	158	27	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
From		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.04	7.13	0.0	0.5	A	16	23
C-AB	0.05	5.30	0.1	0.5	A	31	47
C-A						138	208
A-B						8	12
A-C						195	292

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	13	3	549	0.023	13	0.0	0.0	6.712	A
C-AB	24	6	704	0.035	24	0.0	0.0	5.292	A
C-A	115	29			115				
A-B	7	2			7				
A-C	160	40			160				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	15	4	538	0.028	15	0.0	0.0	6.880	A
C-AB	30	8	712	0.043	30	0.0	0.1	5.284	A
C-A	136	34			136				
A-B	8	2			8				
A-C	191	48			191				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	19	5	524	0.036	19	0.0	0.0	7.126	A
C-AB	39	10	722	0.054	39	0.1	0.1	5.273	A
C-A	164	41			164				
A-B	10	2			10				
A-C	233	58			233				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	19	5	524	0.036	19	0.0	0.0	7.126	A
C-AB	39	10	722	0.054	39	0.1	0.1	5.275	A
C-A	164	41			164				
A-B	10	2			10				
A-C	233	58			233				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	15	4	538	0.028	15	0.0	0.0	6.883	A
C-AB	30	8	712	0.043	30	0.1	0.1	5.288	A
C-A	136	34			136				
A-B	8	2			8				
A-C	191	48			191				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	13	3	549	0.023	13	0.0	0.0	6.713	A
C-AB	24	6	704	0.035	25	0.1	0.0	5.298	A
C-A	115	29			115				
A-B	7	2			7				
A-C	160	40			160				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.06	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.08	0.03	0.26	0.47	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

2038 with Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.60	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	248	Stream B-AC	0.60	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2038 with Dev	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	223	100.000
B - Sawpit Rd		ONE HOUR	✓	27	100.000
C - Lodge Rd (S)		ONE HOUR	✓	280	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	18	205
	B - Sawpit Rd	16	0	11
	C - Lodge Rd (S)	266	14	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.06	8.15	0.1	0.5	A	25	37
C-AB	0.03	4.86	0.0	0.5	A	19	29
C-A						238	357
A-B						17	25
A-C						188	282

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	502	0.041	20	0.0	0.0	7.472	A
C-AB	14	4	756	0.019	14	0.0	0.0	4.855	A
C-A	196	49			196				
A-B	14	3			14				
A-C	154	39			154				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	6	489	0.050	24	0.0	0.1	7.746	A
C-AB	18	5	773	0.024	18	0.0	0.0	4.765	A
C-A	233	58			233				
A-B	16	4			16				
A-C	184	46			184				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	7	471	0.063	30	0.1	0.1	8.153	A
C-AB	24	6	799	0.031	24	0.0	0.0	4.647	A
C-A	284	71			284				
A-B	20	5			20				
A-C	226	56			226				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	7	471	0.063	30	0.1	0.1	8.155	A
C-AB	24	6	799	0.031	24	0.0	0.0	4.649	A
C-A	284	71			284				
A-B	20	5			20				
A-C	226	56			226				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	6	489	0.050	24	0.1	0.1	7.748	A
C-AB	18	5	773	0.024	18	0.0	0.0	4.770	A
C-A	233	58			233				
A-B	16	4			16				
A-C	184	46			184				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	502	0.041	20	0.1	0.0	7.477	A
C-AB	14	4	756	0.019	14	0.0	0.0	4.858	A
C-A	196	49			196				
A-B	14	3			14				
A-C	154	39			154				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.05	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

08:30 - 08:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

08:45 - 09:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

2038 with Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Lodge Rd (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.73	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	319	Stream B-AC	0.73	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2038 with Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Lodge Rd (N)		ONE HOUR	✓	239	100.000
B - Sawpit Rd		ONE HOUR	✓	18	100.000
C - Lodge Rd (S)		ONE HOUR	✓	202	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	9	230
	B - Sawpit Rd	6	0	12
	C - Lodge Rd (S)	172	30	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Lodge Rd (N)	B - Sawpit Rd	C - Lodge Rd (S)
From	A - Lodge Rd (N)	0	0	0
	B - Sawpit Rd	0	0	0
	C - Lodge Rd (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.04	7.19	0.0	0.5	A	17	25
C-AB	0.06	5.30	0.1	0.5	A	36	53
C-A						150	225
A-B						8	12
A-C						211	317

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	14	3	548	0.025	13	0.0	0.0	6.735	A
C-AB	28	7	708	0.039	27	0.0	0.1	5.291	A
C-A	124	31			124				
A-B	7	2			7				
A-C	173	43			173				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	16	4	537	0.030	16	0.0	0.0	6.917	A
C-AB	34	9	716	0.048	34	0.1	0.1	5.285	A
C-A	147	37			147				
A-B	8	2			8				
A-C	207	52			207				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	521	0.038	20	0.0	0.0	7.186	A
C-AB	45	11	727	0.062	45	0.1	0.1	5.274	A
C-A	178	44			178				
A-B	10	2			10				
A-C	253	63			253				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	521	0.038	20	0.0	0.0	7.186	A
C-AB	45	11	727	0.062	45	0.1	0.1	5.274	A
C-A	178	44			178				
A-B	10	2			10				
A-C	253	63			253				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	16	4	537	0.030	16	0.0	0.0	6.921	A
C-AB	34	9	716	0.048	35	0.1	0.1	5.286	A
C-A	147	37			147				
A-B	8	2			8				
A-C	207	52			207				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	14	3	548	0.025	14	0.0	0.0	6.736	A
C-AB	28	7	708	0.039	28	0.1	0.1	5.298	A
C-A	124	31			124				
A-B	7	2			7				
A-C	173	43			173				

Queue Variation Results for each time segment
16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.07	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.10	0.03	0.26	0.47	0.54			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.10	0.00	0.00	0.10	0.10			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

APPENDIX K. Cycle Improvement Strategy Report
(ITB19328-003 TN)

Land at Tape Lane, Hurst: Proposed Cycle Improvement Scheme to Twyford Station

Ref: TW/BB/19328-003A TN
Date: 31 January 2024

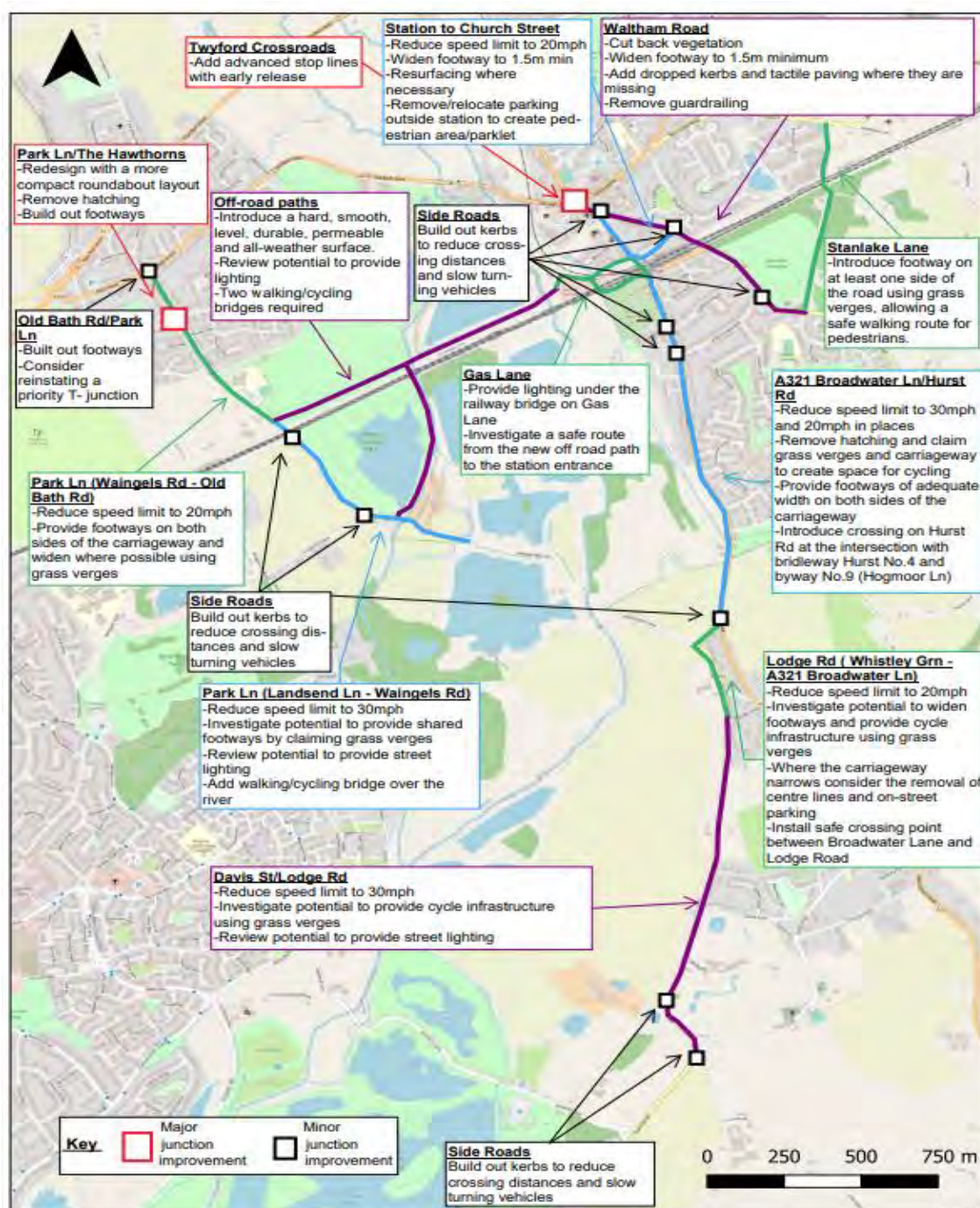
SECTION 1 Introduction

- 1.1 Mactaggart & Mickel Strategic Land (Mac & Mic) is considering options for its land interest at Tape Lane in Hurst. A recent pre-application meeting was held with WBC in relation to the Site.
- 1.2 The Site has a recent planning history, with a planning application submitted in February 2022 (*Ref: 220458*) for a development of up to 200 homes. The application was refused planning permission and was subsequently dismissed at Appeal in March 2023 for the following primary reasons:
- The scale of the scheme proposed was too large for Hurst to accommodate sustainably.
 - Inadequacy in sustainable connections to the wider area, including Twyford, and locally within Hurst village, leading to a lack of genuine travel choices.
 - The package of improvements was insufficient to ensure opportunities are taken up.
- 1.3 In recognition of the reasons for the dismissal of the earlier Appeal, a revised scheme is being considered which directly and positively responds to these matters and promotes a significant enhancement of the transport strategy offer. This includes providing a greatly improved sustainable transport offering, comprising substantial improvements to the existing infrastructure within Hurst as well as improving connections from the village towards Twyford and its railway station.
- 1.4 The purpose of this report is to share emerging feasibility designs for a cycle improvement scheme between Hurst and Twyford Railway Station, which is intended to form part of the comprehensive sustainable transport package that will be delivered alongside the revised development proposals. It is intended to establish the key principles of the improvement scheme with WBC at this early stage, noting the delivery constraints, to enable the scheme to be worked up more fully.

SECTION 2 WBC LCWIP Strategy – Hurst to Twyford

2.1 Wokingham Borough Council (WBC) published its Local Cycling and Walking Infrastructure Plan (LCWIP) in March 2023, which sets out its key walking and cycling strategy priorities. Appendix E of the document provides a series of Infrastructure Improvement Plans for locations across the Borough that it is prioritising for improvement. One such route identified in the WBC improvement strategy is the connection between Hurst and Twyford. The WBC LCWIP Strategy Plan is presented at **Image 2.1**.

Image 2.1: Infrastructure Improvement Plan – Hurst to Twyford



Source: Wokingham Borough Council LCWIP

2.2 The delivery of a pedestrian and cycle improvement scheme between Hurst and Twyford is an established long-term strategy aspiration of WBC, with LCWIP proposals set out to achieve:

- i Reduction in speeds along Lodge Road and investigate the delivery of cycle infrastructure, whether through off-road provision if space permits, or through removal of the centreline.
- ii Deliver an improvement to the existing Lodge Road / Broadwater Lane junction to provide a crossing point for pedestrians and cyclists.
- iii Remove the central hatching along Broadwater Lane / Hurst Road to provide space to deliver cycle infrastructure, alongside speed reduction measures.
- iv Crossing improvement on Hurst Road at intersection with Bridleways at Hurst 4 and Hurst 9.
- v Build out kerbs at side roads along Hurst Road / Blackwater Road to reduce crossing distances for pedestrians and slow vehicles.

2.3 This aligns with the key aims of WBC's emerging LTP4 which among other matters identifies:

- i An aspiration to improve active travel to, and interchange at Twyford Station
- ii Commitment to implementation of the LCWIP, including prioritisation of improvements in routes to Twyford.

SECTION 3 Baseline Conditions

3.1.1 To consider the implementation of any cycle improvement in line with the LCWIP aspirations, the following information was collected and considered.

- Highway boundary information
- Topographical survey data
- Accident analysis
- Traffic information
- Design guidance, including particularly WBC Living Streets, WBC LCWIP, MfS2 and LTN1/20.

3.2 Network Conditions

3.2.1 A summary of local network conditions within the vicinity of the site is presented in **Table 3.1**.

Table 3.1 – Key Street Characteristics

Road	Speed Limit (mph)	Road Width	Footway Provision	Street Lighting	Constraints
Lodge Road	30/40	c. 5.5-6.0m	• None within the vicinity of the site access • Adjacent to the 30mph speed limit transition, continuous footway provided on one or both sides of the carriageway	None	• Limited widths of highway verge • Private frontage adjacent to carriageway • Significant vegetation coverage in vicinity of carriageway
Broadwater Lane	30	c. 6.2m	• Continuous footway on the northern side of the carriageway	None	• Limited widths of highway verge • Private frontage adjacent to carriageway • Significant vegetation coverage in vicinity of carriageway and existence of drainage ditch

Road	Speed Limit (mph)	Road Width	Footway Provision	Street Lighting	Constraints
Hurst Road	30	c. 7.0-7.3m	Continuous on one or both sides of the carriageway	Well lit	- Frequent minor road access junctions - To the north of Wellington Close, limited highway available due to private frontage

3.2.2 Traffic data collection was carried out, is summarised in **Table 3.2** and comprises:

- ATC Surveys between 20th November 2023 and 26th November 2023 at the following locations:
 - Lodge Road (to the south of the proposed site access)
 - Lodge Road (to the north of the proposed site access)
 - Tape Lane
 - Broadwater Lane (adjacent to the existing Post Office / Shop)
 - Broadwater Lane (to the north of the Lodge Road / Broadwater Lane junction)
 - Hurst Road
 - Hurst Road (adjacent to Twyford Railway Station)
- MCC Survey on 21st November 2023 at the Lodge Road / Broadwater Lane priority junction.

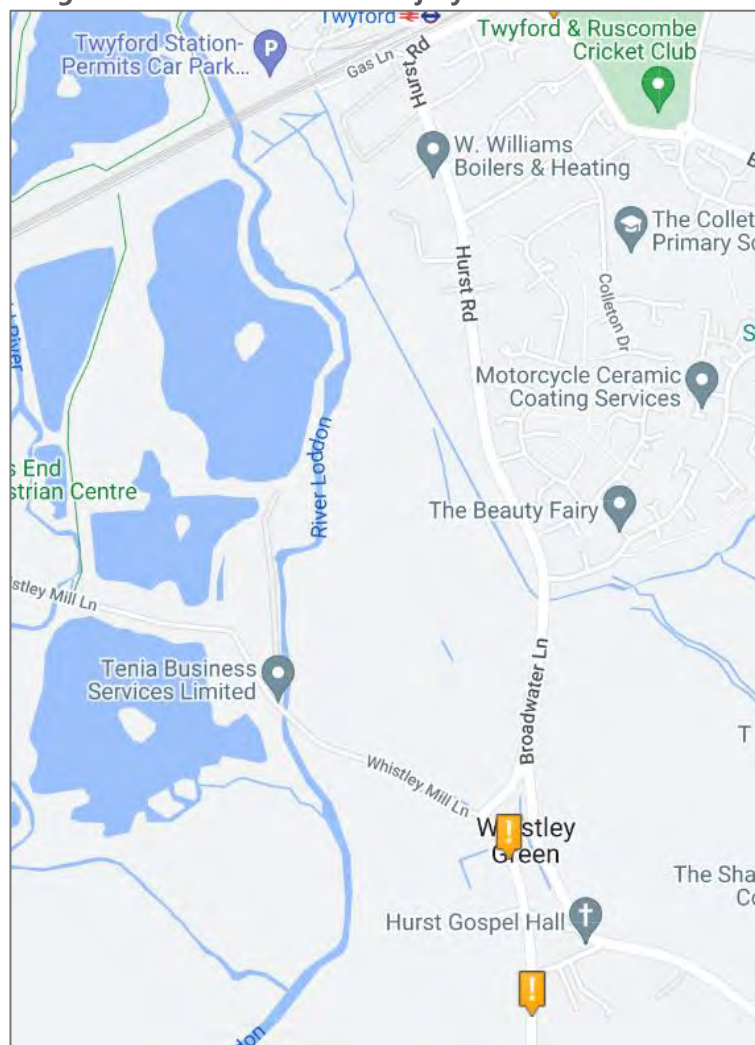
Table 3.2 – Local Traffic Conditions

Road	AM Peak Flow	PM Peak Flow	Daily Flow	HGV%	85 th ile Speed	Cycle Use (Daily Flow)
Lodge Road	105	98	4249	9%	41.8	26
Broadwater Lane (South of Broad Hinton)	170	162	7912	8%	40.2	65
Broadwater Lane (Near Hurst Shop)	78	70	3695	11%	34.1	38
Hurst Road	182	177	8283	7%	36.4	67

Source: Traffic Surveys (November 2023)

- 3.2.3 Accident data for the most recent five-year period has also been obtained from CrashMap. The study area included the length of proposed cycle improvement scheme, including Lodge Road, Broadwater Lane and Hurst Road between the application site and Twyford Railway Station.

Image 3.1: Extract of Personal Injury Accident Data



- 3.2.4 A total of two accidents were recorded within the most recent five-year period, with both incidents resulting in slight injuries being sustained. Both incidents occurred on Lodge Road, with one involving a pedestrian.
- 3.2.5 The number of accidents recorded is not atypical of roads and junctions within village locations and there is no common pattern or trend in the incidents. Overall, there is not considered to be any underlying road safety issues with the local highway network that need to be specifically addressed by the cycle improvement scheme proposals.

SECTION 4 Potential Cycle Improvement – Hurst to Twyford Station

4.1.1 The aspirations of the LCWIP have been considered closely to review how the LCWIP scheme could be delivered taking account of site constraints, notably highway availability, junction presence, traffic conditions, vegetation, structures, and utilities.

4.1.2 The improvement scheme presented for engagement is shown on the preliminary drawings enclosed within this report and is summarised in the following section. This would deliver a significant and material improvement in active travel connections between Hurst and Twyford and assist in achieving the Council's ambitions to achieve a shift in travel behaviour to active travel modes.

4.2 Route Summary

4.2.1 **Image 4.1** demonstrates the scope of improvement proposed, and **Table 4.1** reconciles this with key design guidance and considerations to demonstrate the proposed treatments are suitable.

Image 4.1 – Route Summary Diagram

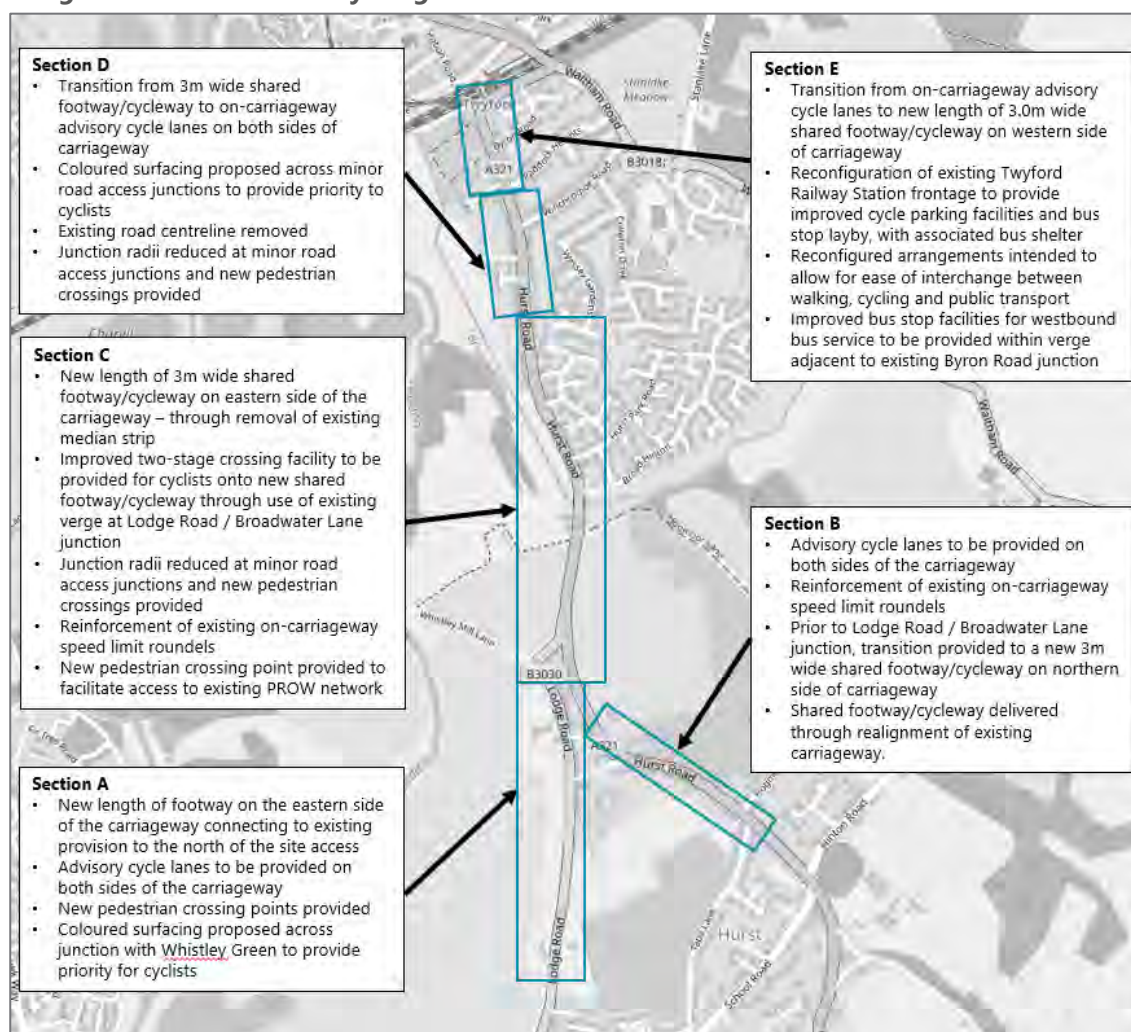


Table 4.1 – Route Summary and Design Reconciliation

Section	Improvement	Design Notes
A – Lodge Road	• New length of footway from the site access routing north along the eastern side of the carriageway. • Advisory on-carriageway cycle lanes on both sides of the carriageway • Removal of existing centreline • New pedestrian crossing points provided • Coloured surfacing to be provided across minor road access junctions to provide priority for cyclists	• Delivery of significant lengths of off-carriageway cycle improvements not feasible due to limited widths of highway verge and the presence of trees adjacent to the carriageway. • Advisory on-carriageway cycle lanes therefore preferred to ensure a continuous improvement scheme along the length of Lodge Road • The delivery of advisory cycle lanes in this location is in accordance with the design principles of LTN 1/20 for 'mixed traffic' in village locations, i.e. where daily vehicle flows are below 5,000¹ (see Table 3.2)
B – Broadwater Lane	• Advisory on-carriageway cycle lanes on both sides of the carriageway • Coloured surfacing to be provided across minor road access junctions to provide priority for cyclists • Reinforcement of existing on-carriageway speed limit roundels • Prior to Lodge Road / Broadwater Lane junction, transition to a new 3m wide shared footway/cycleway on the northern side of the carriageway	• Delivery of off-carriageway cycle improvements not feasible due to limited widths of highway verge, presence of trees and residential frontage. • Advisory on-carriageway cycle lanes therefore preferred (as above) • Where widths of highway verge increase, transition to a new shared use footway/cycleway is provided as an off-carriageway facility • As above for Lodge Road, advisory cycle lanes in this location is in accordance with the principles of LTN 1/20

¹ Reference: Paragraph 7.1.4 of LTN 1/20

Section	Improvement	Design Notes
C – Hurst Road (Part A)	- New length of 3m wide shared footway/cycleway on eastern side of carriageway. Delivered through removal of median strip - Improved cycle crossing facility provided at Lodge Road / Broadwater Lane junction through use of existing verge - Junction radii reduced at minor road access junctions to improve cycle priority - New pedestrian crossing provided to facilitate access to existing PROW network - Reinforcement to existing on-carriageway speed limit roundels	- Removal of the existing median strip, in combination with subtle carriageway narrowing (maintaining a 6.0m width) allows for the delivery of a significant length of off-carriageway shared footway/cycle route - Hurst Road is subject to a 30mph speed limit and therefore the delivery of an off-carriageway shared use footway/cycleway in this location is in accordance with the principles set out for 'light segregation' within Figure 4.1 of LTN 1/20 - The delivery of a shared use route with a minimum width of 3.0m is also compliant with LTN 1/20, i.e. cyclist flows are expected to be less than 300 per hour²
D – Hurst Road (Part B)	- Transition to advisory on-carriageway cycle lanes within the vicinity of the Wellington Close junction - Existing road centreline removed. - Junction radii reduced at minor road access junctions to improve cycle priority - Coloured surfacing provided across minor road access junctions to give priority to cyclists	- Delivery of off-carriageway cycle improvements not feasible due to limited widths of highway verge, presence of trees and residential frontage. - Advisory on-carriageway cycle lanes therefore preferred
E – Hurst Road (Part C)	- Transition from advisory on-carriageway cycle lanes to new length of 3m wide shared footway/cycleway on western side of Hurst Road - Reconfiguration of existing Twyford Railway Station frontage to provide improved cycle parking and bus stop layby, with associated shelter - Reconfigured arrangements provided to enhance interchange between cycling and public transport - Improved bus stop facilities for westbound bus services, including new bus shelter adjacent to Bryon Road junction	- Delivery of off-carriageway cycle improvements through use of highway verge - Twyford Railway Station frontage improvements delivered through use of additional highway land - Hurst Road is subject to a 30mph speed limit and therefore the delivery of an off-carriageway shared use footway/cycleway in this location is in accordance with the principles set out for 'light segregation' within Figure 4.1 of LTN 1/20.

² Ref: Table 6-3 of LTN 1/20

4.3 Design Concept Descriptions

Lodge Road

- i Advisory on-carriageway cycle lanes³ on both sides of the carriageway would be provided, leading towards the existing junction with Broadwater Lane alongside centreline removal. Land constraints limit the ability deliver an off-road improvement here with inconsistent and insufficient verges, boundary treatments and private property accesses present. Where the cycle lanes cross existing minor road access junctions, these would be improved to provide enhanced priority for pedestrians and cyclists through junction treatments.
- ii The use of an area of verge at the junction of Lodge Road with Broadwater Lane to deliver a two-stage crossing for cyclists onto a new 3.0m wide off-road shared footway/cycleway on the eastern side of Broadwater Lane. The expected usage of the route would support shared use in line with LTN 1/20 (<300 cyclists per hour), also noting space constraints and rural nature.

Broadwater Lane

- i South of the junction with Lodge Road, the realignment of the western kerblin on Broadwater Lane is used to deliver a 3.0m wide shared use footway/cycleway (see footnote 1) on the eastern side of the carriageway, whilst maintaining a 6.0m carriageway width and respecting the significant vegetation and drainage ditch present on the eastern side of the road.
- ii North of the junction with Lodge Road, the removal of the existing median strip along the Hurst Road carriageway to continue the 3.0m wide shared footway/cycleway north towards Twyford as a consistent inter-urban cycle route whilst maintaining a 6m road width.
- iii Reinforcement of existing traffic calming measures, including the repainting of the existing 30mph speed limit roundels, alongside road narrowing will aid speed reduction aspirations.
- iv Provision of a formal pedestrian crossing point on Broadwater Lane to provide access to Bridleway no. 4 and Byway No. 6 in line with LCWIP objectives.

Hurst Road

- i Amendments to junction radii of minor road access junctions, along with introduction of coloured surfacing, to improve crossing for pedestrians and cyclists and enhance priority, whilst also slowing vehicle speeds.

³ Compliant with the guidance provided in LTN 1/20 for 'mixed traffic' conditions. The characteristics of Hurst Road and Broadwater Lane (see Table 3.1 and 3.2) ensure that the delivery of a shared use facility is also in compliance with the principles set out in Figure 4.1 of LTN 1/20

- ii Advisory on-carriageway cycle lanes on both sides of Hurst Road, commencing at the existing Wellington Close junction and continuing towards Twyford Railway Station. Space limitations (private residential boundaries fronting tight to the footway) limit off-road provision potential.

Twyford Railway Station

- iii Reconfiguration of the existing Twyford Railway Station frontage to deliver a 3.0m wide shared footway/cycleway leading to a cycle/bus interchange comprising:
 - (a) Improved pedestrian facilities and accessibility to Twyford Railway Station.
 - (b) Improved cycle parking facilities.
 - (c) An improved bus layby, with associated bus shelter and waiting facilities.

4.3.2 The improvement scheme delivers on WBC's long-term aspirations for the local area (as set out in the LCWIP / emerging LTP4) and provides a significant betterment to existing pedestrian/cycle infrastructure, making travel between Hurst and Twyford materially more attractive and safer.

4.3.3 The delivery of the scheme alongside the development proposals would represent a substantial benefit by delivering infrastructure priorities that are not otherwise likely to come forward in the short term and will serve to ensure that there are genuine (and attractive) opportunities to travel by active modes between Hurst and Twyford for a range of journey purposes, including as part of onward journeys via national rail services.

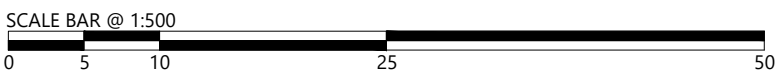
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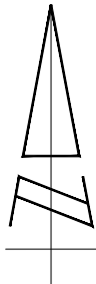
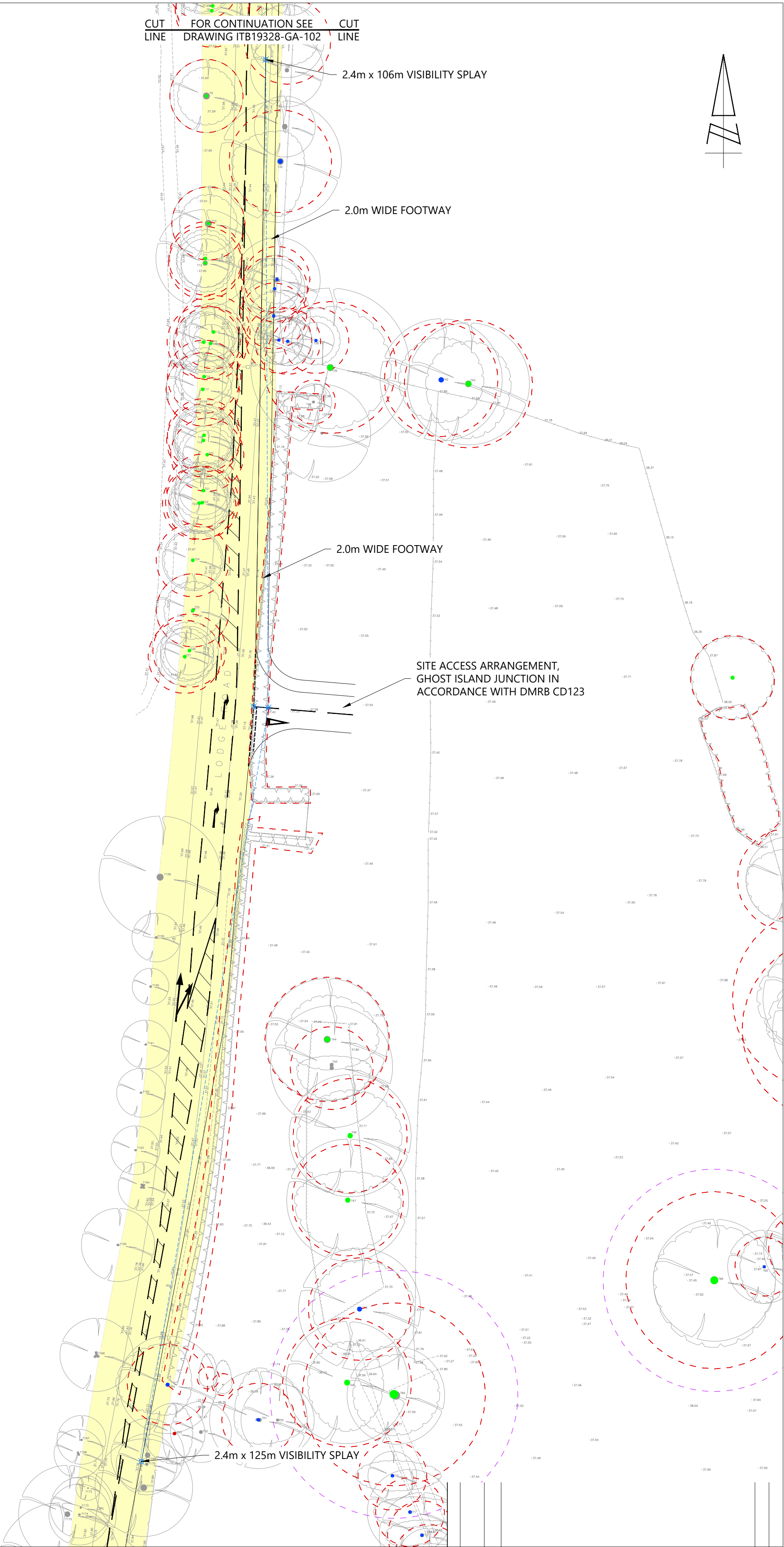
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ADVISORY CYCLE LANE

5.9m

EXISTING FOOTWAY

LTN 1/20 ON-CARRIAGEWAY
ADVISORY CYCLE LANE

END OF EXISTING FOOTWAY

COLOURED SURFACING TO
ENHANCE PRIORITY FOR CYCLISTS

PEDESTRIAN CROSSING WITH
DROPPED KERBS AND TACTILE PAVING

PEDESTRIAN CROSSING WITH
DROPPED KERBS AND TACTILE PAVING

LTN 1/20 ON-CARRIAGEWAY
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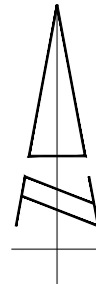
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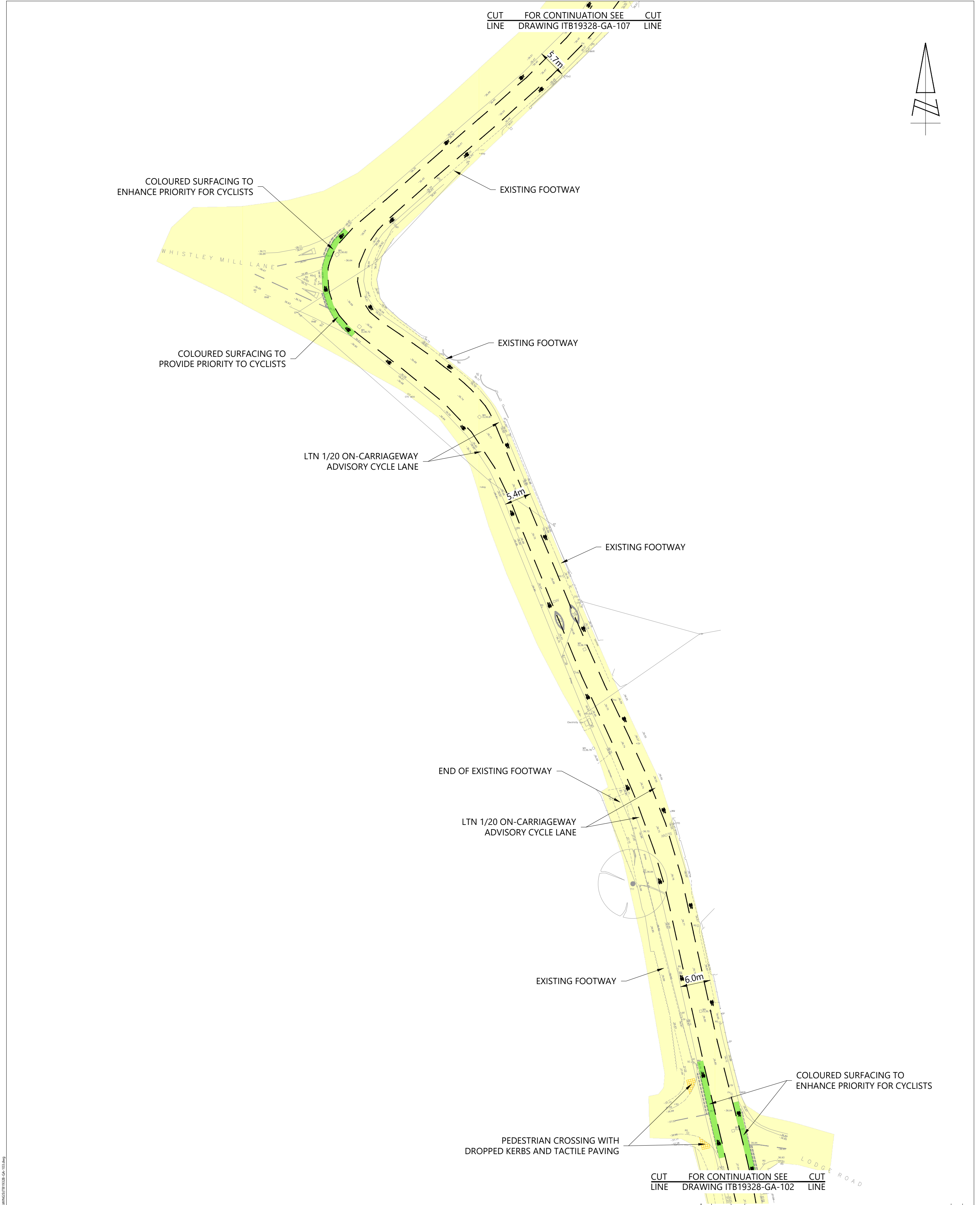
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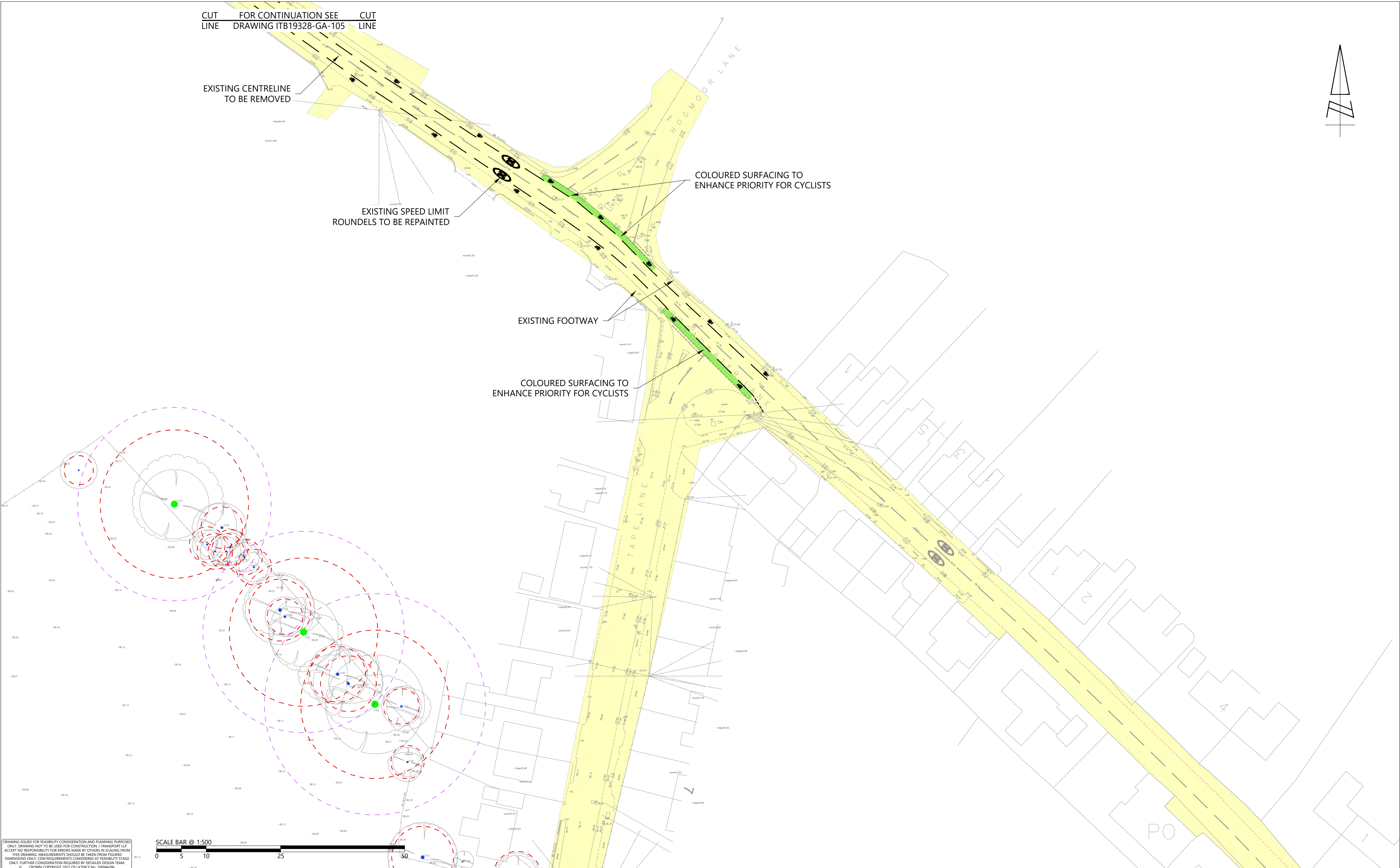
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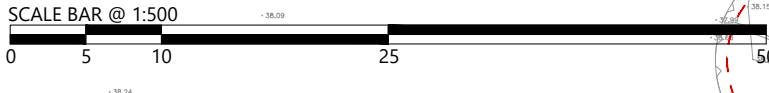
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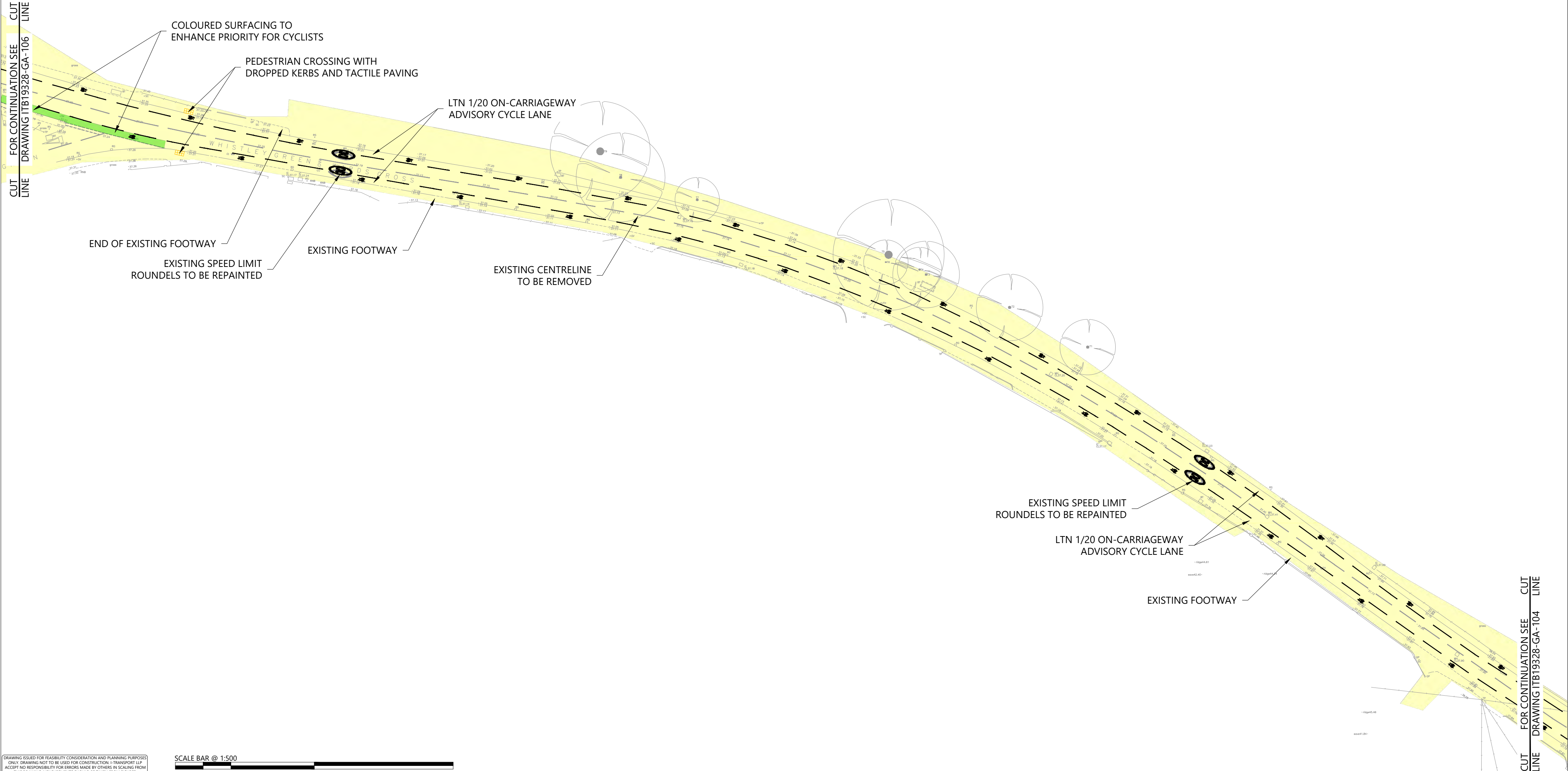
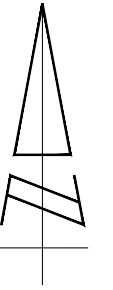
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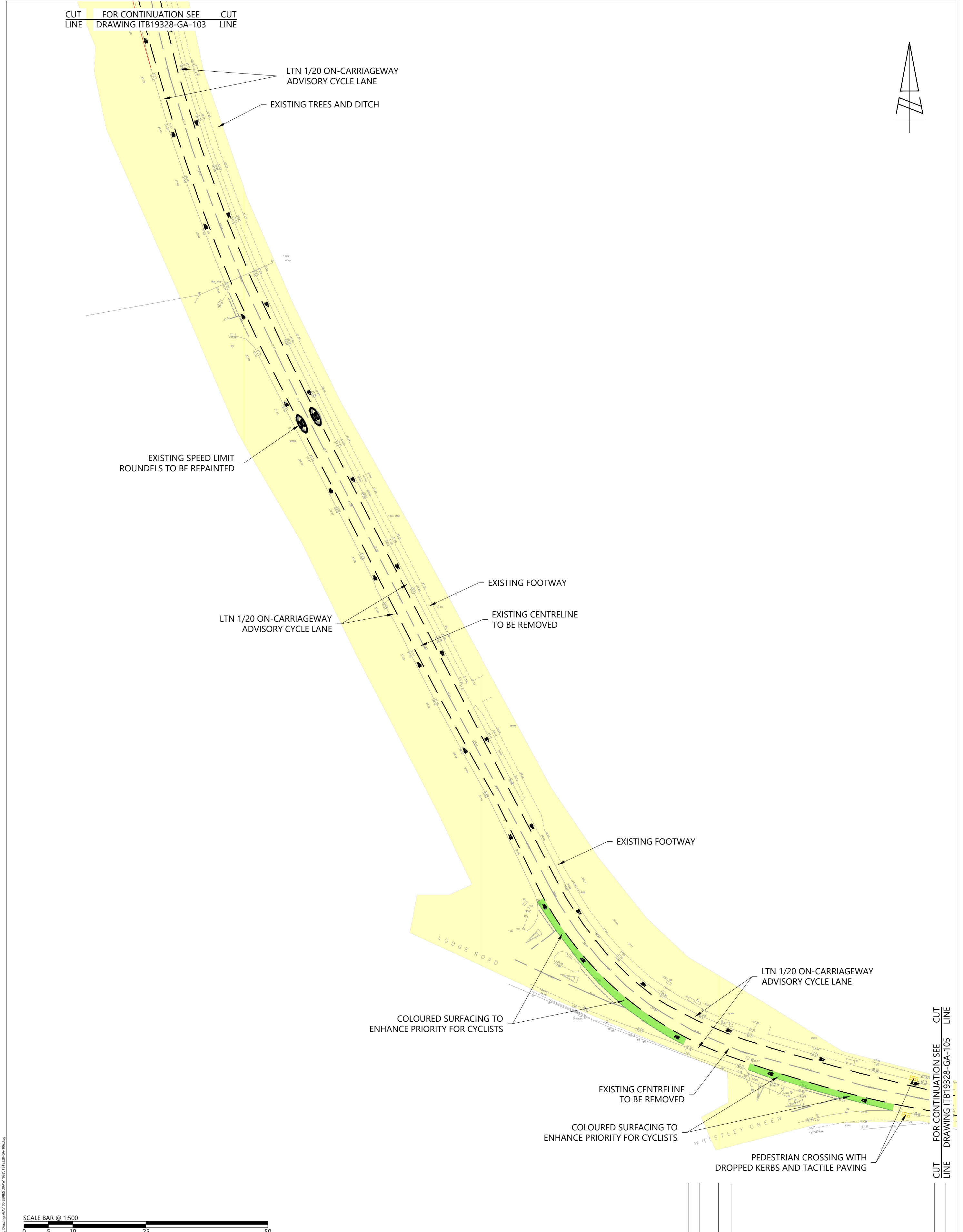
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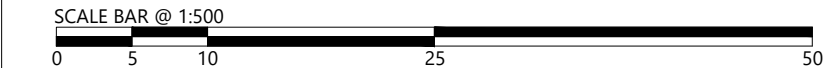
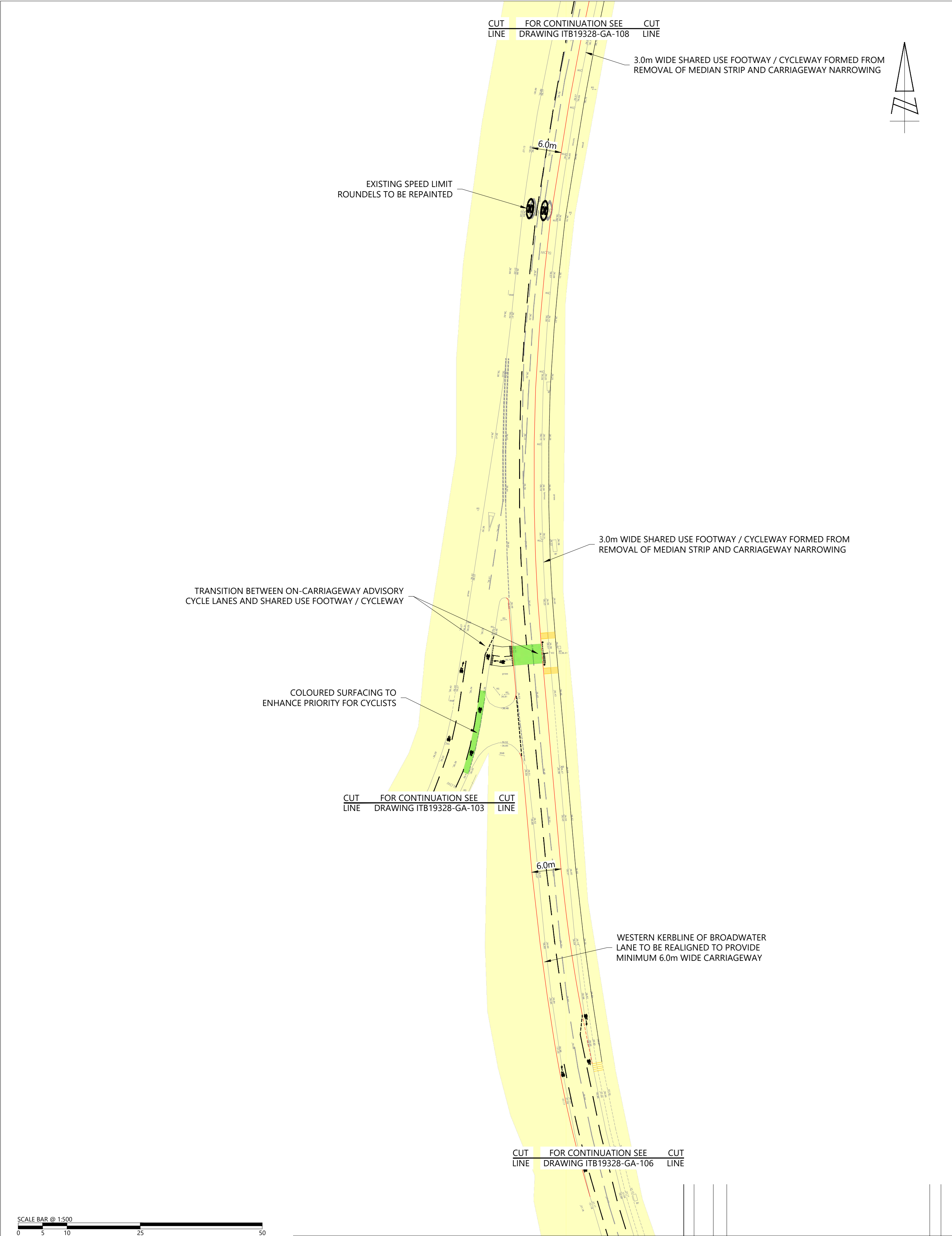


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3.0m WIDE SHARED USE FOOTWAY / CYCLEWAY FORMED FROM
REMOVAL OF MEDIAN STRIP AND CARRIAGEWAY NARROWING

PEDESTRIAN CROSSING WITH BOLLARDS,
DROPPED KERBS AND TACTILE PAVING
TO PROVIDE ACCESS TO BRIDLEWAY

INDICATIVE ALIGNMENT
OF BRIDLEWAY

EXISTING SPEED LIMIT
ROUNDELS TO BE REPAINTED

WESTERN KERBLINE OF BROADWATER
LANE TO BE REALIGNED TO PROVIDE
MINIMUM 6.0m WIDE CARRIAGEWAY

EXISTING SPEED LIMIT
ROUNDELS TO BE REPAINTED

COLOURED SURFACING AND GIVE WAY LINES SET BACK
TO PROVIDE PRIORITY TO CYCLISTS AND PEDESTRIANS

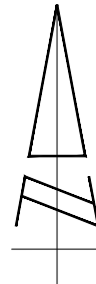
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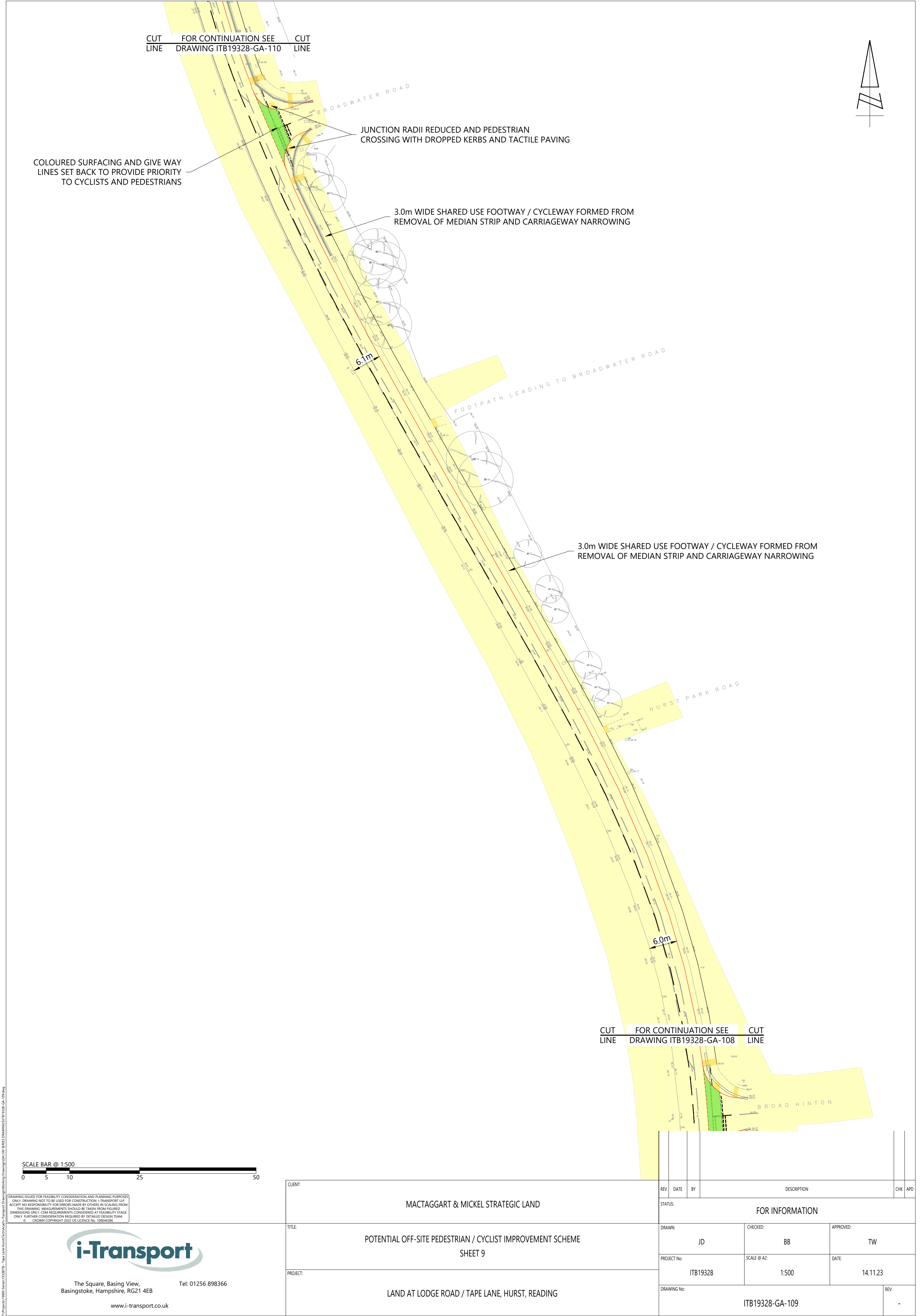
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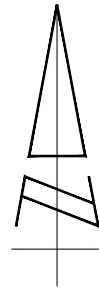
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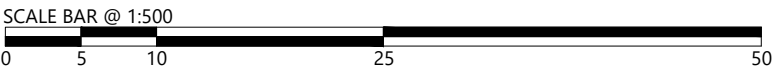
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CROSSING WITH DROPPED KERBS AND TACTILE PAVING

COLOURED SURFACING AND GIVE WAY
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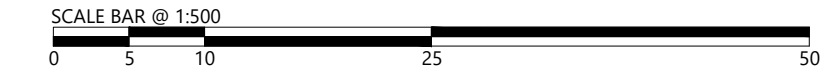
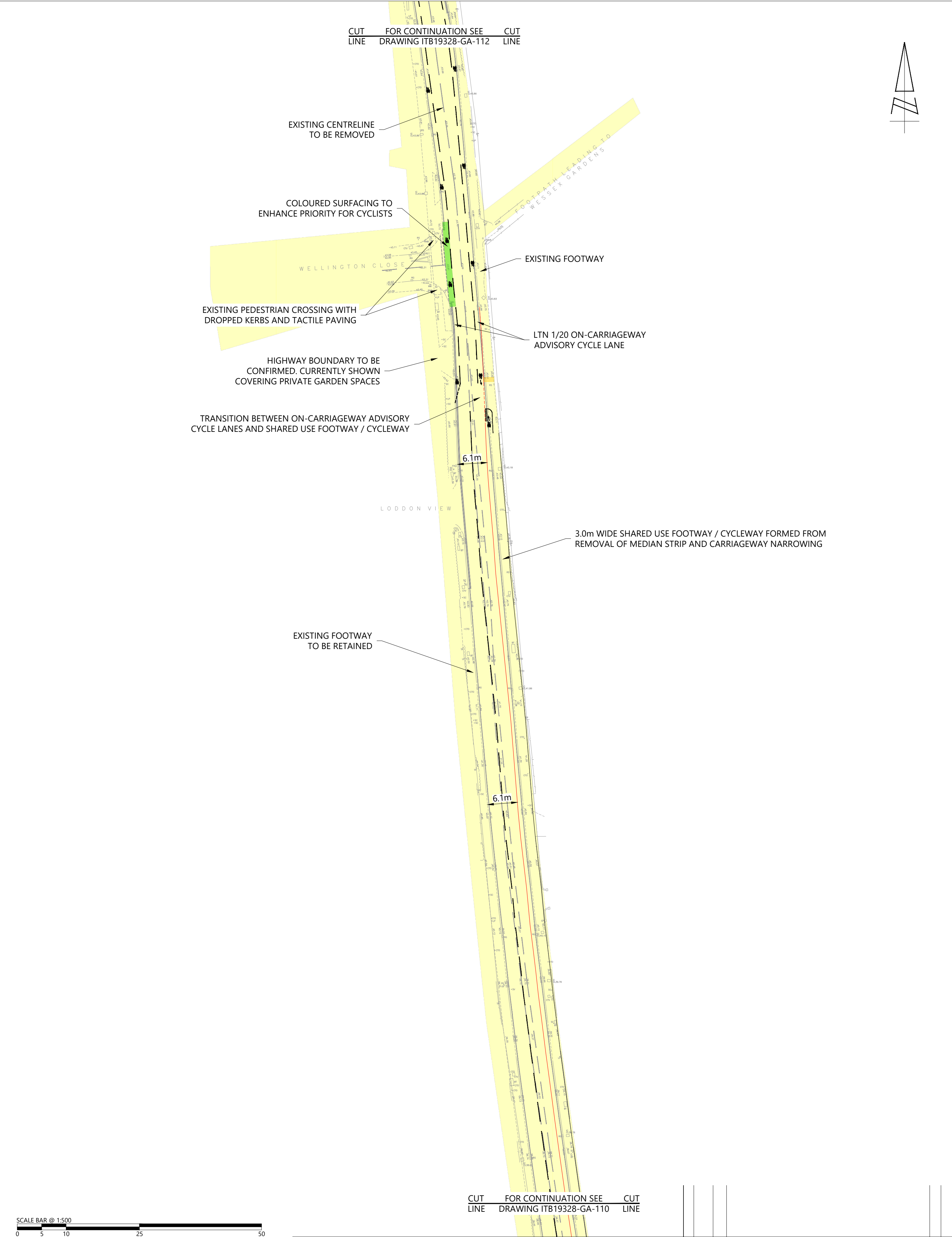


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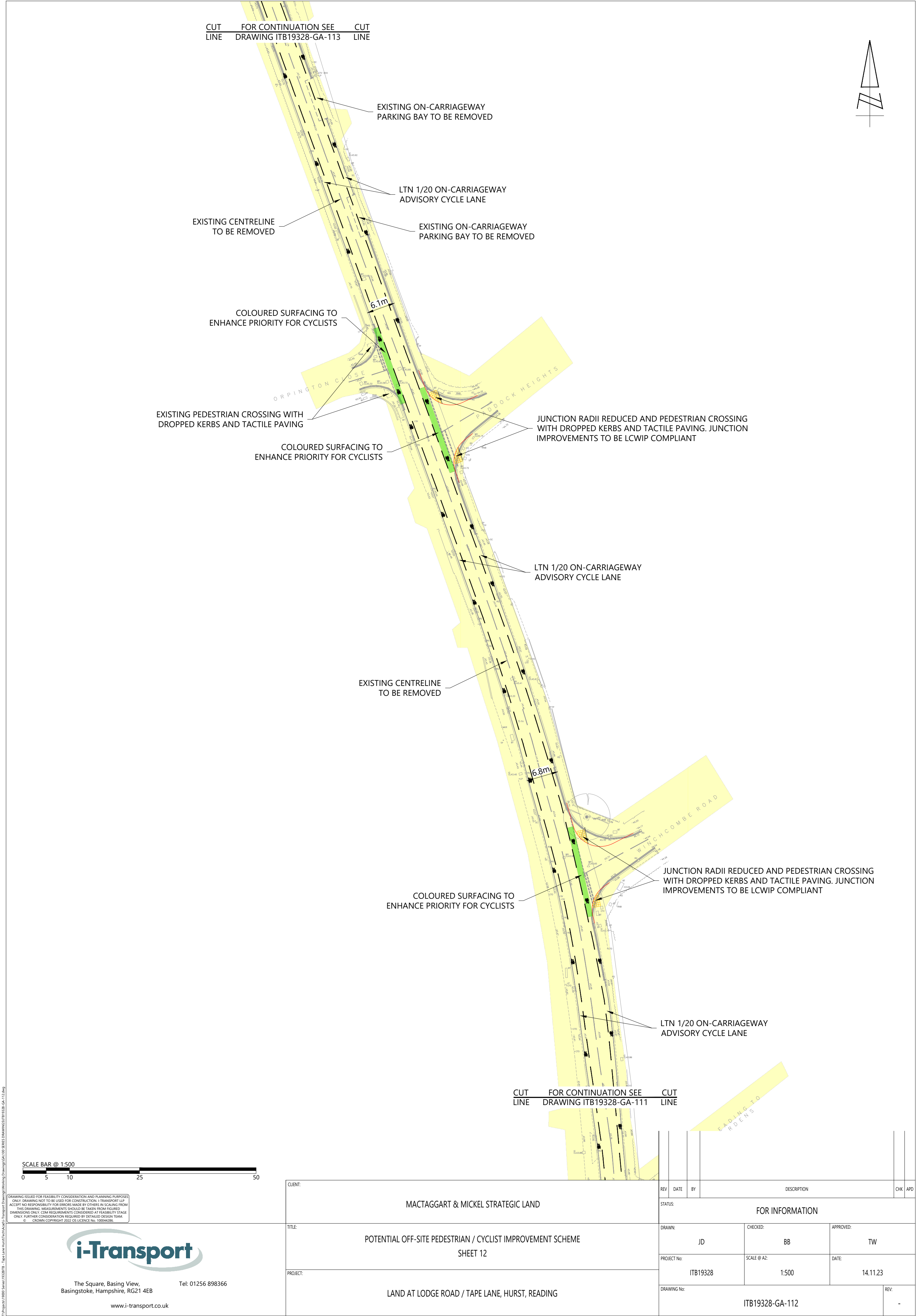
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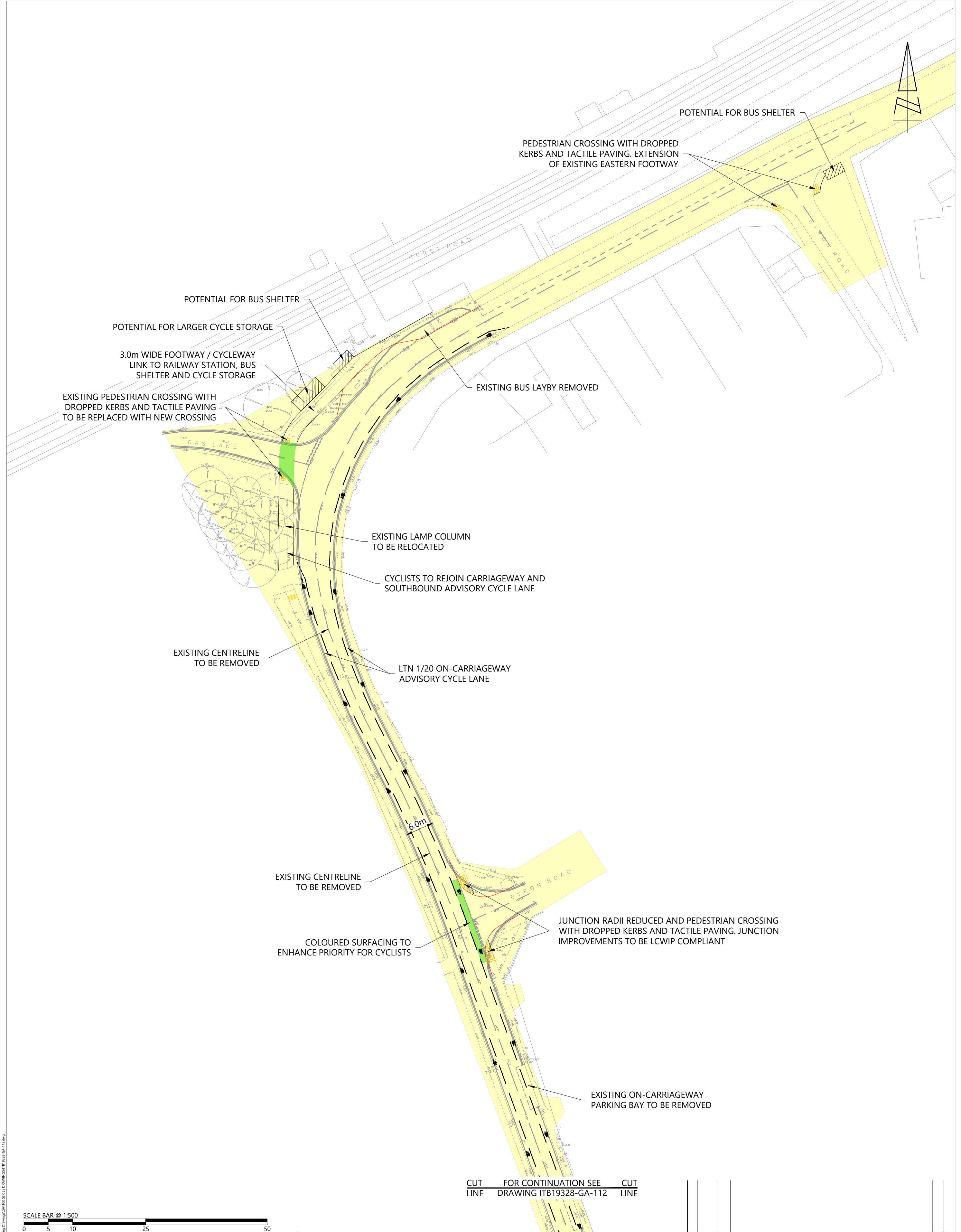
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PROJECT:

LAND AT LODGE ROAD / TAPE LANE, HURST, READING

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APPENDIX L. WBC Pre-Application Note

APPENDIX M. Public Transport Improvement
Strategy Report (ITB19328-004 TN)

Land East of Lodge Road, Hurst: Proposed Bus Improvement Strategy

Ref: TW/BB/19328-004A TN
Date: 25 July 2024

SECTION 1 Introduction

- 1.1 Mactaggart and Mickel Strategic Land (Mac Mic) is considering options for its land interest at Tape Lane in Hurst. A pre-application meeting was held with WBC in December 2023 in relation to the Site.
- 1.2 The Site has a recent planning history, with a planning application submitted in February 2022 (*Ref: 220458*) for a development of up to 200 homes. The application was refused planning permission and was subsequently dismissed at Appeal in March 2023 for the following primary reasons:
- The scale of the scheme proposed was too large for Hurst to accommodate sustainably.
 - Inadequacy in sustainable connections to the wider area, including Twyford, and locally within Hurst village, leading to a lack of genuine travel choices.
 - The package of improvements was insufficient to ensure opportunities are taken up.
- 1.2.1 In recognition of the reasons for the dismissal of the earlier Appeal, a revised scheme is being considered which directly and positively responds to these matters and promotes a significant enhancement of the sustainable transport offer. This includes providing a comprehensive bus improvement strategy to improve bus connections from the village towards Twyford to the north (and its railway station).
- 1.2.2 The purpose of this report is to share the potential options for a bus improvement strategy that will be delivered alongside the development proposals. The options set out are intended to inform wider discussions with WBC on this matter at this early stage.

SECTION 2 **Bus Improvement Strategy - Background**

2.1 **Introduction**

2.1.1 This section of the report sets out the context for the bus improvement strategy, including key aims and objectives of the strategy.

2.2 **Wokingham Bus Service Improvement Plan 2 (2023-2040)**

2.2.1 The WBC Bus Service Improvement Plan was updated in January 2023 and provides a long-term strategy for the transformation of the Boroughs' bus network. The document sets out a number of key objectives, including:

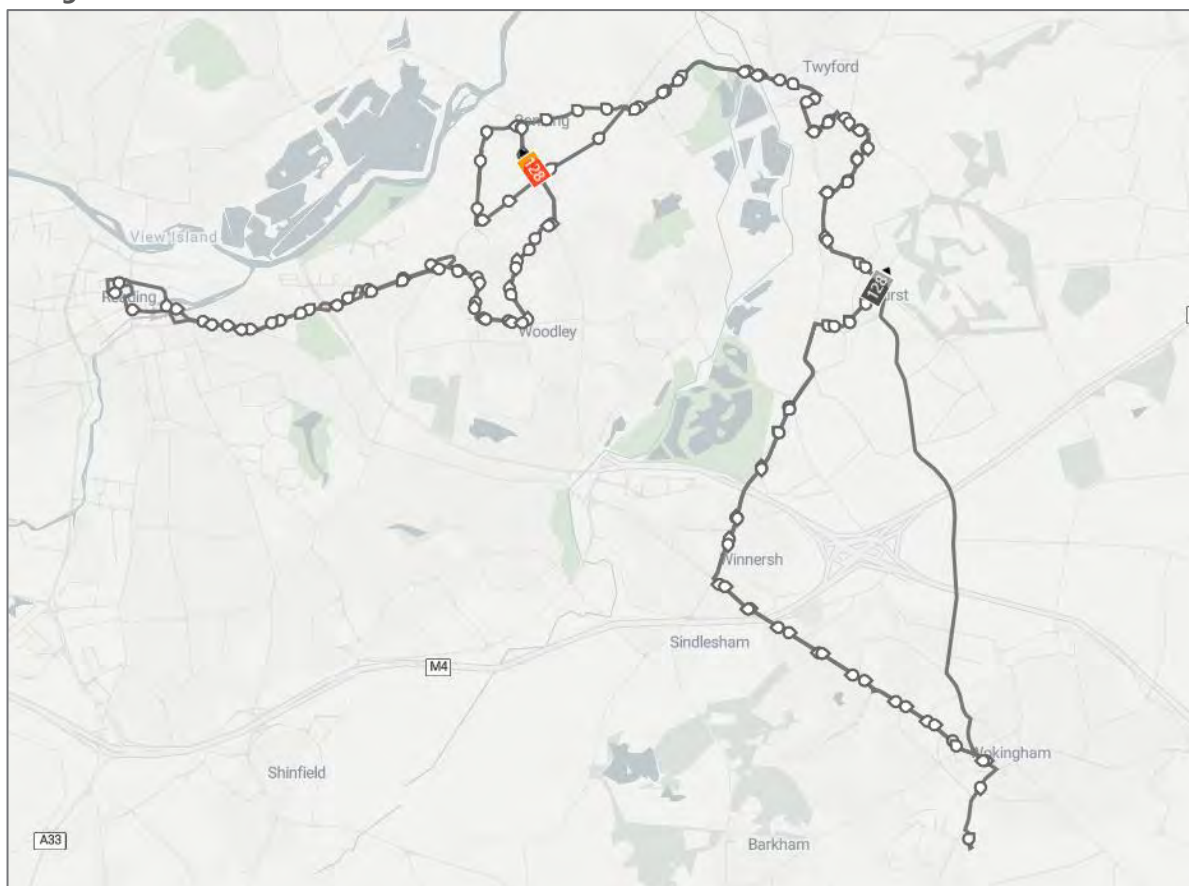
- To grow passenger numbers to pre-pandemic levels and continue that growth.
- To improve bus journey times, reliability and punctuality.
- To improve bus integration with rail passengers, cyclists, pedestrians and car drivers.
- To improve accessibility to transport services and the local bus network for communities in more rural and low-density areas.

2.2.2 The document also makes it clear that funding for all Council services is challenging, and that the delivery of the plan will be subject to suitable funding being secured. The proposed development at the application site in Hurst therefore offers a significant opportunity to assist WBC in the delivery of their Bus Service Improvement Plan. Specifically, the delivery of the key objectives listed above.

2.3 **Existing Bus Provision in Hurst**

2.3.1 The village of Hurst is served by the existing 128/129 bus service. The service is operated under tender by Thames Valley Buses (TVB) and connects Reading and Wokingham via Woodley, Twyford and Hurst (**Image 2.1**).

Image 2.1: Bus Service No. 128/129 Route



Source: Bustimes.org

- 2.3.2** The service operates hourly Monday to Friday and once every 2 hours on a Saturday. TVB operate 2 vehicles (3 during the peaks) along the route to provide a roughly 70-minute headway. A timetable indicating the operation of the existing 128/129 bus service from the nearby bus stops on Broadwater Lane in Hurst (within close vicinity of the site) is presented in **Table 2.1**.

Table 2.1: Summary of Bus Services and Frequency

Route	Destination	Service Frequency		
		Weekday	Saturdays	Sundays
128 / 129	Wokingham – Winnersh – Hurst – Twyford – Woodley – Reading	First service at 07:23 then every 65 minutes between 09:32 and 14:59	Hourly service between 08:41 and 09:38, then circa every two hours until 17:21	No service
	Reading – Woodley – Twyford – Hurst – Winnersh – Wokingham	Service every hour between 09:09 until 19:27	Service every two hours between 10:08 and 18:25	No service

Source: Bustimes.org

2.3.3 The existing 128/129 bus service provides an important connection to key destinations, including:

Within Reading

- Reading town centre;
- Reading College;

Within Twyford

- Twyford town centre;
- Twyford Railway Station;

Within Hurst

- Colleton Primary School;
- Hurst Bakery and Village Shop;
- St Nicholas CE Primary School;

Within Winnersh and Wokingham

- The Forest School and Sixth Form;
- The Emmbrook Secondary School and Sixth Form;
- The Holt Secondary School;
- Winnersh town centre; and
- Wokingham town centre.

2.3.4 Two separate meetings have been held with Thames Valley Buses to discuss the operation of the existing 128/129 service, which identified the following key issues:

- i The service is not commercially viable and relies on significant subsidy from WBC. TVB suggest that this subsidy equates to approximately half of the overall operating costs of the service, which are c. £500k p/a (so £250k p/a subsidy).
- ii The service faces various constraints and network issues which impact its reliability, including:
 - (a) Congestion in Reading and Sonning Bridge, as well as some delays at the Twyford Crossroads.
 - (b) Ongoing roadworks along the route, in particular at the Cemetery junction in Reading.
 - (c) Poor waiting facilities at Twyford Railway Station.
- iii Patronage in Hurst is relatively low at approximately 2-3% and this number is supported by concessionary fare passengers. The introduction of Crossrail at Twyford has increased bus demand, as have the application of £2 fares, but patronage remains below the national average (c. 5%). TVB's view is that a wider demographic brought about by a mixed housing development could increase patronage in Hurst.
- iv Despite these issues, the core 128/129 service is considered one of the better subsidised routes and TVB's view is that WBC are keen to maintain / improve the service.

2.3.5 The above key issues provide a significant opportunity to deliver a comprehensive bus improvement scheme as part of the development proposals at the application site to strengthen bus provision and infrastructure within Hurst and secure a long-term sustainable solution.

2.3.6 As set out above, this improvement strategy would form part of the wider comprehensive sustainable transport package that will be delivered alongside the proposed development at the application site. This wider strategy includes proposals to deliver a cycle route to Twyford Railway Station and implement improved bus waiting facilities at the station. Initial proposals for these improvements are set out in i-Transport report no. **ITB19328-003A TN**.

2.4 Goals and Objectives

2.4.1 As part of the comprehensive improvement strategy for bus services and infrastructure within Hurst, the scheme will look to deliver improved connectivity to:

- 1 Rail Services at Twyford Railway Station – including infrastructure improvements to the existing bus waiting facilities.
- 2 Local Schools.
- 3 Local facilities and services within Twyford.

Improved Connectivity to Railway Services

2.4.2 Twyford Railway Station is a critical local service hub and provides rail services to key destinations including London, Oxford, Reading, Southampton Central and Basingstoke. Following the implementation of Crossrail (the Elizabeth Line) the station now operates over 5 services per hour to London and Reading.

2.4.3 A summary of these services and the average journey times to each destination is presented in **Table 2.2**.

Table 2.2: Summary of Rail Services and Frequency

Station	Destination	Frequency		Average Journey Duration
		Peak	Off-Peak	
Twyford	London Paddington	6	5-6	25-40 minutes
	Oxford	3	4	44 minutes
	Reading	6	4	9 minutes
	Southampton Central	2	2	1 hours 20 minutes
	Basingstoke	3	3	41 minutes

Source: Trainline

2.4.4 Whilst the existing 128/129 bus route provides a connection to Twyford Railway Station from Hurst, only a single service currently departs from the village during the traditional morning commuter periods, arriving at Twyford Railway Station at 07:34. The existing 128/129 bus service timetable therefore currently limits the opportunities for residents within Hurst to access numerous railway services to onward destinations as part of a longer commute.

2.4.5 A key aim will therefore be to deliver an improvement strategy that provides more opportunities for residents of Hurst to align their bus journeys with onward rail services to key destinations, i.e. to London and Reading. This will provide a significant betterment to the public transport offering within Hurst and will provide genuine opportunities for residents to travel long distances to key locations by sustainable modes.

Improved Connectivity to Local Schools

2.4.6 Wokingham does not provide a singular catchment school for each location within the Borough. Instead, various designated areas for schools overlap one another, with parents able to choose from numerous schools.

2.4.7 The site within Hurst is located within the designated area / catchment of 8 primary schools, the nearest of which is St Nicholas CE Primary School. The school is located some 450m to the southeast of the site on School Road and is therefore accessible within a comfortable walking distance.

2.4.8 The site is also located within the designated area / catchment of 6 secondary schools. These schools include The Piggott CE School in Twyford and four further schools in Winnersh / Wokingham area.

2.4.9 As set out above, the existing 128/129 bus service routes within the vicinity of a number of these catchment schools. A summary of the available bus services to local schools in relation to school start and finish times is presented in **Table 2.3**.

Table 2.3: Existing 128/129 Bus Service Connections to Local Secondary Schools

School	School Times		Outbound	Inbound	Cycle Distance	Walk from Bus Stop
	Start	Finish				
Forest School (Boys)	08:30	15:00	07:54	15:45	<1 minute	2 minutes (200m)
Emmbrook School	08:25	14:55	07:54	15:34	3 minutes	10 minutes (800m)
Holt School (Girls)	08:40	15:30	07:54	15:38	2 minutes	6 minutes (500m)
Piggott School	08:50	15:00	07:23	16:23	6 minutes	19 minutes (1.6km)

Source: Bustimes.org

2.4.10 The existing 128/129 bus service offers genuine opportunities to access secondary schools to the south of the site within Winnersh / Wokingham respectively, including the Forest School, Emmbrook School and Holt School. The services call at bus stops within a reasonable walking distance of each school and arrive/depart at times that align well with school start/finish times.

2.4.11 However, the service does not provide a convenient connection to Piggott CE School, which is located to the north of the site within Twyford. Therefore, a key aim of the bus improvement strategy will be to greatly improve the bus connections to Piggott School, thereby offering residents of the site and Hurst genuine opportunities to access the school by bus services.

Improved Connections to Twyford Centre

2.4.12 Twyford is located c. 2.5km to the north of Hurst and is an important service centre, providing a range of high-quality facilities and services including (but not limited to):

- Twyford Railway Station;
- A health club;
- A library;
- A GP surgery;
- A dental practice; and
- A town centre offering a range of shops and restaurants, including a Tesco Express and Waitrose Supermarket.

2.4.13 The facilities and services within Twyford will fulfil the day-to-day needs of local residents at the site and within Hurst. The existing 128/129 bus service currently provides an hourly service to Twyford and, whilst offering a useful connection, there is a significant opportunity to increase the frequency of bus services to this key local service centre.

SECTION 3 Bus Improvement Strategy - Options for Improvement

3.1 Introduction

3.1.1 This section of the report sets out the options to deliver a comprehensive bus improvement strategy for the village of Hurst as part of the development proposals at the application site. Four potential options are provided and are considered in turn below.

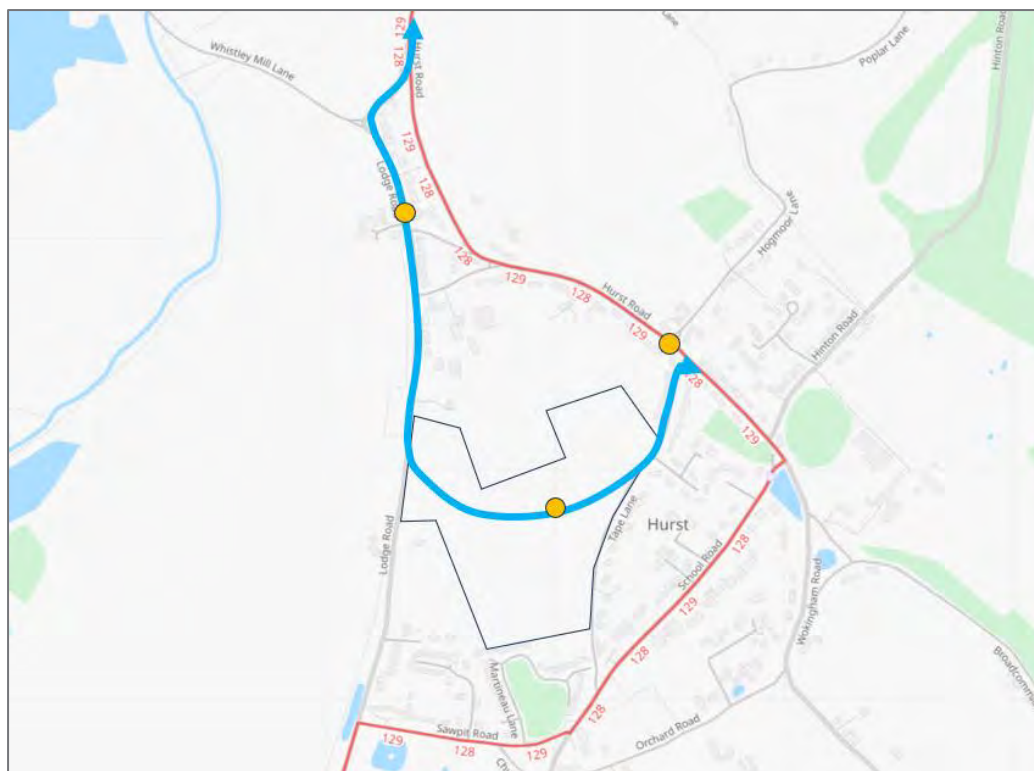
3.1.2 It is important to note that all options would be delivered alongside the comprehensive cycle improvement scheme to Twyford Railway Station (summarised in i-Transport report no. **ITB19328-003A**), which includes a suite of improvements to the existing waiting facilities for bus passengers and cycle parking facilities.

3.2 Option 1 – No Improvement

3.2.1 This option would see no direct improvements being delivered to the existing 128/129 bus service within Hurst. However, as part of the development proposals, the developer would fund a minor route diversion through the application site to provide improved permeability and better connect the 128/129 bus service to key population demographics within Hurst.

3.2.2 The possible minor bus route diversion is indicated in **Image 3.1**.

Image 3.1: Potential Minor 128/129 Bus Service Diversion



- 3.2.3 The potential diversion would be facilitated through the delivery of a bus/emergency vehicle only access onto Tape Lane and the re-provision of the existing bus stops serving Whistley Green and Hogmoor Lane respectively. The proposals would also see the inclusion of a mobility hub within the application site to provide a quality interchange for both existing and future residents in Hurst.
- 3.2.4 The impact of the proposed diversion and reprovision of bus stops is illustrated in **Image 3.2** and **Image 3.3** respectively.

Image 3.2: Existing Bus Stop Accessibility along 128/129 Bus Route in Hurst – (400m Walking Catchment)

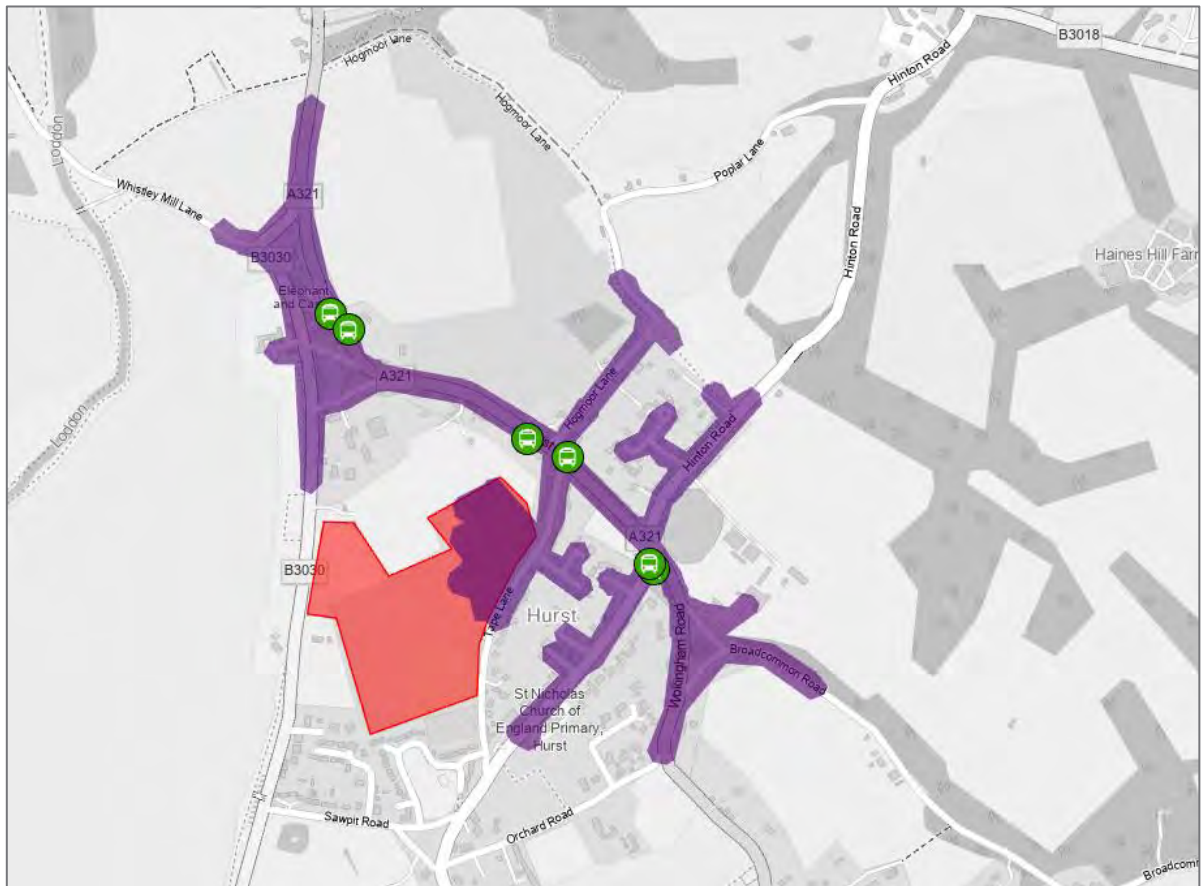
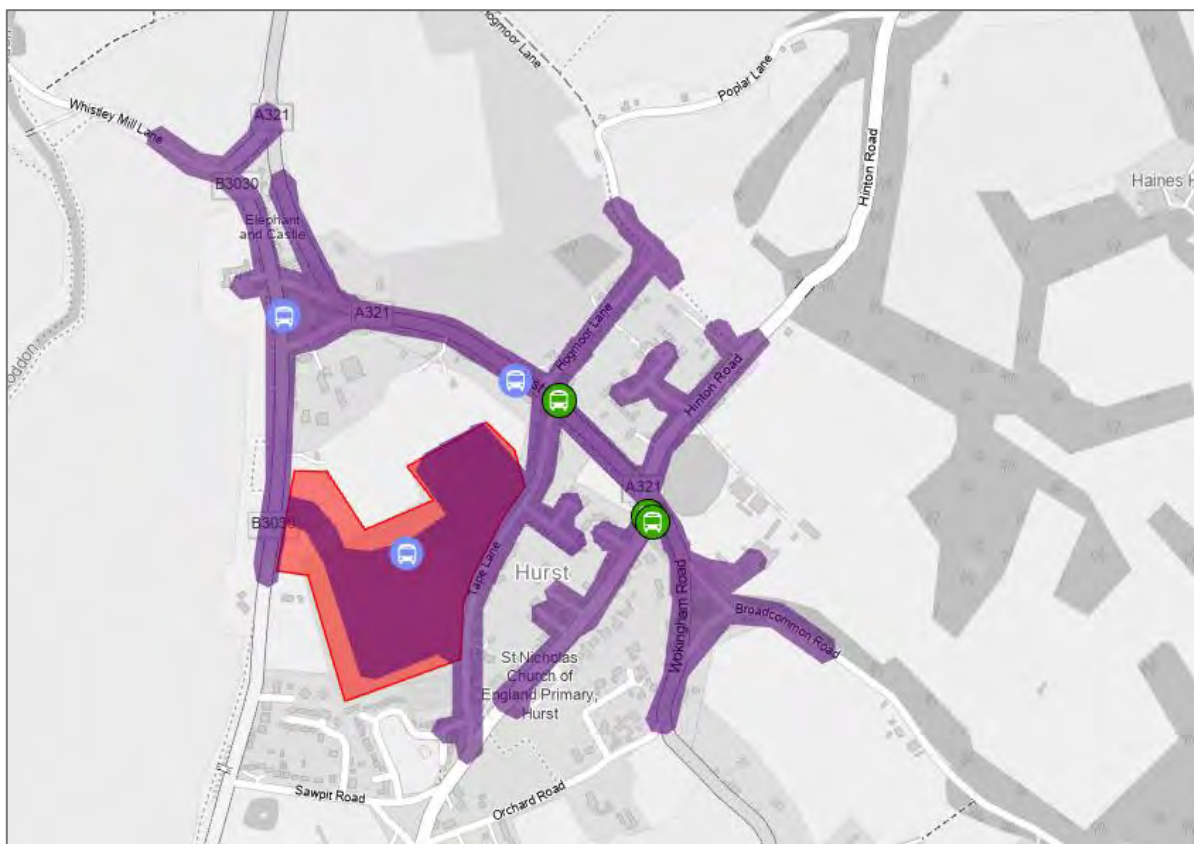


Image 3.3: Proposed Bus Stop Accessibility along 128/129 Bus Route in Hurst – (400m Walking Catchment)



3.2.5 The repositioning of bus stops within Hurst, as well as the diversion of the existing 128/129 bus service through the site, would result in a greater number of properties within Hurst being within 400m of a bus stop. This would be a clear improvement to the accessibility of public transport services.

3.2.6 Subject to more detailed discussions with WBC, initial engagement with TVB has indicated that they would support the diversion of the existing 128/129 bus service for the following key reasons:

- 1 The bus service would continue to serve existing users within Hurst.
- 2 The diverted bus service would connect to new residents and key population demographics within Hurst (as illustrated in **Image 3.2** and **Image 3.3**).
- 3 The potential diversion would be minor (amounting to no more than c. 400m from the existing route).

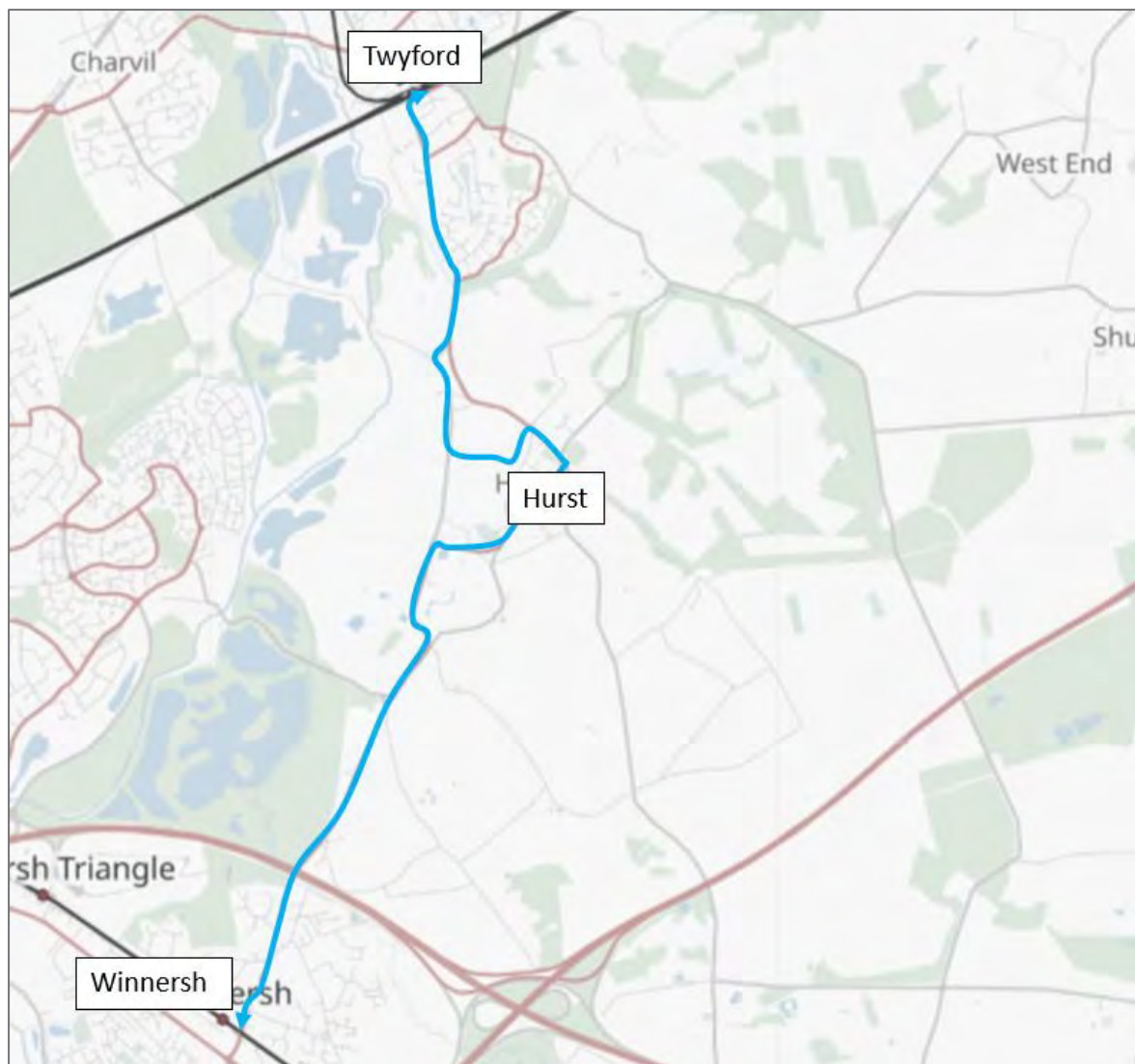
3.2.7 However, whilst potentially improving the demand for the existing 128/129 bus service, the key fact remains that the service is not currently commercially viable. As such, this option would do little to secure a long-term sustainable bus strategy for Hurst and deliver on the key objectives of WBC's Bus Improvement Plan.

3.3 **Option 2 – Provide Support to Existing 128/129 Bus Service**

- 3.3.1 As set out in Section 2, initial discussions with TVB have helped to ascertain that the existing 128/129 bus service is not commercially viable. At present, the service covers approximately only half its annual running costs (which are c. £500k p/a) and therefore relies on significant subsidy from WBC (in the region of £250k p/a).
- 3.3.2 In addition to providing all measures presented in Option 1, i.e. a minor diversion to the service through the site, this option would see the developer providing additional subsidy to the service. The funding would be secured through Section 106 Contributions and would assist in securing the long-term operation of the service.
- 3.3.3 However, whilst assisting in securing the long-term viability of the service, this option would do little to deliver on the wider objectives of WBC's Bus Improvement Plan, including the improvement to frequencies, journey times or integration with other modes of sustainable transport.

3.4 **Option 3 – Delivery of an Additional Tendered Service**

- 3.4.1 In addition to the measures set out in Option 1, this option would see the delivery of an additional tendered bus service within Hurst. The potential service would operate:
- Monday-Saturday (06:30-19:30) and therefore during similar operational hours to the existing 128/129 bus service. This would allow the new service to supplement the existing 128/129 service.
 - Along a route between Twyford and Winnersh via Hurst (**Image 3.4**) allowing a c. 30-45 minute headway and providing opportunities for the new service and existing 128/129 service to dovetail (subject to timetabling).

Image 3.4: Potential Route for Additional Tendered Service

3.4.2 Initial engagement with TVB has identified that the delivery of a new service would be the most viable improvement solution and could strengthen the existing 128/129 service by unlocking latent demand within Hurst through offering improved services and connectivity to Twyford and Winnersh respectively. The delivery of the additional tendered service would also assist WBC in the delivery of a number of their key objectives within their Bus Improvement Strategy.

3.4.3 However, whilst delivering a substantial improvement the exiting public transport offering in Hurst, the introduction of a new tendered service would likely face the following issues:

- i The cost of running such a service is estimated to be c. £200k p.a.¹ for a single bus, with pump-priming anticipated over a 5-year period.

¹ Established through initial engagement with TVB

- ii In a similar manner to the existing 128/129 bus service, the new service is unlikely to be fully self-financing, despite the additional revenue that will be generated by residents of the new development and the unlocking of additional latent demand within Hurst.
- iii It is therefore likely that further subsidy would be required for the service following an initial five-year period and therefore the option may not deliver a sustainable long-term model.

3.4.4 Points ii and iii can be demonstrated clearly through initial revenue forecasting, the results of which are summarised below:

Table 3.1: Initial Revenue Forecast – Additional Tendered Bus Service

No. of Dwellings	Estimated Population	Development Demand (Daily)			Estimated Annual Fare Revenue (£2.50 Fare)	
		Total All Mode Trips	Bus Trips (3%) ⁽³⁾	Bus Trips (5%) ⁽³⁾	3% Bus Trips	5% Bus Trips
99	238 ⁽¹⁾	1734 ⁽²⁾	52	87	£26,017	£43,362

1) Estimated population assuming an average number of persons per household of 2.4 (ONS Census 2021)

2) Calculated using the total person TRICS trip rates summarised in Table 5.2 of the Transport Assessment.

3) Estimated bus trip mode share, based on discussions with TVB.

3.4.5 Assuming a bus modal share of between 3%-5%, an annual fare revenue of some £26k-£43k could be expected to be generated by residents of the proposed development. This would cover only around 13%-21% of the annual cost to operate the service. The additional tendered service would therefore rely of significant subsidy to continue to operate beyond the initial five-year funding period.

3.5 Option 4 – Delivery of a New Private Bus Service

3.5.1 This option would see the delivery of a bespoke new private bus service operating from the application site. The potential service would operate:

- As a large mini-bus (16-seater) Monday to Saturday (07:00-10:00) and (15:00-19:00).
- Along a bespoke route between Hurst and Twyford, calling at Twyford Railway Station, Twyford town centre and the Piggott CE School (**Image 3.5**).

Image 3.5: Potential New Bespoke Bus Service Route

3.5.2 The tailored operational hours will allow for a twice per hour service being attainable between Hurst and Twyford (and its railway station) and the delivery of a sustainable connection to a local secondary school that is not well served by the existing 128/129 bus service. The new bespoke service would supplement the existing 128/129 service and would provide a significant betterment to the existing public transport connections to/from Hurst.

3.5.3 Initial engagement with TVB has identified that the cost to operate such a bespoke service would be c. £173k p.a. The funding for the service would be secured in the following manner, with the full viability appraisal contained at **Appendix A**:

- 1 A developer bus fund** – this would comprise a c. £86.5k annual contribution to the service over a 10-year period (c. 50% of the annual cost) and would be secured in the S106.
- 2 Service charge contributions** – these would be on-going contributions provided by residents of the proposed development as part of their normal service charge. In total, this would contribute c. £76.5k to the service p.a. (c. 45% of the annual cost).

- 3 Additional local revenue** – this would comprise revenue generated by the service from existing residents of Hurst, assuming a £2.50 fare model. This would contribute remaining operational funds necessary (c. £10k p.a.).

3.5.4 The service would be open for use by all residents of Hurst with residents of the proposed development riding free of charge (in recognition of their service charge contributions) and all other Hurst passengers riding for a nominal fee of c. £2. This fare model broadly aligns with that currently applied to the existing 128/129 bus service, which levies £2 fares on all users.

3.5.5 The new bespoke private service offers substantial benefits over the remaining three potential improvement options, including Option 3:

- i** The service has a sustainable long-term financing model, with ongoing costs met in part by developer funding and in part by the levying of ongoing service charges to residents of the proposed development and additional local revenue. The service therefore offers a sustainable long-term solution.
- ii** By operating along a bespoke route, the service will be able to attain a twice hourly frequency during operational hours. This is a significant improvement over the existing hourly 128/129 service and will provide genuine additional opportunities for users to align bus journeys with onward rail services to key destinations, i.e. Reading and London.
- iii** The service will call directly at Twyford town centre, enhancing connections to this important service centre.
- iv** The service will also offer a direct connection to The Piggott CE School. In combination with the existing 128/129 bus service, the new bespoke service will ensure that reliable bus service connections are achievable to a range of secondary schools that have catchment areas that encompass the application site.

3.5.6 The new bespoke service offers the best solution to improving bus connectivity within Hurst, delivering on all three key objectives set out in Section 2 of this report and assisting WBC in the delivery of their Bus Improvement Plan.

SECTION 4 Summary and Conclusions

- 4.1 Mactaggart and Mickel Strategic Land (Mac Mic) is considering options for its land interest at Tape Lane in Hurst. A pre-application meeting was held with WBC in December 2023 in relation to the Site.
- 4.2 The village of Hurst is served by the existing 128/129 bus service. The service is operated under tender by Thames Valley Buses (TVB) and connects Reading and Wokingham via Woodley, Twyford and Hurst. The service operates hourly Monday to Friday and once every 2 hours on a Saturday.
- 4.3 Whilst providing a useful and important connection for residents in Hurst, initial discussions with TVB have identified that the service suffers from a number of issues. Critically, these include the fact that the service is not commercially viable and relies on significant subsidy (upwards of 50%) to sustain its operation.
- 4.4 The proposed development at the application site therefore offers a significant opportunity to deliver a comprehensive bus improvement scheme as part of the development proposals to strengthen bus provision and infrastructure within Hurst and secure a long-term sustainable solution for bus travel.
- 4.5 Four options to deliver an improvement have been considered, with Option 4 being the most comprehensive and offering the greatest potential to deliver a long-term sustainable solution. The option would:
- i Deliver a bespoke private bus service between the site, Twyford and The Piggott CE School, operating twice per hour Monday to Saturday between the hours of 07:00-10:00 and 15:00-19:00. This would supplement the existing 128/129 service.
 - ii Have a sustainable long-term financing model, with ongoing costs met in part by developer funding and in part by the levying of ongoing services charges to residents of the proposed development, as well as additional local revenue (through a £2.50 fare scheme).
 - iii Provide genuine additional opportunities for users to align bus journeys with onward rail services to key destinations, including Reading and London.
 - iv Enhance connections to Twyford town centre, which is an important local service centre.
 - v Deliver a direct connection to The Piggott CE School which, in combination with the existing 128/129 bus service, would ensure that reliable bus service connections are achievable to a range of secondary schools that have catchment areas that encompass the application site.
- 4.5.2 Initial engagement with TVB has identified that the cost to operate such a bespoke service would be c. £173k p.a. The proposed revenue model for the private bus service is summarised below, with a full viability appraisal contained at **Appendix A**:

- 1 **A developer bus fund** – this would comprise a c. £86.5k annual contribution to the service over a 10-year period (c. 50% of the annual cost) and would be secured in the S106.
- 2 **Service charge contributions** – these would be on-going contributions provided by residents of the proposed development as part of their normal service charge. In total, this would contribute c. £76.5k to the service p.a. (c. 45% of the annual cost).
- 3 **Additional local revenue** – this would comprise revenue generated by the service from existing residents of Hurst, assuming a £2 fare model. This would contribute remaining operational funds necessary (c. £10k p.a.).

APPENDIX A. BUS VIABILITY ASSESSMENT (OPTION 4)

		Development Demand (Daily)			Annual Fare Revenue (£2.5)	
Dwellings	Population	Total All Mode Trips	Bus Trips (3%)	Bus Trips (5%)	3% Mode Share	5% Mode Share
99	238	1734	52	87	£26,017	£43,362

Assumes no revenue from existing populations of Hurst and Twyford.

Cost of Bus Service	£173,000	<i>Advised by TV Buses</i>
Service Charge Contributions	£76,500	<i>Equates to 45% cost</i>
Developer Bus Fund	£86,500	<i>Provided for minimum 10 Year period (£865k)</i>
Additional Local Revenue	£10,000	<i>From wider Area</i>
CIL	£3,613,500	<i>WBC CIL £365 per sqm / Average 100sqm House</i>

Service Charge Calculation	
Annual	Monthly
£773	£64

