FUTURE PHASE 3 SITE

FUTURE PHASE 3 SITE

Protected route for pedestrian–cycle link to Howes Lane

BECKDALE CLOSE

HOWES LANE

REV	DESCRIPTION	DRAWN	INITIALS	DATE

DRAWING STATUS	CHECKED BY	DATE

david tucker associates
transport planning consultants

Forester House, Doctors Lane
Henley-in-Arden
Warwickshire B95 5AW
Tel: +44(0)1564 793598
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JOB TITLE	CLIENT
AXIS J9	ALBION LAND

DRAWING TITLE

ACCESS ROAD GENERAL ARRANGEMENT

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
1: 500@A1	RM	Aug21	14042–60	H

Appendix D

MOTT MACDONALD

Axis J9, Bicester

Road Safety Audit
Stage 1

12 August 2021

Mott MacDonald
10 Temple Back
Bristol BS1 6FL
United Kingdom

T +44 (0)117 906 9500
mottmac.com

David Tucker Associates
Forester House
Doctors Lane
Henley in Arden
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B95 5AW

Axis J9, Bicester

Road Safety Audit
Stage 1

12 August 2021

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	12/08/2021	T J Blaney	R J Collins	J T Pearson	First Issue
		[redacted]			

Document reference: 100414124 | TPN | ITD | 045 | A

Information class: Standard

Contents

1 Introduction

This report describes a Stage 1 Road Safety Audit carried out on the proposed access arrangements for two new employment areas located off a (yet to be built) strategic link road.

The audit was carried out at the request of David Tucker Associates.

The audit took place at the Bristol office of Mott MacDonald and consisted of a detailed examination of the submitted documentation and drawings listed in **Appendix A**.

It is confirmed that this is a Stage 1 Road Safety Audit and that the audit was undertaken upon completion of the preliminary design work.

The Road Safety Audit Team, as approved by the David Tucker Associates' Project Sponsor, Simon Parfitt, consisted of:

Tim Blaney	BSc (Hons), CMILT, MCIHT, MSoRSA (Certificate of Competency in Road Safety Audit, July 2012) Audit Team Leader, Mott MacDonald
Rachael Collins	BA (Hons), MSc, MCIHT (Certificate of Competency in Road Safety Audit, July 2016) Audit Team Member, Mott MacDonald

A visit to the site was completed on Wednesday 4th August at 1000 hrs. During this visit the weather was overcast, with sunny spells and the road surface was dry. Traffic conditions were moderate and free flowing. No pedestrian or cycle activity was observed.

This Road Safety Audit was carried out in accordance with Highways England's Departmental Standard GG119. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

The comments and suggestions for road safety improvements made in this report seek to address matters that might have an adverse effect on road safety in the context of the chosen design. No attempt has been made to comment on the justification of the scheme. Consequently, the auditors accept no responsibility for the design or construction of the scheme.

All the issues raised in this report are considered to be required for action. The comments contained in the report are based on safety related concerns and as such the design engineer will need to consider carefully how to respond to each of the issues. The Audit Response Report should be completed by the Design Team and kept on file for future reference.

Two previous audits (Doc. Refs: *382187/TPN/ITD/001/A* and *382187/TPN/ITD/026/A*) have been undertaken by the same Audit Team on alternative proposals for this location, but no previous audits have been undertaken on the current scheme design.

A Key Plan indicating the location of any identified safety related issues is provided in **Appendix B**.

Scheme Description

The scheme consists of two new access points for proposed employment areas contained within Axis J9 on the north-western side of Bicester. The accesses will form priority T-junctions with a strategic link road that is yet to be constructed and will be located on the northern and southern sides.

Footway cycleways will be provided either side of the link road with priority crossings across both accesses. An uncontrolled pedestrian / cyclist crossing point will be provided across the link road mid-way between the two proposed accesses and this will include a refuge island that forms a physical ‘splitter’ between two right turn lanes into the accesses.

2 Items Raised at this Stage 1 Audit

This section describes road safety related issues identified by the Audit Team during the Stage 1 Road Safety Audit.

The Audit Team did not identify any road safety related issues associated with the scheme as presented in **Appendix A**.

3 Audit Team Statement

We certify that this audit has been carried out in accordance with Highways England's Departmental Standard GG119.

Road Safety Audit Team Leader

T J Blaney BSc (Hons), CMILT, MCIHT, MSoRSA
(Certificate of Competency in Road Safety Audit, July 2012)

Signed: [redacted]

Date: 12th August 2021

Principal Road Safety Engineer
Mott MacDonald
10 Temple Back
Bristol
BS1 6FL

Road Safety Audit Team Member

R J Collins BA (Hons), MSc, MCIHT
(Certificate of Competency in Road Safety Audit, July 2016)

Signed: [redacted]

Date: 12th August 2021

Senior Road Safety Engineer
Mott MacDonald
9 Portland Street
Manchester
M1 3BE

Appendices

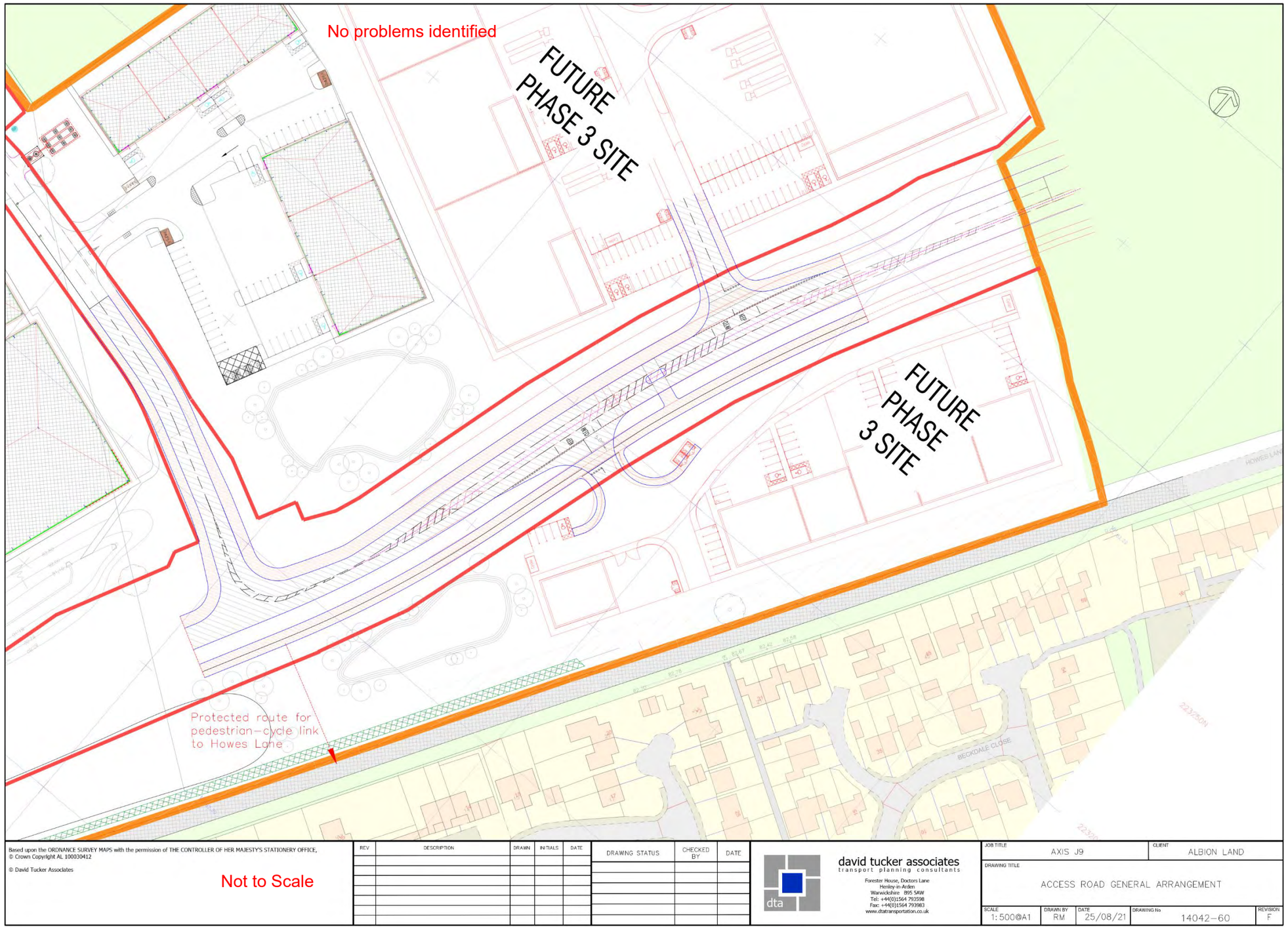
A. List of Drawings & Documents Examined

Table 3.1: Drawings

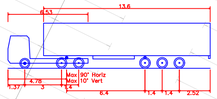
Drawing Number	Revision	Drawing Title
14042-60	F	Access Road General Arrangement

Source: David Tucker Associates

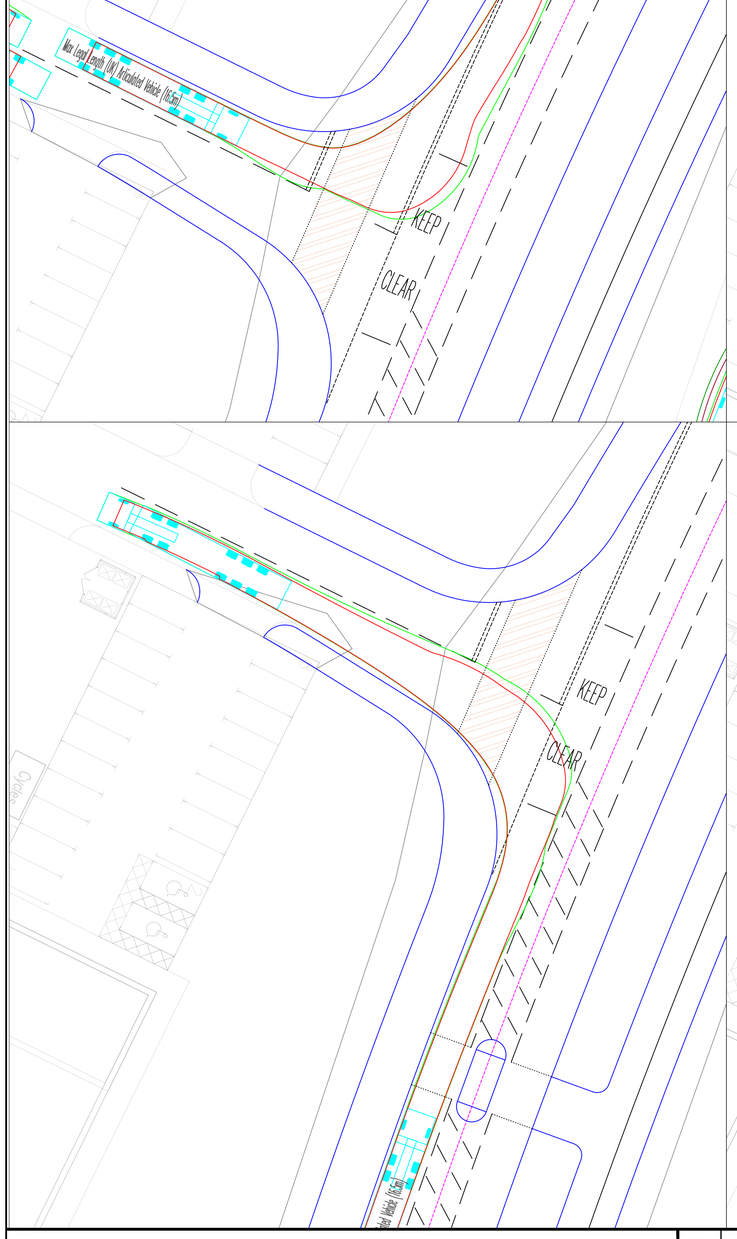
B. Location Plan – Axis J9, Access Road

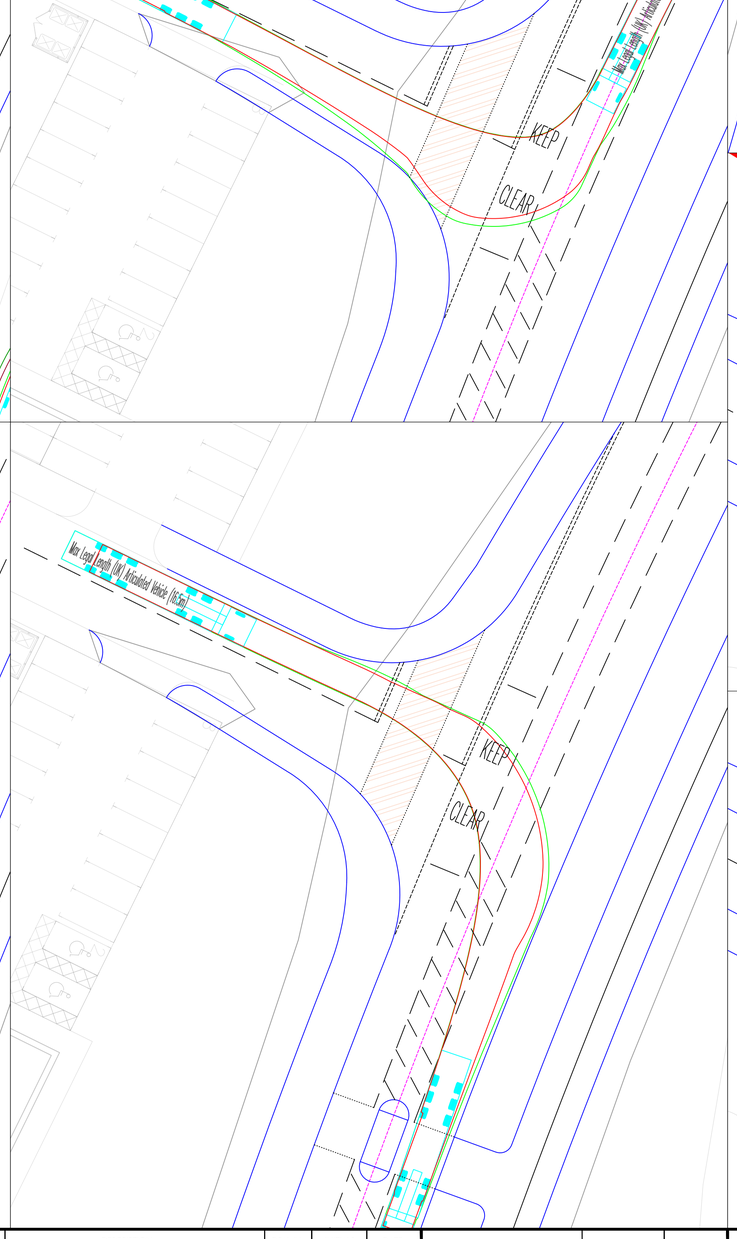


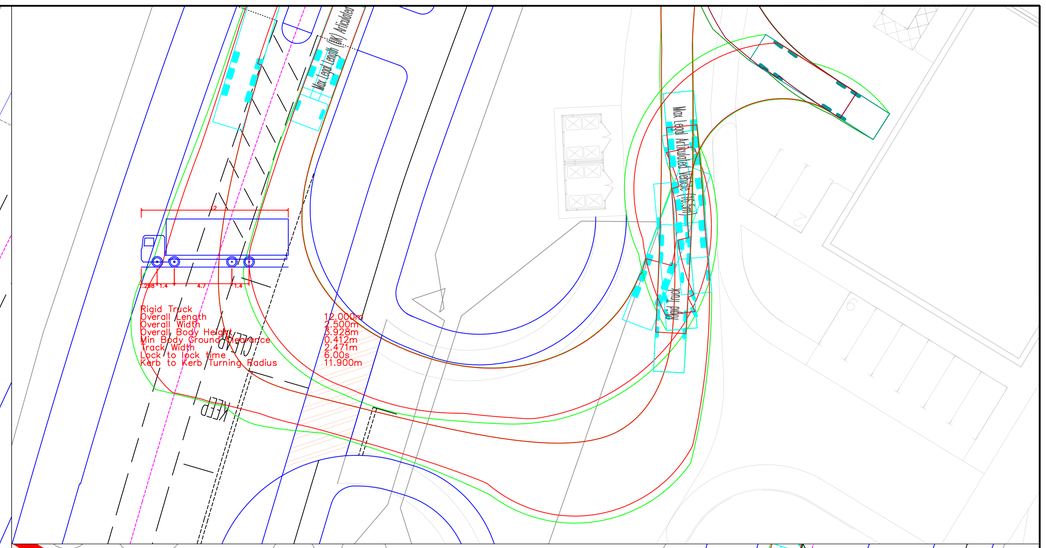
Appendix E



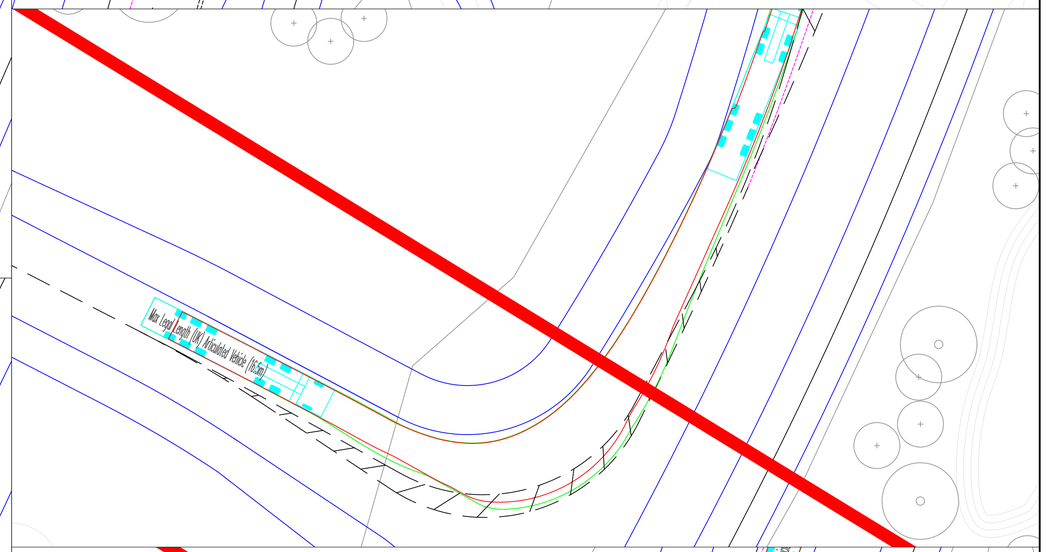
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m

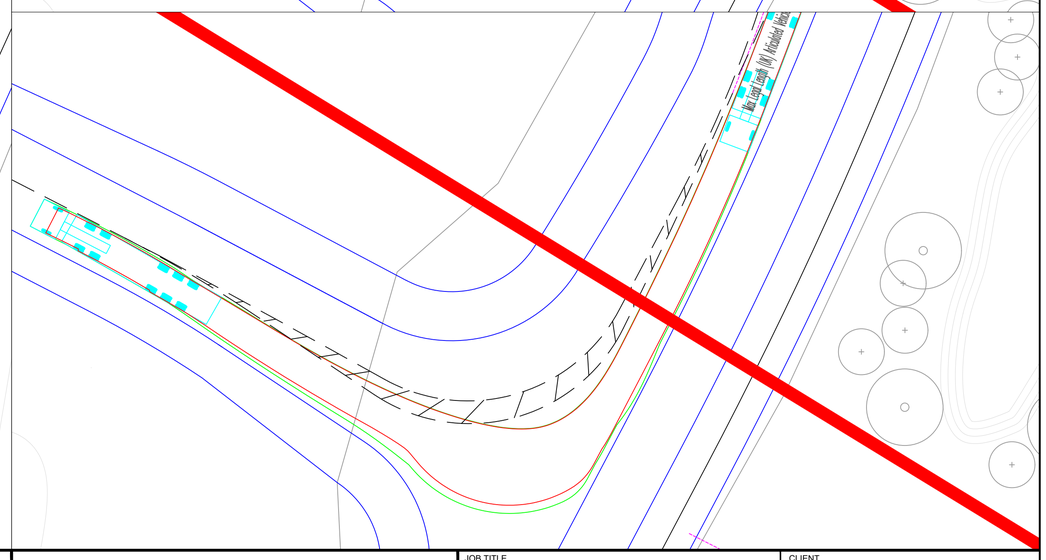






Rigid Truck
Overall Length 12.000m
Overall Width 2.500m
Overall Body Height 3.329m
Min Body Ground Clearance 0.412m
Track Width 2.471m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 11.900m





REV	DESCRIPTION	DRAWN	INITIALS	DATE

DRAWING STATUS	CHECKED BY	DATE

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www.dtatransportation.co.uk

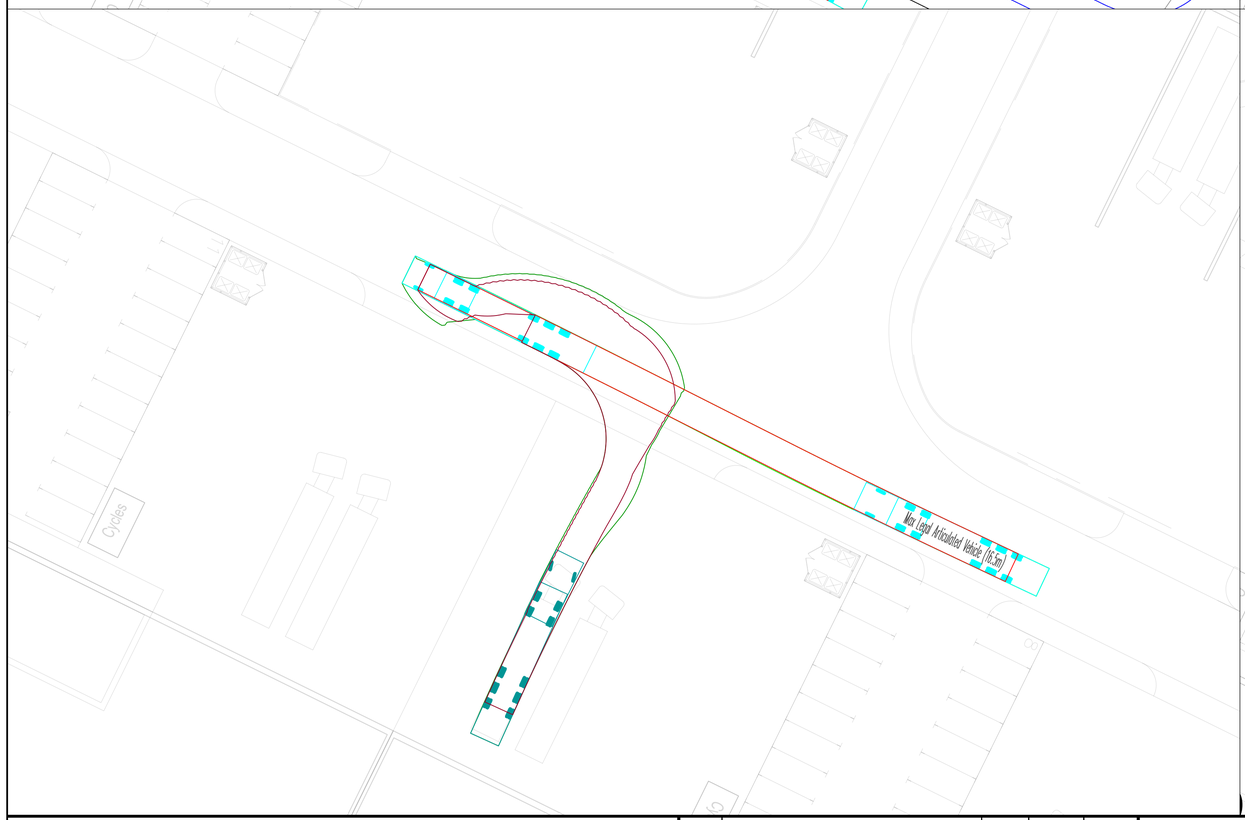
JOB TITLE	CLIENT
AXIS J9	ALBION LAND

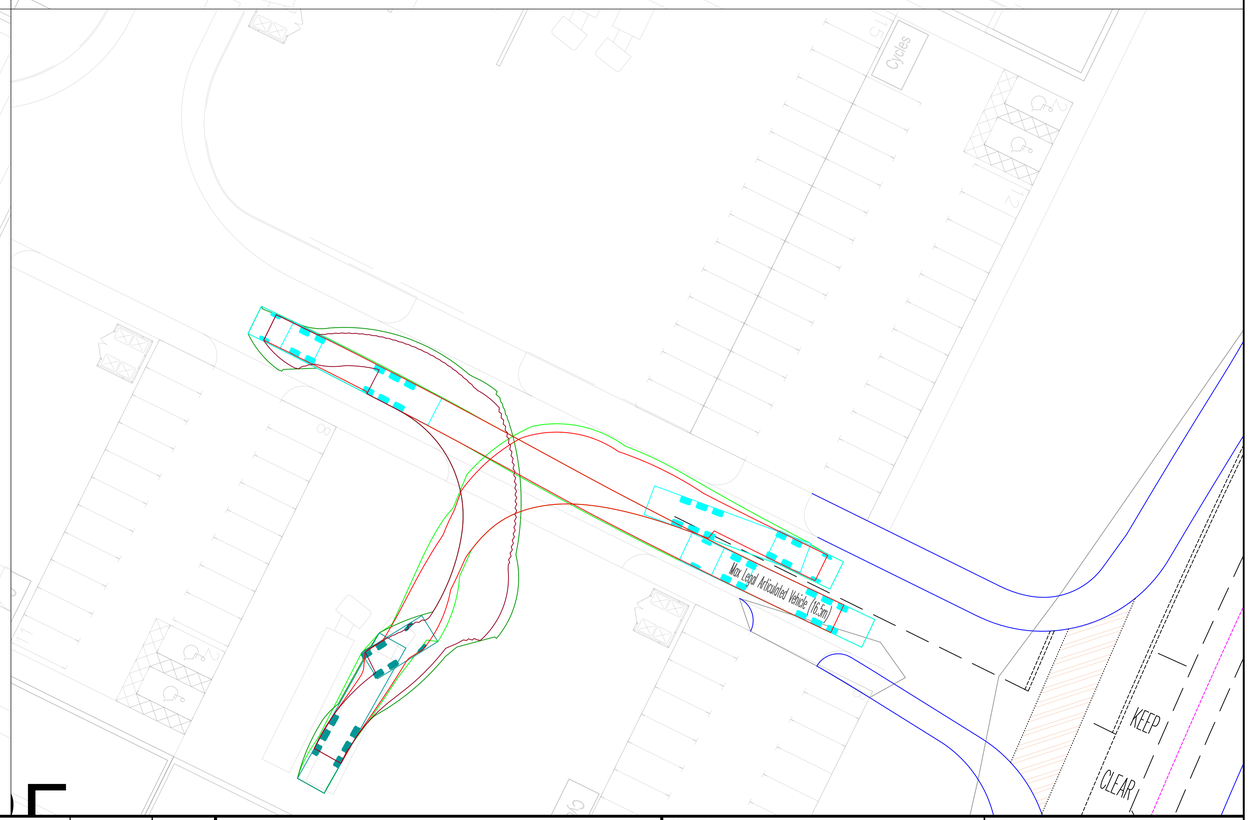
DRAWING TITLE

ACCESS ROAD GENERAL ARRANGEMENT
VEHICLE TRACKING

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
1: 250@A1	RM	Aug21	14042–60–2	H

Appendix F





REV	DESCRIPTION	DRAWN	INITIALS	DATE

DRAWING STATUS	CHECKED BY	DATE

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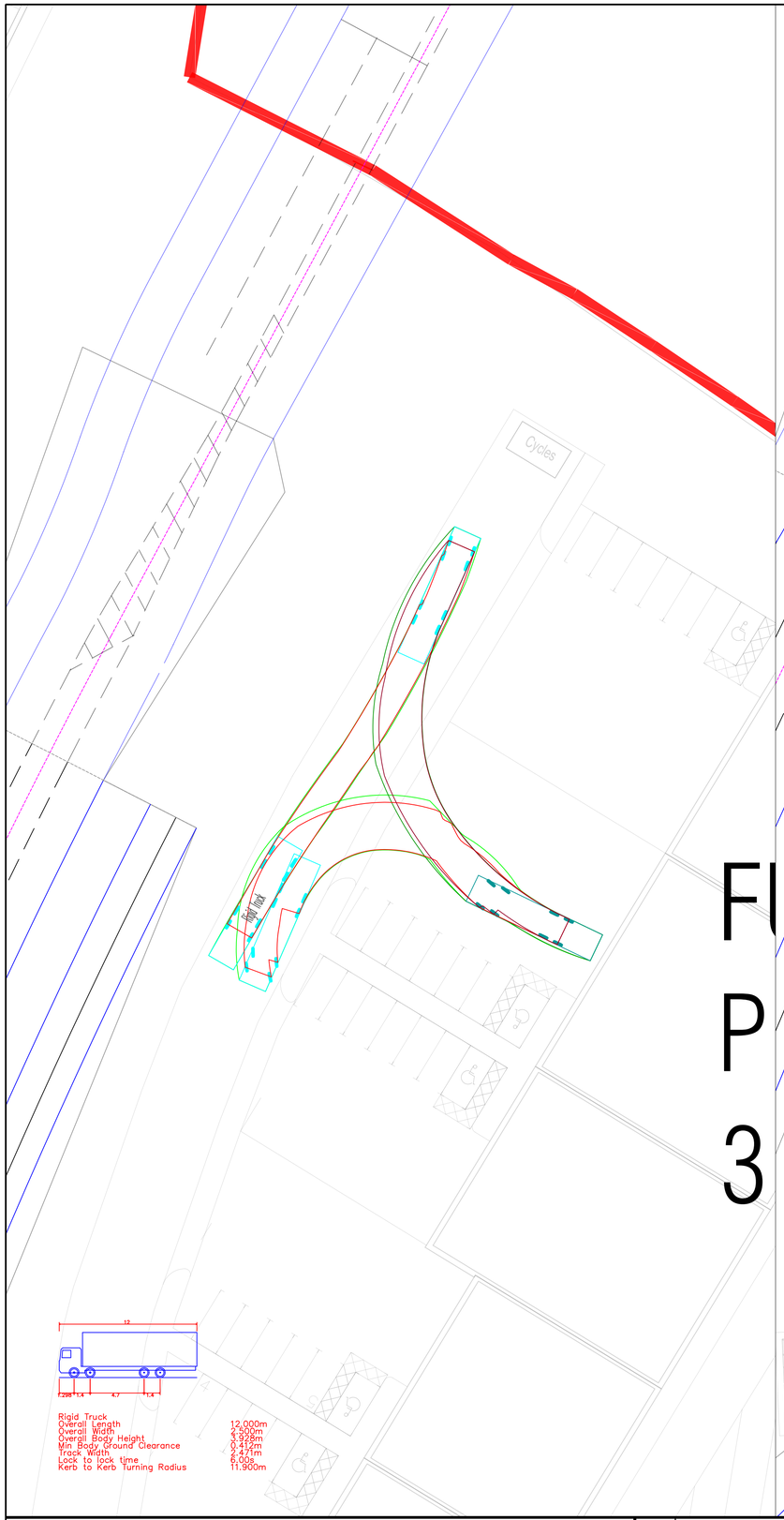
JOB TITLE: AXIS J9

CLIENT: ALBION LAND

DRAWING TITLE:

ACCESS ROAD GENERAL ARRANGEMENT
VEHICLE TRACKING WESTERN SITE

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
1: 250@A1	RM	Aug21	14042–60–3	H



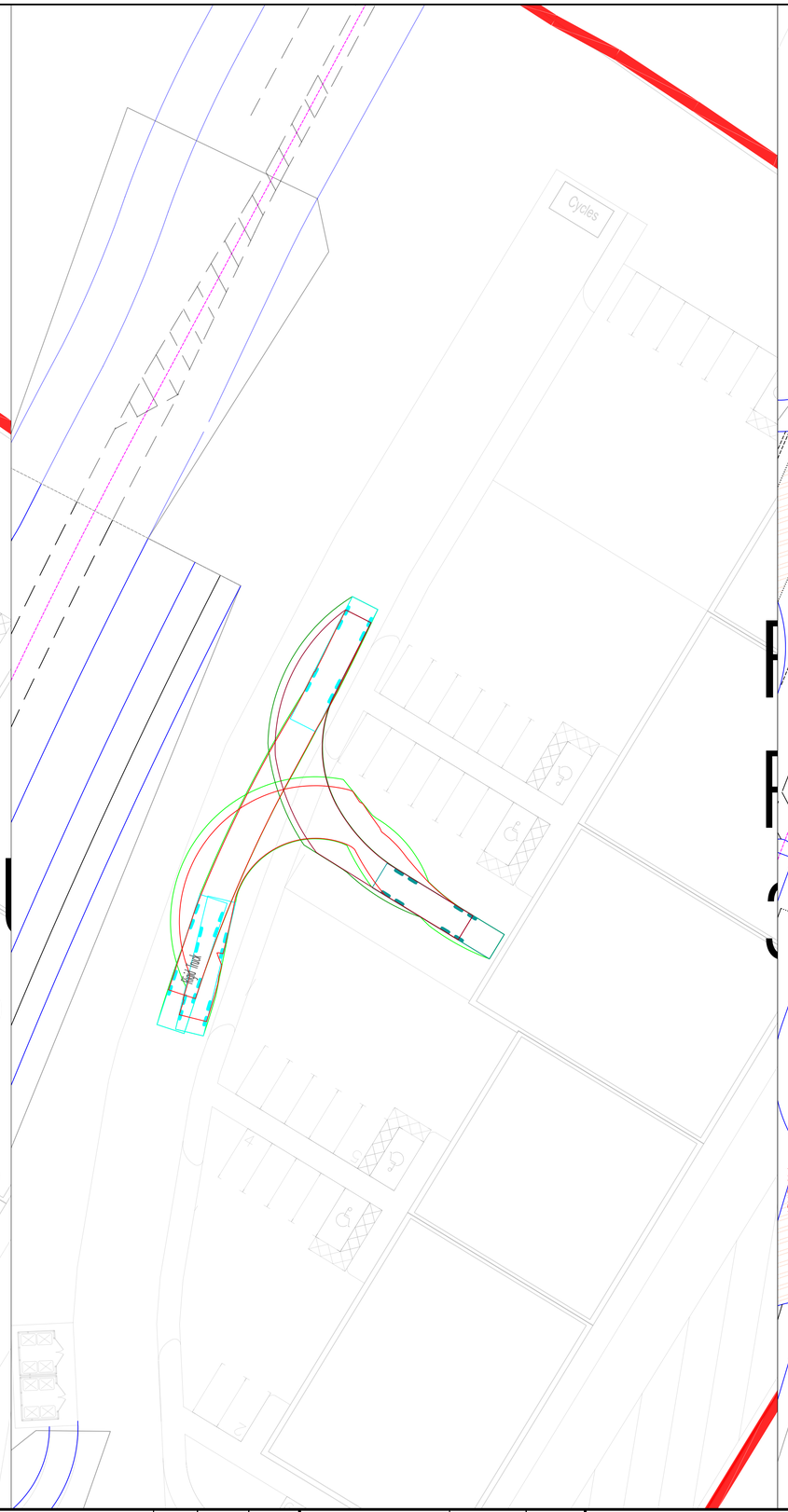
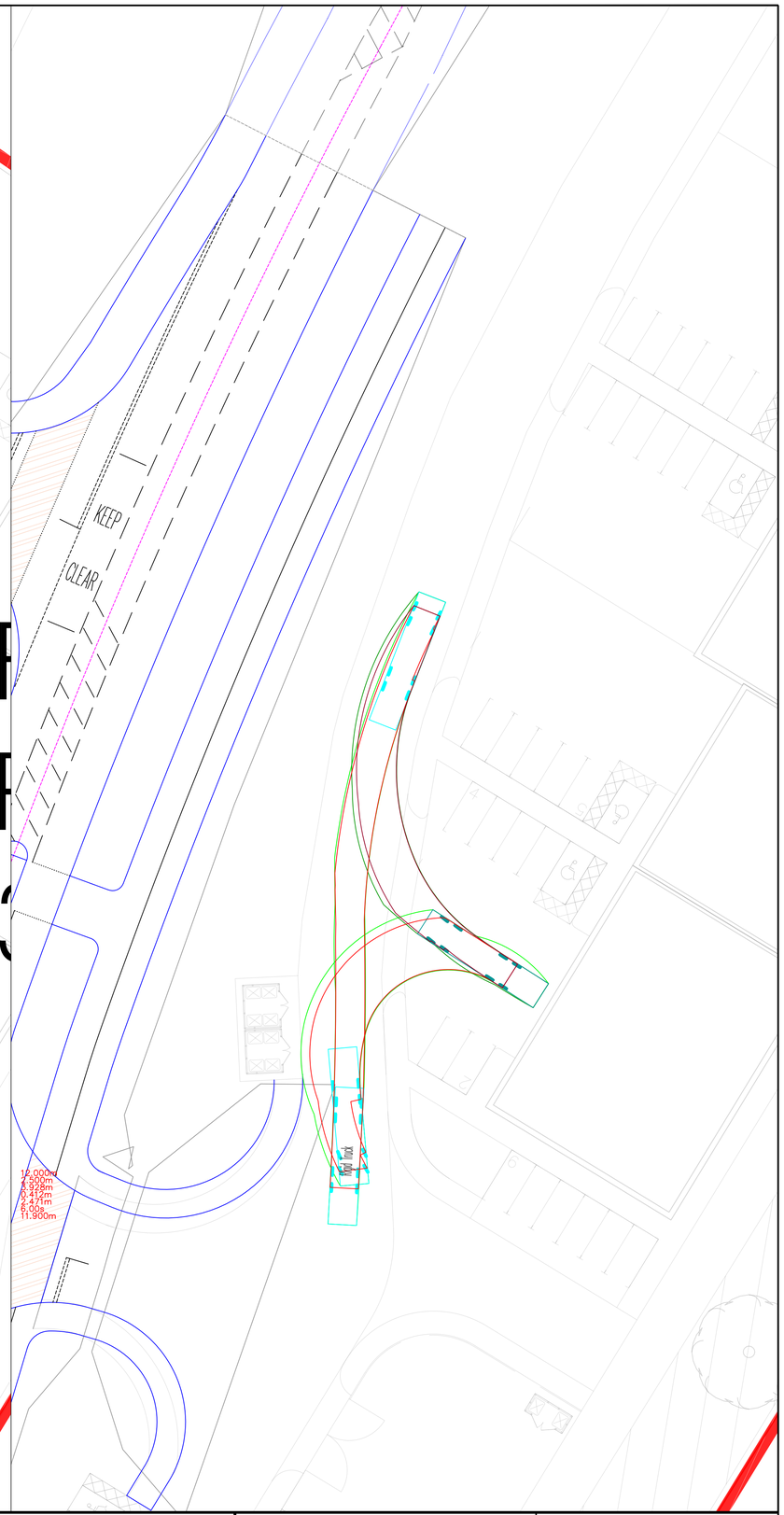


FIGURE 3



REV	DESCRIPTION	DRAWN	INITIALS	DATE

DRAWING STATUS	CHECKED BY	DATE

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Fax: +44(0)1564 793983
www.dtatransportation.co.uk

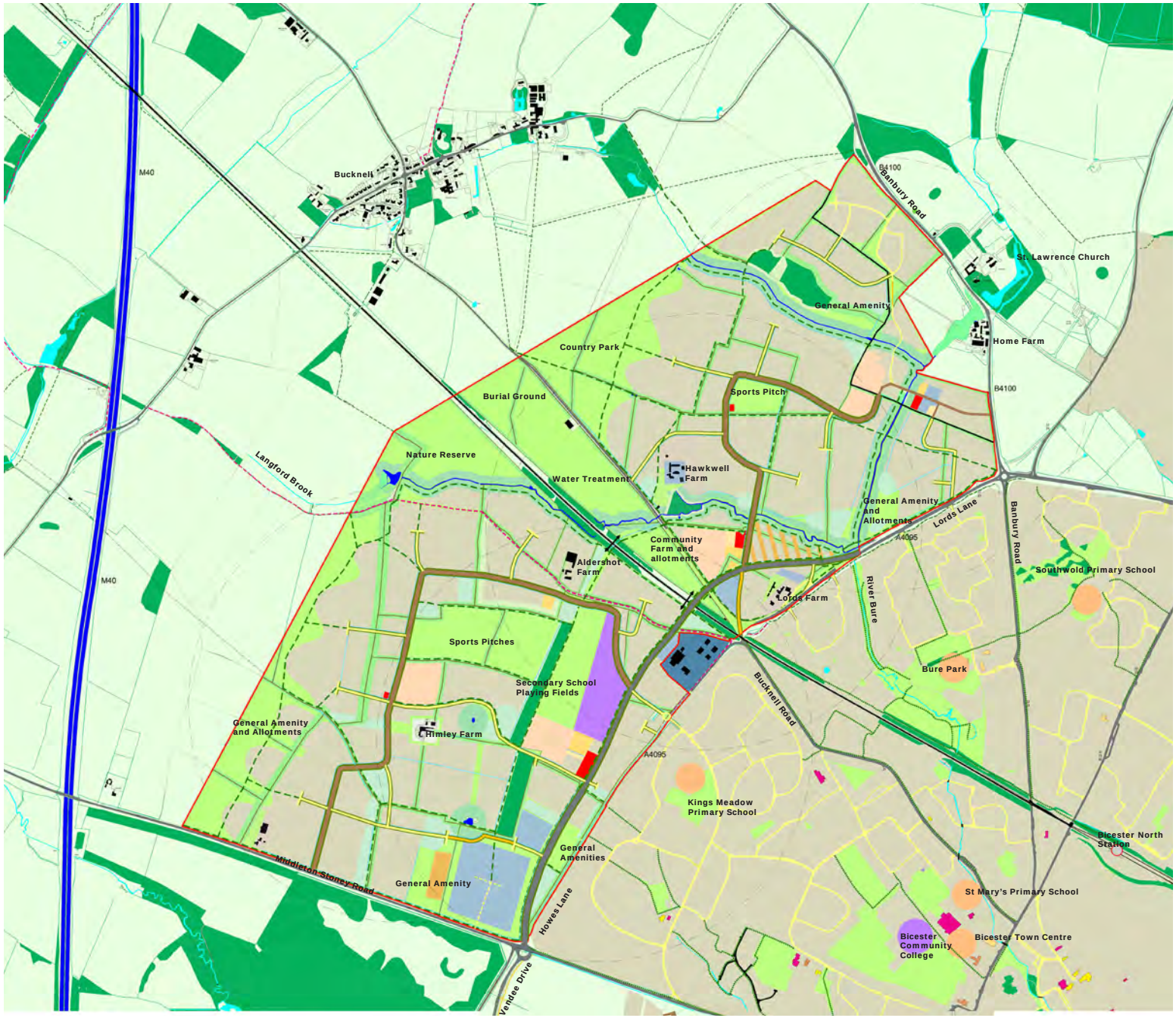
JOB TITLE	CLIENT
AXIS J9	ALBION LAND

DRAWING TITLE

ACCESS ROAD GENERAL ARRANGEMENT
VEHICLE TRACKING EASTERN SITE

SCALE	DRAWN BY	DATE	DRAWING No	REVISION
1: 500@A1	RM	Aug21	14042–60–4	H

Appendix G



Masterplan Site Area

Proposed NW Bicester Land Use

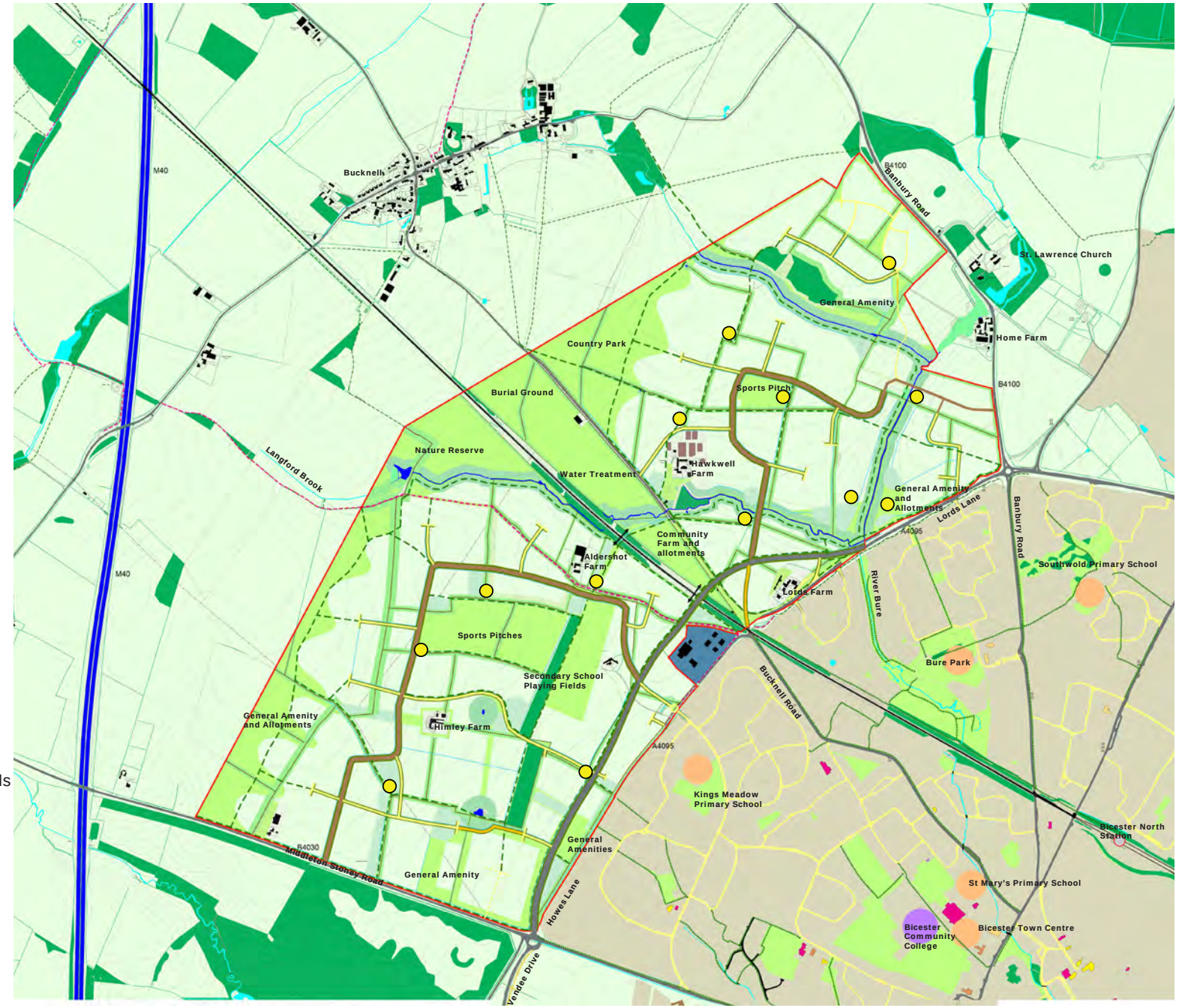
- Green Infrastructure
- Existing Woodlands and hedgerows
- Existing Water Corridor and Ponds
- Proposed Woodlands and Hedgerows Buffer
- Proposed Water Corridor Buffer Zone
- Housing
- Primary School
- Secondary School
- Secondary School Sports Pitches
- Existing Business (including green space tbc)
- Existing Farm Use (including green space tbc)
- Commercial/ Business
- Social/Community
- Retail
- Care Home/Hotel/Other
- Extra Care Housing (including green space tbc)
- Energy Centre
- Water Treatment
- Proposed Retention Basins and Attenuation Ponds
- Proposed Swales
- Existing Herbage

Proposed Connectivity

- Strategic Roads including footpath/cycleway
- Primary Roads including footpath/cycleway
- Secondary Roads including footpath/cycleway
- Off road footpath cycleways
- Crossing under railway
- Existing Bridle Path

FARRELLS

BIMP6 01 NW Bicester Masterplan
Masterplan Framework



Masterplan Site Area

Proposed NW Bicester Land Use

- Green Infrastructure
- Existing Woodlands and hedgerows
- Existing Water Corridor and Ponds
- Proposed Woodlands and Hedgerows Buffer
- Proposed Water Corridor Buffer Zone
- Existing Business (including green space tbc)
- Existing Farm Use (including green space tbc)
- Play
- Proposed Retention Basins and Attenuation Ponds
- Proposed Swales

Proposed Connectivity

- Strategic Roads including footpath/cycleway
- Primary Roads including footpath/cycleway
- Secondary Roads including footpath/cycleway
- Off road footpath cycleways
- Crossing under railway
- Existing Bridle Path

N

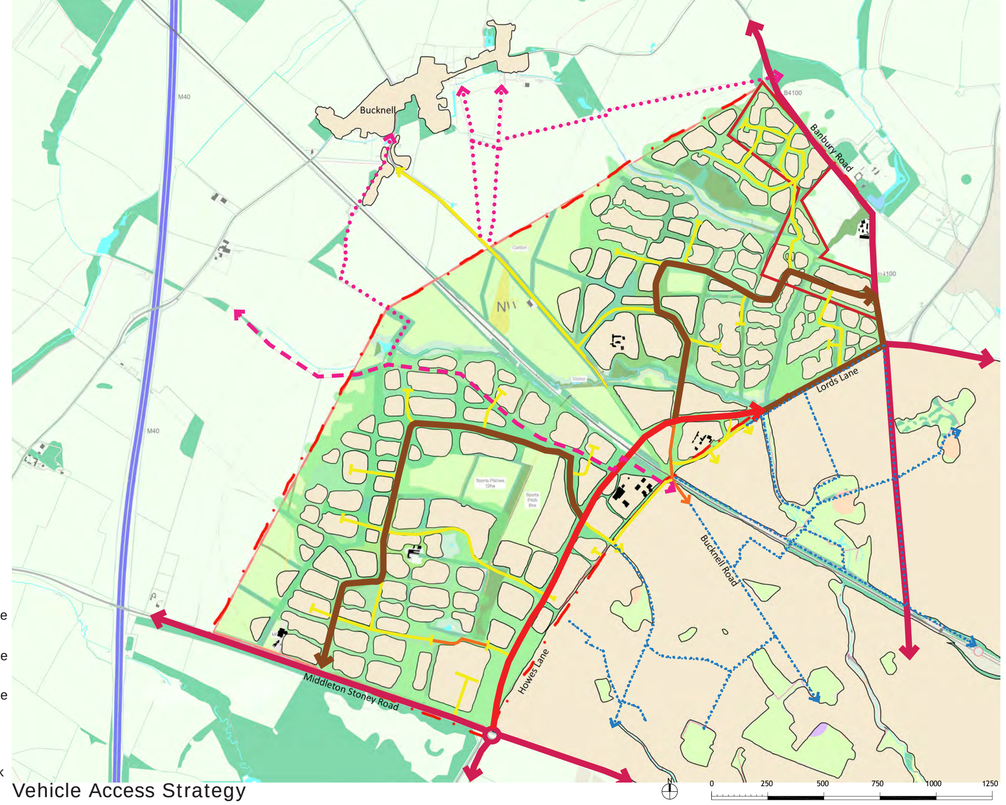
0 250 500 750 1000 1250

FARRELLS

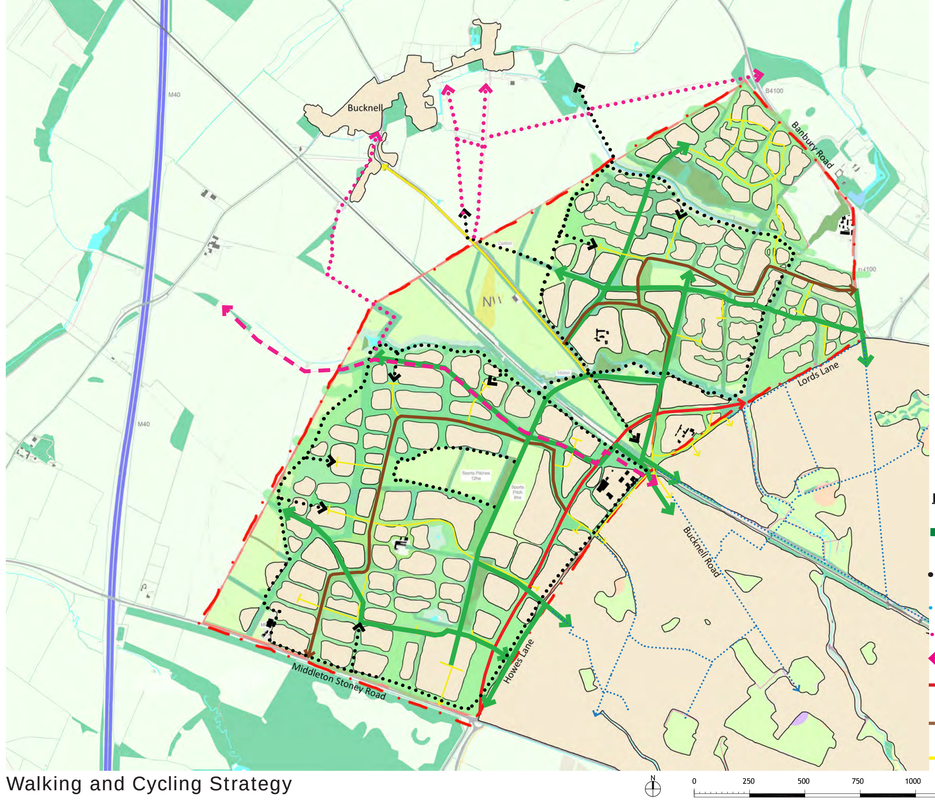
BIMP6 02 NW Bicester Masterplan
Green Infrastructure Framework

Proposed Key Information

- Proposed pedestrian/cycle route adjacent to Strategic Road
- Proposed pedestrian/cycle route adjacent to Primary Road
- Proposed pedestrian/cycle route Secondary Road
- Proposed Bus Only Road
- Proposed primary road network connections



Vehicle Access Strategy



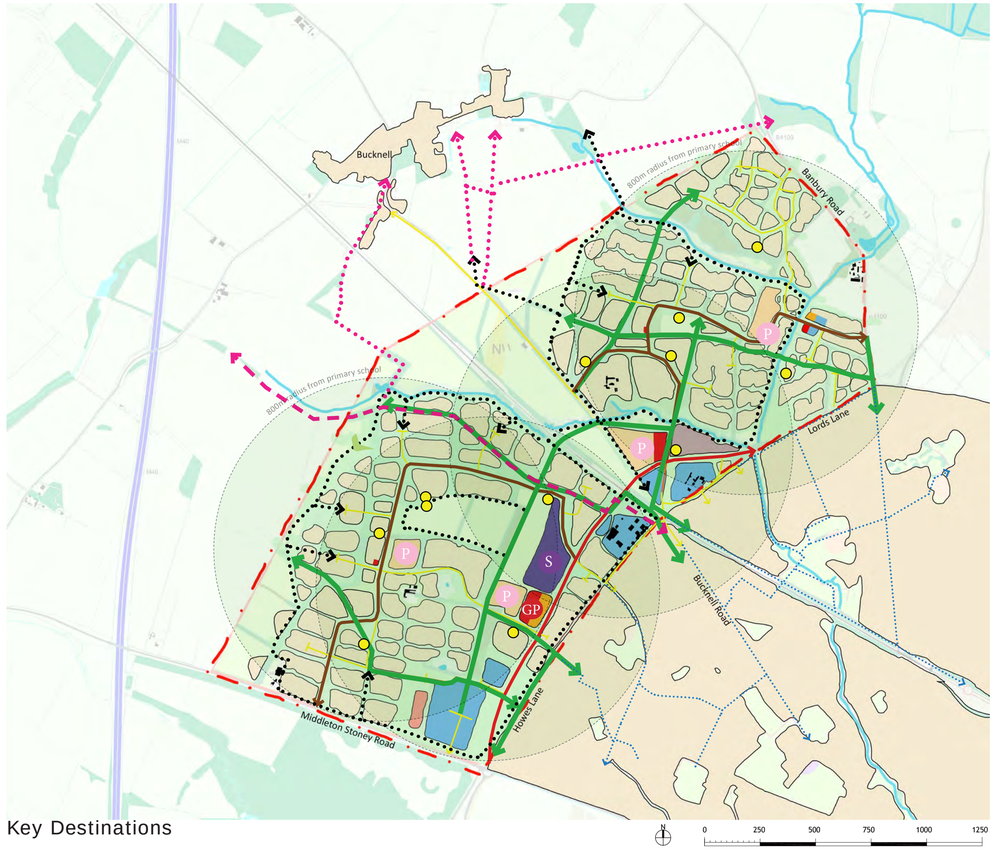
Walking and Cycling Strategy

Proposed Key Information

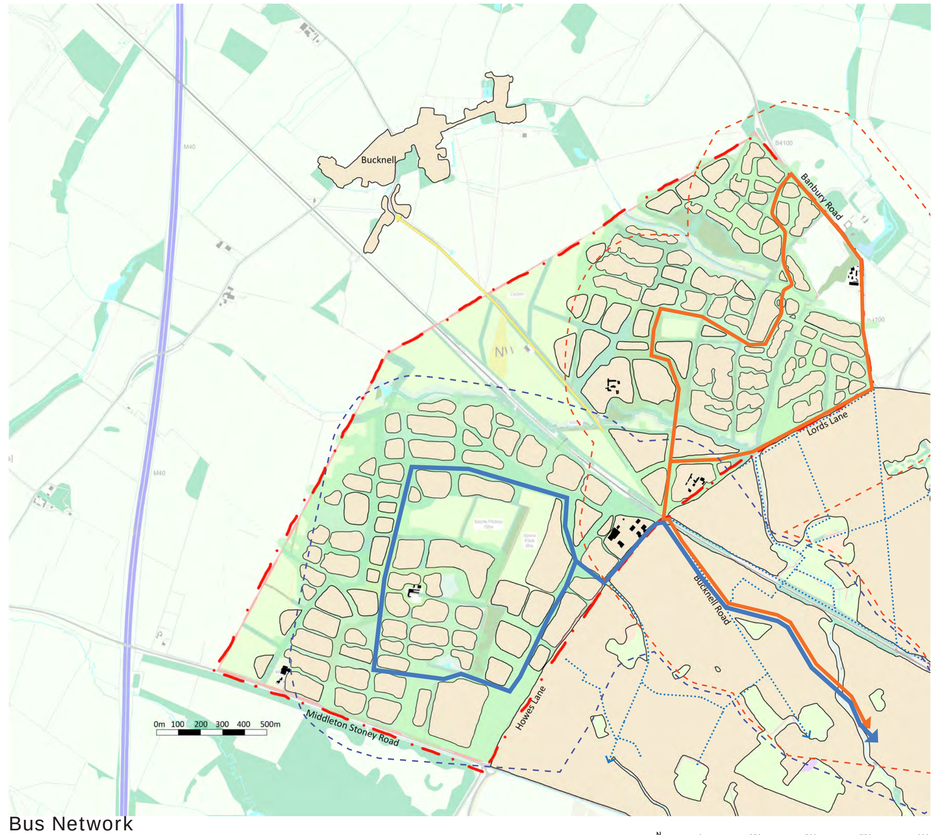
- Proposed Off Road Pedestrian/ Cycle Route
- Proposed Leisure Pedestrians/ Cycle route in GI
- Proposed Primary/Secondary Pedestrian and Cycle Route along Existing Routes
- Existing public footpath
- Bridleway
- Proposed pedestrian/cycle route adjacent to Strategic Road
- Proposed pedestrian/cycle route adjacent to Primary Road
- Proposed pedestrian/cycle route on Secondary Road

Proposed Key Information

- Proposed Secondary School
- Proposed Primary School
- 800m radius walking distance
- Business
- Retail/Leisure
- Social/Community
- Hotel or Care Home
- Extra Care Home
- Health Care
- Play Area



Key Destinations



Bus Network

Proposed Key Information

- Bus Route 1
- Bus Route 2
- Catchment for Bus Route 1
- Catchment for Bus Route 2

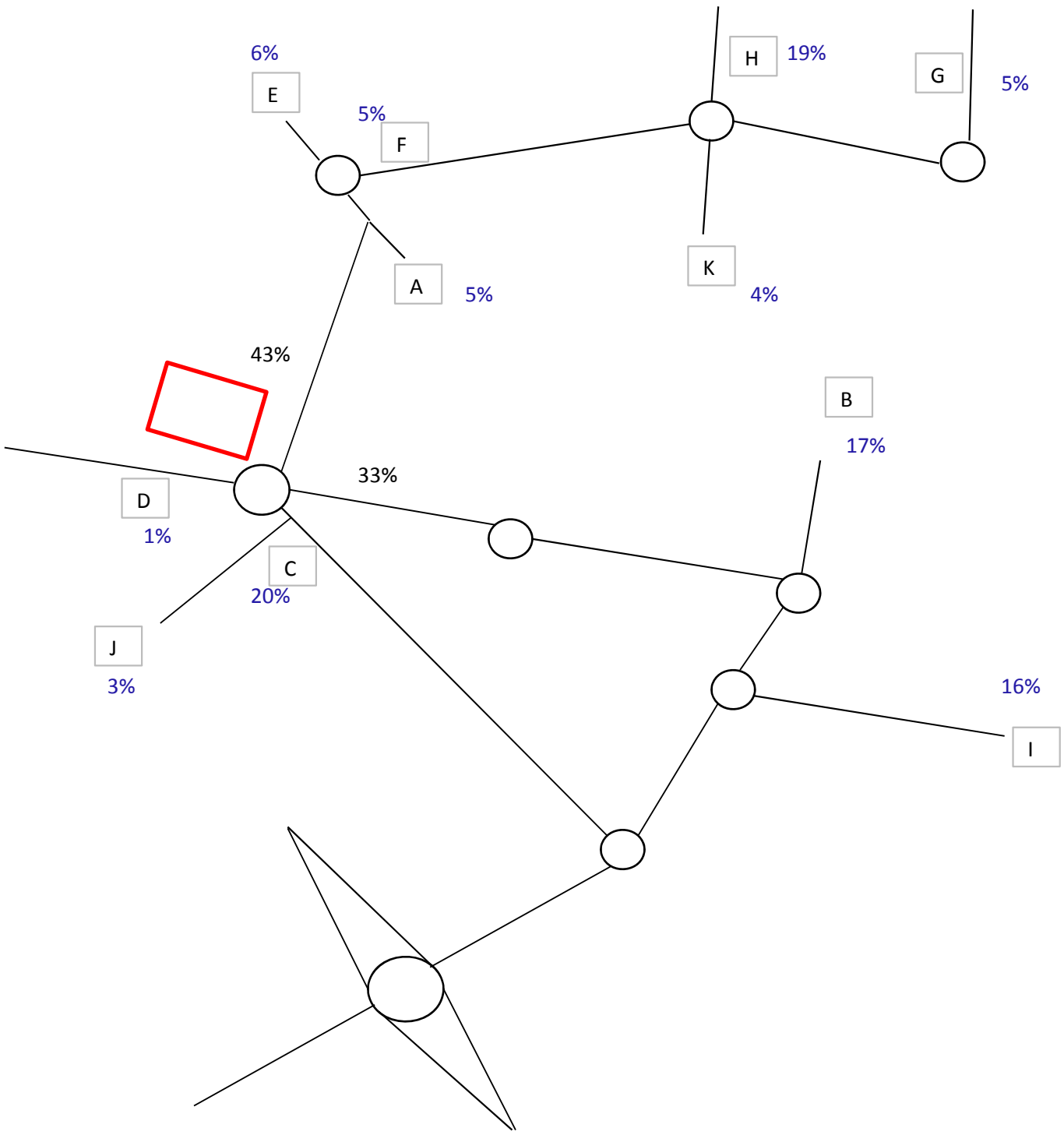
Proposed Primary/Secondary/ Pedestrian and Cycle Route along Existing Routes

FARRELLS

BIMP6 03 NW Bicester Masterplan
Movement and Access Framework

Appendix H

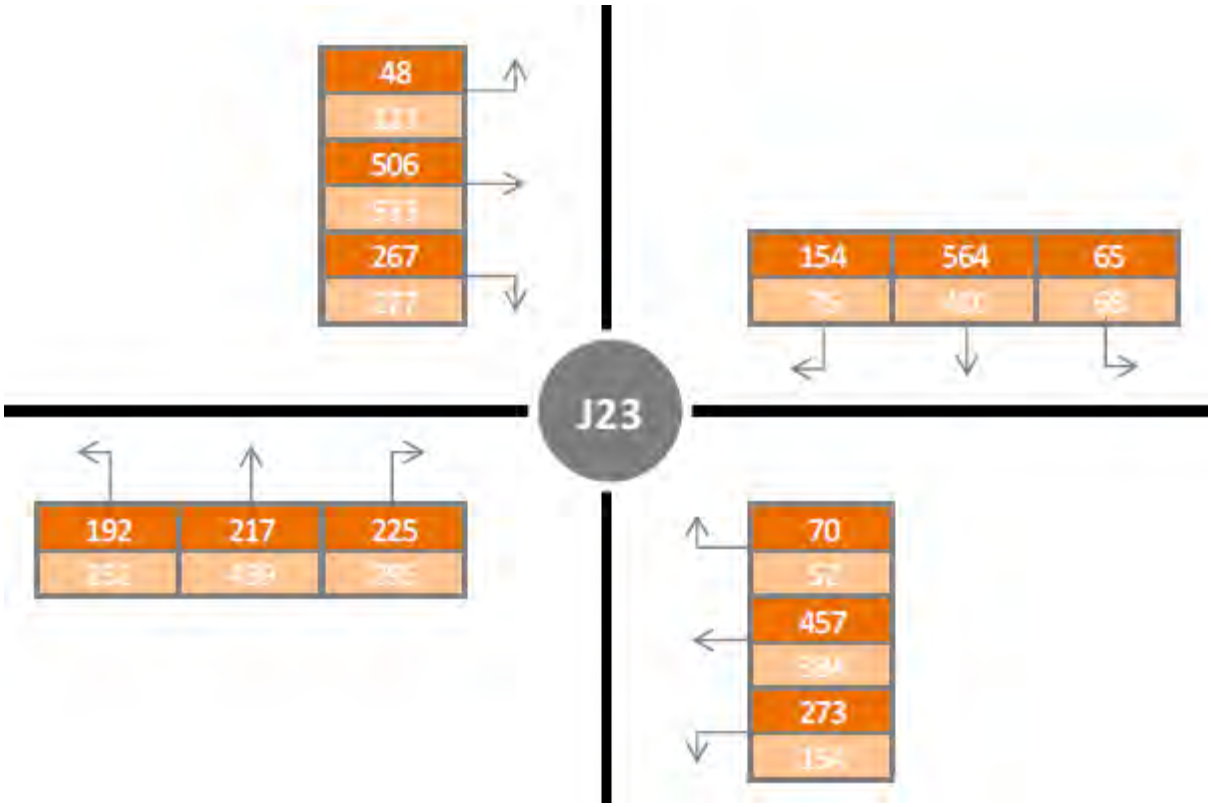
Employment Traffic Distribution



Route		%
A	179	5.1%
B	592	16.8%
C	703	19.9%
D	52	1.5%
E	206	5.8%
F	166	4.7%
G	180	5.1%
H	657	18.6%
I	561	15.9%
J	96	2.7%
K	137	3.9%
	3529	

Appendix I

The 2031 forecast flows from the Bicester Transport Model are set out below for the Middleton Stoney Roundabout, hopefully this is sufficient to inform your requirement. The dark orange is vehicles 0800-0900 with the light orange vehicles 1700-1800.



Appendix J

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.1.1519

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Howes Lane - B4030 - A4095 2021.j10
Path: P:\14000's\14042
Report generation date: 06/08/2021 17:01:14

»(Default Analysis Set) - 2031 , AM
»(Default Analysis Set) - 2031 , PM
»(Default Analysis Set) - 2031 Base+Dev, AM
»(Default Analysis Set) - 2031 Base+Dev, PM

Summary of junction performance

	AM						PM					
	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	A1 - 2031											
1 - Howes Lane	D1	10.6	51.63	0.93	F	24.03	D2	2.3	15.20	0.70	C	29.03
2 - Middleton Stoney Rd E		5.2	24.20	0.84	C			1.2	7.63	0.55	A	
3 - Perimeter Rd (Vendee Drive)		0.8	4.77	0.45	A			2.0	7.07	0.66	A	
4 - B4030 (W)		2.8	12.40	0.74	B			18.3	74.57	0.97	F	
	A1 - 2031 Base+Dev											
1 - Howes Lane	D3	11.8	56.85	0.94	F	26.97	D4	2.8	17.34	0.74	C	30.82
2 - Middleton Stoney Rd E		6.3	28.62	0.87	D			1.3	7.76	0.56	A	
3 - Perimeter Rd (Vendee Drive)		1.0	5.77	0.51	A			2.7	9.60	0.73	A	
4 - B4030 (W)		3.0	13.24	0.75	B			18.9	76.93	0.97	F	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted Av.s.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	27/04/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DTA\arcady
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						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 period length (min)	Time segment length (min)	Run automatically
D1	2031	AM	FLAT	08:00	09:00	60	15	✓
D2	2031	PM	FLAT	17:00	18:00	60	15	✓
D3	2031 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓
D4	2031 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

(Default Analysis Set) - 2031 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roundabout	Standard Roundabout		1, 2, 3, 4	24.03	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	24.03	C

Arms

Arms

Arm	Name	Description	No give-way line
1	Howes Lane		
2	Middleton Stoney Rd E		
3	Perimeter Rd (Vendee Drive)		
4	B4030 (W)		

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - Howes Lane	3.65	7.00	4.6	21.8	54.0	41.0		
2 - Middleton Stoney Rd E	3.65	8.10	7.0	21.0	54.0	45.0		
3 - Perimeter Rd (Vendee Drive)	3.65	8.10	12.3	25.8	54.0	41.0		
4 - B4030 (W)	3.65	8.00	5.1	19.7	54.0	46.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Howes Lane	0.518	1363
2 - Middleton Stoney Rd E	0.534	1473
3 - Perimeter Rd (Vendee Drive)	0.579	1684
4 - B4030 (W)	0.515	1377

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2031	AM	FLAT	08:00	09:00	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Howes Lane		FLAT	✓	783	100.000
2 - Middleton Stoney Rd E		FLAT	✓	800	100.000
3 - Perimeter Rd (Vendee Drive)		FLAT	✓	634	100.000
4 - B4030 (W)		FLAT	✓	821	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Howes Lane	2 - Middleton Stoney Rd E	3 - Perimeter Rd (Vendee Drive)	4 - B4030 (W)
From	1 - Howes Lane	0	65	564	154
	2 - Middleton Stoney Rd E	70	0	457	273
	3 - Perimeter Rd (Vendee Drive)	217	225	0	192
	4 - B4030 (W)	48	506	267	0

Vehicle Mix

HV %s

		To			
		1 - Howes Lane	2 - Middleton Stoney Rd E	3 - Perimeter Rd (Vendee Drive)	4 - B4030 (W)
From	1 - Howes Lane	0	1	1	1
	2 - Middleton Stoney Rd E	1	0	1	1
	3 - Perimeter Rd (Vendee Drive)	1	1	0	1
	4 - B4030 (W)	1	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Howes Lane	0.93	51.63	10.6	F	783	783
2 - Middleton Stoney Rd E	0.84	24.20	5.2	C	800	800
3 - Perimeter Rd (Vendee Drive)	0.45	4.77	0.8	A	634	634
4 - B4030 (W)	0.74	12.40	2.8	B	821	821

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	783	196	987	851	0.920	752	332	0.0	7.7	30.726	D
2 - Middleton Stoney Rd E	800	200	953	964	0.830	783	786	0.0	4.4	18.575	C
3 - Perimeter Rd (Vendee Drive)	634	159	483	1404	0.452	631	1252	0.0	0.8	4.683	A
4 - B4030 (W)	821	205	508	1116	0.736	810	606	0.0	2.7	11.534	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	783	196	998	846	0.926	776	335	7.7	9.3	45.855	E
2 - Middleton Stoney Rd E	800	200	979	950	0.842	798	795	4.4	4.9	23.229	C
3 - Perimeter Rd (Vendee Drive)	634	159	495	1397	0.454	634	1282	0.8	0.8	4.762	A
4 - B4030 (W)	821	205	512	1114	0.737	821	617	2.7	2.8	12.369	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	783	196	998	846	0.926	780	335	9.3	10.1	49.677	E
2 - Middleton Stoney Rd E	800	200	982	949	0.843	799	796	4.9	5.1	23.932	C
3 - Perimeter Rd (Vendee Drive)	634	159	496	1397	0.454	634	1285	0.8	0.8	4.767	A
4 - B4030 (W)	821	205	512	1114	0.737	821	618	2.8	2.8	12.396	B

08:45 - 09:00

	Total	Junction	Circulating				Throughput	Start	End		Unsignalised

Arm	Demand (PCU/hr)	Arrivals (PCU)	flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	(exit) (PCU/hr)	queue (PCU)	queue (PCU)	Delay (s)	level of service
1 - Howes Lane	783	196	998	845	0.926	781	335	10.1	10.6	51.630	F
2 - Middleton Stoney Rd E	800	200	983	948	0.844	800	796	5.1	5.2	24.200	C
3 - Perimeter Rd (Vendee Drive)	634	159	496	1396	0.454	634	1286	0.8	0.8	4.768	A
4 - B4030 (W)	821	205	512	1114	0.737	821	618	2.8	2.8	12.404	B

(Default Analysis Set) - 2031 , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roundabout	Standard Roundabout		1, 2, 3, 4	29.03	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	29.03	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2031	PM	FLAT	17:00	18:00	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Howes Lane		FLAT	✓	554	100.000
2 - Middleton Stoney Rd E		FLAT	✓	590	100.000
3 - Perimeter Rd (Vendee Drive)		FLAT	✓	1006	100.000
4 - B4030 (W)		FLAT	✓	931	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Howes Lane	2 - Middleton Stoney Rd E	3 - Perimeter Rd (Vendee Drive)	4 - B4030 (W)
From	1 - Howes Lane	0	68	410	76
	2 - Middleton Stoney Rd E	52	0	384	154
	3 - Perimeter Rd (Vendee Drive)	459	295	0	252
	4 - B4030 (W)	121	533	277	0

Vehicle Mix

HV %s

		To			
		1 - Howes Lane	2 - Middleton Stoney Rd E	3 - Perimeter Rd (Vendee Drive)	4 - B4030 (W)
From	1 - Howes Lane	0	1	1	1
	2 - Middleton Stoney Rd E	1	0	1	1
	3 - Perimeter Rd (Vendee Drive)	1	1	0	1
	4 - B4030 (W)	1	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Howes Lane	0.70	15.20	2.3	C	554	554
2 - Middleton Stoney Rd E	0.55	7.63	1.2	A	590	590
3 - Perimeter Rd (Vendee Drive)	0.66	7.07	2.0	A	1006	1006
4 - B4030 (W)	0.97	74.57	18.3	F	931	931

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	554	139	1064	811	0.683	546	622	0.0	2.1	13.303	B
2 - Middleton Stoney Rd E	590	148	742	1077	0.548	585	867	0.0	1.2	7.329	A
3 - Perimeter Rd (Vendee Drive)	1006	252	279	1522	0.661	998	1048	0.0	1.9	6.845	A
4 - B4030 (W)	931	233	800	966	0.964	886	478	0.0	11.2	35.320	E

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	554	139	1093	796	0.696	553	630	2.1	2.2	14.905	B
2 - Middleton Stoney Rd E	590	148	758	1068	0.552	590	888	1.2	1.2	7.599	A
3 - Perimeter Rd (Vendee Drive)	1006	252	282	1521	0.662	1006	1066	1.9	2.0	7.062	A
4 - B4030 (W)	931	233	806	962	0.967	917	482	11.2	14.7	59.412	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	554	139	1098	794	0.698	554	631	2.2	2.3	15.110	C
2 - Middleton Stoney Rd E	590	148	760	1067	0.553	590	891	1.2	1.2	7.619	A
3 - Perimeter Rd (Vendee Drive)	1006	252	282	1521	0.662	1006	1068	2.0	2.0	7.065	A
4 - B4030 (W)	931	233	806	962	0.967	922	482	14.7	16.8	68.563	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	554	139	1100	793	0.699	554	631	2.3	2.3	15.198	C
2 - Middleton Stoney Rd E	590	148	761	1067	0.553	590	893	1.2	1.2	7.626	A
3 - Perimeter Rd (Vendee Drive)	1006	252	282	1521	0.662	1006	1069	2.0	2.0	7.065	A
4 - B4030 (W)	931	233	806	962	0.967	925	482	16.8	18.3	74.565	F

(Default Analysis Set) - 2031 Base+Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roundabout	Standard Roundabout		1, 2, 3, 4	26.97	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	26.97	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2031 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Howes Lane		FLAT	✓	791	100.000
2 - Middleton Stoney Rd E		FLAT	✓	823	100.000
3 - Perimeter Rd (Vendee Drive)		FLAT	✓	647	100.000
4 - B4030 (W)		FLAT	✓	821	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Howes Lane	2 - Middleton Stoney Rd E	3 - Perimeter Rd (Vendee Drive)	4 - B4030 (W)
From	1 - Howes Lane	0	70	567	154
	2 - Middleton Stoney Rd E	93	0	273	457
	3 - Perimeter Rd (Vendee Drive)	230	225	0	192
	4 - B4030 (W)	48	506	267	0

Vehicle Mix

HV %s

		To			
		1 - Howes Lane	2 - Middleton Stoney Rd E	3 - Perimeter Rd (Vendee Drive)	4 - B4030 (W)
From	1 - Howes Lane	1	1	1	1
	2 - Middleton Stoney Rd E	1	1	1	1
	3 - Perimeter Rd (Vendee Drive)	1	1	1	1
	4 - B4030 (W)	1	1	1	1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Howes Lane	0.94	56.85	11.8	F	791	791
2 - Middleton Stoney Rd E	0.87	28.62	6.3	D	823	823
3 - Perimeter Rd (Vendee Drive)	0.51	5.77	1.0	A	647	647
4 - B4030 (W)	0.75	13.24	3.0	B	821	821

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	791	198	986	852	0.929	758	367	0.0	8.2	32.078	D
2 - Middleton Stoney Rd E	823	206	954	963	0.854	803	790	0.0	5.0	20.603	C
3 - Perimeter Rd (Vendee Drive)	647	162	684	1288	0.502	643	1073	0.0	1.0	5.605	A
4 - B4030 (W)	821	205	543	1098	0.748	810	784	0.0	2.8	12.181	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	791	198	998	846	0.935	783	371	8.2	10.2	49.320	E
2 - Middleton Stoney Rd E	823	206	981	949	0.867	820	800	5.0	5.8	26.964	D
3 - Perimeter Rd (Vendee Drive)	647	162	700	1278	0.506	647	1100	1.0	1.0	5.759	A
4 - B4030 (W)	821	205	548	1095	0.749	821	800	2.8	2.9	13.187	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	791	198	998	846	0.936	787	371	10.2	11.2	54.212	F
2 - Middleton Stoney Rd E	823	206	984	948	0.869	822	801	5.8	6.1	28.142	D
3 - Perimeter Rd (Vendee Drive)	647	162	702	1277	0.507	647	1104	1.0	1.0	5.769	A
4 - B4030 (W)	821	205	548	1095	0.750	821	802	2.9	3.0	13.224	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	791	198	998	845	0.936	788	371	11.2	11.8	56.848	F
2 - Middleton Stoney Rd E	823	206	986	947	0.869	822	801	6.1	6.3	28.624	D
3 - Perimeter Rd (Vendee Drive)	647	162	703	1277	0.507	647	1105	1.0	1.0	5.773	A
4 - B4030 (W)	821	205	548	1095	0.750	821	802	3.0	3.0	13.236	B

(Default Analysis Set) - 2031 Base+Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roundabout	Standard Roundabout		1, 2, 3, 4	30.82	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	30.82	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2031 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Howes Lane		FLAT	✓	584	100.000
2 - Middleton Stoney Rd E		FLAT	✓	593	100.000
3 - Perimeter Rd (Vendee Drive)		FLAT	✓	1007	100.000
4 - B4030 (W)		FLAT	✓	931	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Howes Lane	2 - Middleton Stoney Rd E	3 - Perimeter Rd (Vendee Drive)	4 - B4030 (W)
From	1 - Howes Lane	0	88	420	76
	2 - Middleton Stoney Rd E	55	0	154	384
	3 - Perimeter Rd (Vendee Drive)	460	295	0	252
	4 - B4030 (W)	121	533	277	0

Vehicle Mix

HV %s

		To			
		1 - Howes Lane	2 - Middleton Stoney Rd E	3 - Perimeter Rd (Vendee Drive)	4 - B4030 (W)
From	1 - Howes Lane	1	1	1	1
	2 - Middleton Stoney Rd E	1	1	1	1
	3 - Perimeter Rd (Vendee Drive)	1	1	1	1
	4 - B4030 (W)	1	1	1	1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Howes Lane	0.74	17.34	2.8	C	584	584
2 - Middleton Stoney Rd E	0.56	7.76	1.3	A	593	593
3 - Perimeter Rd (Vendee Drive)	0.73	9.60	2.7	A	1007	1007
4 - B4030 (W)	0.97	76.93	18.9	F	931	931

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	584	146	1063	812	0.719	574	625	0.0	2.4	14.748	B
2 - Middleton Stoney Rd E	593	148	751	1072	0.553	588	886	0.0	1.2	7.441	A
3 - Perimeter Rd (Vendee Drive)	1007	252	510	1388	0.725	997	829	0.0	2.6	9.060	A
4 - B4030 (W)	931	233	802	965	0.965	886	705	0.0	11.3	35.670	E

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	584	146	1092	797	0.733	583	634	2.4	2.7	16.913	C
2 - Middleton Stoney Rd E	593	148	768	1063	0.558	593	907	1.2	1.3	7.730	A
3 - Perimeter Rd (Vendee Drive)	1007	252	515	1386	0.727	1007	846	2.6	2.6	9.579	A
4 - B4030 (W)	931	233	810	960	0.969	916	712	11.3	15.0	60.594	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	584	146	1097	794	0.735	584	635	2.7	2.7	17.212	C
2 - Middleton Stoney Rd E	593	148	770	1062	0.558	593	911	1.3	1.3	7.751	A
3 - Perimeter Rd (Vendee Drive)	1007	252	515	1386	0.727	1007	848	2.6	2.6	9.592	A
4 - B4030 (W)	931	233	810	960	0.969	922	712	15.0	17.3	70.407	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Howes Lane	584	146	1099	793	0.736	584	635	2.7	2.8	17.339	C
2 - Middleton Stoney Rd E	593	148	771	1061	0.559	593	912	1.3	1.3	7.759	A
3 - Perimeter Rd (Vendee Drive)	1007	252	515	1386	0.727	1007	849	2.6	2.7	9.596	A
4 - B4030 (W)	931	233	810	960	0.969	924	712	17.3	18.9	76.926	F

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.1.1519

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Import of Middleton Stoney Rd-Site Access_2021.j10
Path: P:\14000's\14042
Report generation date: 06/08/2021 15:02:20

»(Default Analysis Set) - 2031, AM
»(Default Analysis Set) - 2031, PM
»(Default Analysis Set) - 2031 with Dev, AM
»(Default Analysis Set) - 2031 with Dev, PM

Summary of junction performance

	AM					PM				
	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Set ID	Q (PCU)	Delay (s)	RFC	LOS
	A1 - 2031									
Stream B-C	D3	0.1	8.49	0.09	A	D4	0.3	10.27	0.19	B
Stream B-A		0.1	24.74	0.06	C		0.1	22.69	0.06	C
Stream C-B		0.3	10.77	0.23	B		0.1	9.53	0.06	A
	A1 - 2031 with Dev									
Stream B-C	D5	0.2	8.83	0.12	A	D6	0.5	12.12	0.31	B
Stream B-A		0.1	27.62	0.07	D		0.1	23.54	0.06	C
Stream C-B		0.5	12.15	0.31	B		0.1	9.63	0.07	A

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 Av. delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	26/07/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DTA\arcady
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Q Percentiles	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)

		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2031	AM	ONE HOUR	07:45	09:15	15
D4	2031	PM	ONE HOUR	16:45	18:15	15
D5	2031 with Dev	AM	ONE HOUR	07:45	09:15	15
D6	2031 with Dev	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	(Default Analysis Set)	100.000

(Default Analysis Set) - 2031, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

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	Site Access	T-Junction	Two-way	Two-way	Two-way		0.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.92	A

Arms

Arms

Arm	Name	Description	Arm type
A	Middleton Stoney Rd W		Major
B	Site Access		Minor
C	Middelton Stoney Rd E		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 - Middelton Stoney Rd E	6.80		✓	3.50	100.0		-

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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane plus flare	10.00	7.10	4.30	3.50	3.50		1.00	120	120

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	610	0.107	0.271	0.171	0.387
B-C	788	0.117	0.295	-	-
C-B	721	0.270	0.270	-	-

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)
D3	2031	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Middleton Stoney Rd W		✓	831	100.000
B - Site Access		✓	51	100.000
C - Middelton Stoney Rd E		✓	900	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Middleton Stoney Rd W	B - Site Access	C - Middelton Stoney Rd E
From	A - Middleton Stoney Rd W	0	10	821
	B - Site Access	10	0	41
	C - Middelton Stoney Rd E	803	97	0

Vehicle Mix

HV %s

		To		
		A - Middleton Stoney Rd W	B - Site Access	C - Middelton Stoney Rd E
From	A - Middleton Stoney Rd W	0	10	10
	B - Site Access	10	0	10
	C - Middelton Stoney Rd E	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
B-C	0.09	8.49	0.1	A
B-A	0.06	24.74	0.1	C
C-A				
C-B	0.23	10.77	0.3	B
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	601	0.051	31	0.1	6.938	A
B-A	8	310	0.024	7	0.0	13.074	B

C-A	605			605			
C-B	73	553	0.132	72	0.2	8.238	A
A-B	8			8			
A-C	618			618			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	564	0.065	37	0.1	7.510	A
B-A	9	252	0.036	9	0.0	16.306	C
C-A	722			722			
C-B	87	520	0.168	87	0.2	9.145	A
A-B	9			9			
A-C	738			738			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	511	0.088	45	0.1	8.489	A
B-A	11	171	0.064	11	0.1	24.683	C
C-A	884			884			
C-B	107	474	0.225	106	0.3	10.748	B
A-B	11			11			
A-C	904			904			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	511	0.088	45	0.1	8.494	A
B-A	11	171	0.064	11	0.1	24.744	C
C-A	884			884			
C-B	107	474	0.225	107	0.3	10.769	B
A-B	11			11			
A-C	904			904			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	564	0.065	37	0.1	7.515	A
B-A	9	252	0.036	9	0.0	16.347	C
C-A	722			722			
C-B	87	520	0.168	88	0.2	9.169	A
A-B	9			9			
A-C	738			738			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	601	0.051	31	0.1	6.949	A
B-A	8	310	0.024	8	0.0	13.102	B
C-A	605			605			
C-B	73	553	0.132	73	0.2	8.266	A
A-B	8			8			
A-C	618			618			

(Default Analysis Set) - 2031, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

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	Site Access	T-Junction	Two-way	Two-way	Two-way		0.74	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.74	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)
D4	2031	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Middleton Stoney Rd W		✓	941	100.000
B - Site Access		✓	93	100.000
C - Middelton Stoney Rd E		✓	736	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Middleton Stoney Rd W	B - Site Access	C - Middelton Stoney Rd E
From	A - Middleton Stoney Rd W	0	10	931
	B - Site Access	10	0	83
	C - Middelton Stoney Rd E	712	24	0

Vehicle Mix

HV %s

		To		
		A - Middleton Stoney Rd W	B - Site Access	C - Middelton Stoney Rd E
From	A - Middleton Stoney Rd W	0	10	10
	B - Site Access	10	0	10
	C - Middelton Stoney Rd E	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
B-C	0.19	10.27	0.3	B
B-A	0.06	22.69	0.1	C
C-A				
C-B	0.06	9.53	0.1	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	577	0.108	62	0.1	7.682	A
B-A	8	320	0.024	7	0.0	12.652	B
C-A	536			536			
C-B	18	530	0.034	18	0.0	7.727	A
A-B	8			8			
A-C	701			701			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	535	0.139	74	0.2	8.591	A
B-A	9	264	0.034	9	0.0	15.538	C
C-A	640			640			
C-B	22	493	0.044	22	0.0	8.396	A
A-B	9			9			
A-C	837			837			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	477	0.192	91	0.3	10.256	B
B-A	11	186	0.059	11	0.1	22.657	C
C-A	784			784			
C-B	26	442	0.060	26	0.1	9.531	A
A-B	11			11			
A-C	1025			1025			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	477	0.192	91	0.3	10.274	B
B-A	11	186	0.059	11	0.1	22.691	C
C-A	784			784			
C-B	26	442	0.060	26	0.1	9.532	A
A-B	11			11			
A-C	1025			1025			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-C	75	535	0.139	75	0.2	8.609	A
B-A	9	264	0.034	9	0.0	15.560	C
C-A	640			640			
C-B	22	493	0.044	22	0.1	8.402	A
A-B	9			9			
A-C	837			837			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	577	0.108	63	0.1	7.705	A
B-A	8	320	0.024	8	0.0	12.669	B
C-A	536			536			
C-B	18	530	0.034	18	0.0	7.735	A
A-B	8			8			
A-C	701			701			

(Default Analysis Set) - 2031 with Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

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	Site Access	T-Junction	Two-way	Two-way	Two-way		1.31	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.31	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)
D5	2031 with Dev	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Middleton Stoney Rd W		✓	831	100.000
B - Site Access		✓	66	100.000
C - Middelton Stoney Rd E		✓	938	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Middleton Stoney Rd W	B - Site Access	C - Middelton Stoney Rd E
From	A - Middleton Stoney Rd W	0	10	821
	B - Site Access	10	0	56
	C - Middelton Stoney Rd E	803	135	0

Vehicle Mix

HV %s

		To		
		A - Middleton Stoney Rd W	B - Site Access	C - Middelton Stoney Rd E
From	A - Middleton Stoney Rd W	0	10	10
	B - Site Access	10	0	10
	C - Middelton Stoney Rd E	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
B-C	0.12	8.83	0.2	A
B-A	0.07	27.62	0.1	D
C-A				
C-B	0.31	12.15	0.5	B
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	42	601	0.070	42	0.1	7.080	A
B-A	8	299	0.025	7	0.0	13.574	B
C-A	605			605			
C-B	102	553	0.184	101	0.2	8.746	A
A-B	8			8			
A-C	618			618			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	50	564	0.089	50	0.1	7.709	A
B-A	9	238	0.038	9	0.0	17.261	C
C-A	722			722			
C-B	121	520	0.233	121	0.3	9.923	A
A-B	9			9			
A-C	738			738			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	510	0.121	61	0.1	8.822	A
B-A	11	155	0.071	11	0.1	27.512	D
C-A	884			884			
C-B	149	474	0.313	148	0.5	12.104	B
A-B	11			11			
A-C	904			904			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	510	0.121	62	0.2	8.828	A
B-A	11	154	0.071	11	0.1	27.618	D
C-A	884			884			
C-B	149	474	0.313	149	0.5	12.149	B
A-B	11			11			
A-C	904			904			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-C	50	564	0.089	51	0.1	7.721	A
B-A	9	238	0.038	9	0.0	17.322	C
C-A	722			722			
C-B	121	520	0.233	122	0.3	9.972	A
A-B	9			9			
A-C	738			738			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	42	601	0.070	42	0.1	7.090	A
B-A	8	299	0.025	8	0.0	13.613	B
C-A	605			605			
C-B	102	553	0.184	102	0.3	8.797	A
A-B	8			8			
A-C	618			618			

(Default Analysis Set) - 2031 with Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

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	Site Access	T-Junction	Two-way	Two-way	Two-way		1.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.18	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)
D6	2031 with Dev	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Middleton Stoney Rd W		✓	941	100.000
B - Site Access		✓	146	100.000
C - Middelton Stoney Rd E		✓	740	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Middleton Stoney Rd W	B - Site Access	C - Middelton Stoney Rd E
From	A - Middleton Stoney Rd W	0	10	931
	B - Site Access	10	0	136
	C - Middelton Stoney Rd E	712	28	0

Vehicle Mix

HV %s

		To		
		A - Middleton Stoney Rd W	B - Site Access	C - Middelton Stoney Rd E
From	A - Middleton Stoney Rd W	0	10	10
	B - Site Access	10	0	10
	C - Middelton Stoney Rd E	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
B-C	0.31	12.12	0.5	B
B-A	0.06	23.54	0.1	C
C-A				
C-B	0.07	9.63	0.1	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	102	577	0.177	101	0.2	8.316	A
B-A	8	318	0.024	7	0.0	12.759	B
C-A	536			536			
C-B	21	530	0.040	21	0.0	7.773	A
A-B	8			8			
A-C	701			701			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	122	535	0.228	122	0.3	9.572	A
B-A	9	260	0.035	9	0.0	15.777	C
C-A	640			640			
C-B	25	493	0.051	25	0.1	8.460	A
A-B	9			9			
A-C	837			837			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	150	477	0.314	149	0.5	12.068	B
B-A	11	179	0.061	11	0.1	23.487	C
C-A	784			784			
C-B	31	442	0.070	31	0.1	9.631	A
A-B	11			11			
A-C	1025			1025			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	150	476	0.314	150	0.5	12.118	B
B-A	11	179	0.061	11	0.1	23.538	C
C-A	784			784			
C-B	31	442	0.070	31	0.1	9.634	A
A-B	11			11			
A-C	1025			1025			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

B-C	122	535	0.228	123	0.3	9.621	A
B-A	9	260	0.035	9	0.0	15.811	C
C-A	640			640			
C-B	25	493	0.051	25	0.1	8.467	A
A-B	9			9			
A-C	837			837			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	102	577	0.178	103	0.2	8.359	A
B-A	8	318	0.024	8	0.0	12.780	B
C-A	536			536			
C-B	21	530	0.040	21	0.0	7.781	A
A-B	8			8			
A-C	701			701			

Appendix K

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Western Parcel - SLR Junction.j10
Path: P:\14000's\14042
Report generation date: 09/08/2021 09:54:48

Summary of junction performance

	AM						PM					
	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Res Cap	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Res Cap
	2031											
Stream B-AC	D1	0.0	8.74	0.03	A	114 %	D2	0.1	11.03	0.12	B	65 %
Stream C-AB		0.0	6.29	0.04	A	[Stream B-AC]		0.0	6.99	0.01	A	[Stream B-AC]

Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle. Res Cap 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	06/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DTA\arcady
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Q Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031	AM	ONE HOUR	07:45	09:15	15
D2	2031	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031, 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		0.23	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	114	Stream B-AC	0.23	A

Arms

Arms

Arm	Name	Description	Arm type
A	Strategic Link Road (S)		Major
B	Western Parcel		Minor
C	Strategic Link Road (N)		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 - Strategic Link Road (N)	7.00		✓	3.50	175.0	✓	3.00

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 - Western Parcel	One lane	3.60	107	179

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	640	0.112	0.282	0.177	0.403
B-C	781	0.114	0.289	-	-
C-B	771	0.286	0.286	-	-

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)
D1	2031	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Strategic Link Road (S)		✓	367	100.000
B - Western Parcel		✓	12	100.000
C - Strategic Link Road (N)		✓	731	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Strategic Link Road (S)	B - Western Parcel	C - Strategic Link Road (N)
From	A - Strategic Link Road (S)	0	31	336
	B - Western Parcel	7	0	5
	C - Strategic Link Road (N)	707	24	0

Vehicle Mix

HV %s

		To		
		A - Strategic Link Road (S)	B - Western Parcel	C - Strategic Link Road (N)
From	A - Strategic Link Road (S)	0	10	10
	B - Western Parcel	10	0	10
	C - Strategic Link Road (N)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
B-AC	0.03	8.74	0.0	A
C-AB	0.04	6.29	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	542	0.017	9	0.0	7.435	A
C-AB	18	692	0.026	18	0.0	5.875	A
C-A	532			532			
A-B	23			23			
A-C	253			253			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	511	0.021	11	0.0	7.923	A
C-AB	22	677	0.032	22	0.0	6.044	A

C-A	636			636			
A-B	28			28			
A-C	302			302			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	467	0.028	13	0.0	8.735	A
C-AB	26	656	0.040	26	0.0	6.293	A
C-A	778			778			
A-B	34			34			
A-C	370			370			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	466	0.028	13	0.0	8.735	A
C-AB	26	656	0.040	26	0.0	6.293	A
C-A	778			778			
A-B	34			34			
A-C	370			370			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	511	0.021	11	0.0	7.924	A
C-AB	22	677	0.032	22	0.0	6.047	A
C-A	636			636			
A-B	28			28			
A-C	302			302			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	542	0.017	9	0.0	7.436	A
C-AB	18	692	0.026	18	0.0	5.876	A
C-A	532			532			
A-B	23			23			
A-C	253			253			

2031, 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		0.41	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	65	Stream B-AC	0.41	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)
D2	2031	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Strategic Link Road (S)		✓	639	100.000
B - Western Parcel		✓	44	100.000
C - Strategic Link Road (N)		✓	557	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Strategic Link Road (S)	B - Western Parcel	C - Strategic Link Road (N)
From	A - Strategic Link Road (S)	0	3	636
	B - Western Parcel	25	0	19
	C - Strategic Link Road (N)	554	3	0

Vehicle Mix

HV %s

		To		
		A - Strategic Link Road (S)	B - Western Parcel	C - Strategic Link Road (N)
From	A - Strategic Link Road (S)	0	10	10
	B - Western Parcel	10	0	10
	C - Strategic Link Road (N)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
B-AC	0.12	11.03	0.1	B
C-AB	0.01	6.99	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	502	0.066	33	0.1	8.442	A
C-AB	2	633	0.004	2	0.0	6.273	A
C-A	417			417			
A-B	2			2			
A-C	479			479			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	463	0.086	39	0.1	9.355	A
C-AB	3	607	0.004	3	0.0	6.554	A
C-A	498			498			
A-B	3			3			
A-C	572			572			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	408	0.119	48	0.1	11.017	B
C-AB	3	570	0.006	3	0.0	6.988	A
C-A	610			610			
A-B	3			3			
A-C	700			700			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	408	0.119	48	0.1	11.028	B
C-AB	3	570	0.006	3	0.0	6.988	A
C-A	610			610			
A-B	3			3			
A-C	700			700			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	463	0.086	40	0.1	9.368	A
C-AB	3	607	0.004	3	0.0	6.557	A
C-A	498			498			
A-B	3			3			
A-C	572			572			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	502	0.066	33	0.1	8.457	A

C-AB	2	633	0.004	2	0.0	6.273	A
C-A	417			417			
A-B	2			2			
A-C	479			479			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Eastern Parcel - SLR Junction.j10
Path: P:\14000's\14042
Report generation date: 09/08/2021 09:43:23

Summary of junction performance

	AM						PM					
	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Res Cap	Set ID	Q (PCU)	Delay (s)	RFC	LOS	Res Cap
	2031											
Stream B-AC	D1	0.0	0.00	0.00	A	159 %	D2	0.0	9.60	0.02	A	91 %
Stream C-AB		0.0	7.62	0.01	A	[Stream C-AB]		0.0	6.57	0.00	A	[Stream B-AC]

Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle. Res Cap 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	06/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DTA\arcady
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Q Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031	AM	ONE HOUR	07:45	09:15	15
D2	2031	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031, 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		0.05	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	159	Stream C-AB	0.05	A

Arms

Arms

Arm	Name	Description	Arm type
A	Strategic Link Road (N)		Major
B	Eastern Parcel		Minor
C	Strategic Link Road (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 - Strategic Link Road (S)	7.00		✓	3.50	189.0	✓	3.00

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 - Eastern Parcel	One lane	3.60	114	99

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	599	0.104	0.264	0.166	0.377
B-C	727	0.107	0.270	-	-
C-B	780	0.289	0.289	-	-

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)
D1	2031	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Strategic Link Road (N)		✓	794	100.000
B - Eastern Parcel		✓	2	100.000
C - Strategic Link Road (S)		✓	373	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Strategic Link Road (N)	B - Eastern Parcel	C - Strategic Link Road (S)
From	A - Strategic Link Road (N)	0	4	790
	B - Eastern Parcel	1	0	1
	C - Strategic Link Road (S)	366	7	0

Vehicle Mix

HV %s

		To		
		A - Strategic Link Road (N)	B - Eastern Parcel	C - Strategic Link Road (S)
From	A - Strategic Link Road (N)	0	10	10
	B - Eastern Parcel	10	0	10
	C - Strategic Link Road (S)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.01	7.62	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	465	0.000	0	0.0	0.000	A
C-AB	5	607	0.009	5	0.0	6.577	A
C-A	276			276			
A-B	3			3			
A-C	595			595			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	427	0.000	0	0.0	0.000	A
C-AB	6	574	0.011	6	0.0	6.977	A

C-A	329			329			
A-B	4			4			
A-C	710			710			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	372	0.000	0	0.0	0.000	A
C-AB	8	527	0.015	8	0.0	7.619	A
C-A	403			403			
A-B	4			4			
A-C	870			870			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	372	0.000	0	0.0	0.000	A
C-AB	8	527	0.015	8	0.0	7.619	A
C-A	403			403			
A-B	4			4			
A-C	870			870			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	427	0.000	0	0.0	0.000	A
C-AB	6	574	0.011	6	0.0	6.978	A
C-A	329			329			
A-B	4			4			
A-C	710			710			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	465	0.000	0	0.0	0.000	A
C-AB	5	607	0.009	5	0.0	6.579	A
C-A	276			276			
A-B	3			3			
A-C	595			595			

2031, 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		0.08	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	91	Stream B-AC	0.08	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)
D2	2031	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Strategic Link Road (N)		✓	554	100.000
B - Eastern Parcel		✓	9	100.000
C - Strategic Link Road (S)		✓	636	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Strategic Link Road (N)	B - Eastern Parcel	C - Strategic Link Road (S)
From	A - Strategic Link Road (N)	0	0	554
	B - Eastern Parcel	4	0	5
	C - Strategic Link Road (S)	635	1	0

Vehicle Mix

HV %s

		To		
		A - Strategic Link Road (N)	B - Eastern Parcel	C - Strategic Link Road (S)
From	A - Strategic Link Road (N)	0	10	10
	B - Eastern Parcel	10	0	10
	C - Strategic Link Road (S)	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
B-AC	0.02	9.60	0.0	A
C-AB	0.00	6.57	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	503	0.013	7	0.0	7.981	A
C-AB	0.75	660	0.001	0.75	0.0	6.010	A
C-A	478			478			
A-B	0			0			
A-C	417			417			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	470	0.017	8	0.0	8.579	A
C-AB	0.90	636	0.001	0.90	0.0	6.233	A
C-A	571			571			
A-B	0			0			
A-C	498			498			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	422	0.023	10	0.0	9.603	A
C-AB	1	604	0.002	1	0.0	6.570	A
C-A	699			699			
A-B	0			0			
A-C	610			610			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	422	0.023	10	0.0	9.603	A
C-AB	1	604	0.002	1	0.0	6.570	A
C-A	699			699			
A-B	0			0			
A-C	610			610			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	470	0.017	8	0.0	8.582	A
C-AB	0.90	636	0.001	0.90	0.0	6.233	A
C-A	571			571			
A-B	0			0			
A-C	498			498			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	503	0.013	7	0.0	7.985	A

C-AB	0.75	660	0.001	0.75	0.0	6.010	A
C-A	478			478			
A-B	0			0			
A-C	417			417			

Appendix L

UA005241
NW Bicester Interim Traffic Calculations

J20 Bucknell Road/ Howes Lane

Base Year 2012 AM Peak

From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	Total
Bucknell Road North	0	326	188	514
Howes Lane	352	0	9	361
Bucknell Road South	255	85	0	340
Total	607	411	197	**1215**

Base Year 2012 PM Peak

From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	Total
Bucknell Road North	0	303	85	388
Howes Lane	429	0	6	435
Bucknell Road South	429	151	0	580
Total	858	454	91	**1403**

Interim Year 2024 AM Peak **Model Test 1** NWB Units 2256

From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	Total
Bucknell Road North	0	559	263	822
Howes Lane	572	0	69	641
Bucknell Road South	380	116	0	496
Total	952	675	332	**1959**

Interim Year 2024 PM Peak **Model Test 1** NWB Units 2256

From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	Total
Bucknell Road North	0	497	319	816
Howes Lane	650	0	91	741
Bucknell Road South	491	196	0	687
Total	1141	693	410	**2244**

Change in Traffic 2012-2024 **AM Peak**

From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	Total
Bucknell Road North	0	233	75	308
Howes Lane	220	0	60	280
Bucknell Road South	125	31	0	156
Total	345	264	135	**744**

Change in Traffic 2012-2024 **PM Peak**

From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	Total
Bucknell Road North	0	194	234	428
Howes Lane	221	0	85	306
Bucknell Road South	62	45	0	107
Total	283	239	319	**841**

Model Test 2

Reduction on 2024 60.11% **AM Peak** NWB Units 900

From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	Total
Bucknell Road North	0	419	218	637
Howes Lane	440	0	33	473
Bucknell Road South	305	97	0	402
Total	745	516	251	**1512**

Model Test 2

Reduction on 2024 60.11% **PM Peak** NWB Units 900

From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	Total
Bucknell Road North	0	380	178	559
Howes Lane	517	0	40	557
Bucknell Road South	454	169	0	623
Total	971	549	218	**1738**

Model Test 3

Reduction on 2024	46.81%	**AM Peak**		NWB Units 1200
From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	**Total**
Bucknell Road North	0	450	228	678
Howes Lane	469	0	41	510
Bucknell Road South	321	101	0	423
Total	791	551	269	**1611**

Model Test 3

Reduction on 2024	46.81%	**PM Peak**		NWB Units 1200
From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	**Total**
Bucknell Road North	0	406	209	616
Howes Lane	547	0	51	598
Bucknell Road South	462	175	0	637
Total	1009	581	261	**1850**

Albion Test

Reduction on 2024	53.46%	**AM Peak**		NWB Units 1050
From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	**Total**
Bucknell Road North	0	434	223	657
Howes Lane	454	0	37	491
Bucknell Road South	313	99	0	413
Total	768	534	260	**1561**

Albion Test

Reduction on 2024	53.46%	**PM Peak**		NWB Units 1050
From/ To	Bucknell Road North	Howes Lane	Bucknell Road South	**Total**
Bucknell Road North	0	393	194	587
Howes Lane	532	0	46	577
Bucknell Road South	458	172	0	630
Total	990	565	239	**1794**

david tucker associates
Forester House
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