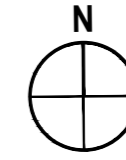


vectos.

Appendix O



Notes:
 1. This is not a construction drawing and is intended for illustrative purposes only.
 2. White lining is indicative only.



REV	DETAILS	DRAWN	CHECKED	DATE

CLIENT:
Merton College

PROJECT:
YARNTON, CHERWELL

DRAWING TITLE:
Possible A44 / Cassington Road Junction Improvement

SCALES:
1:500 at A2

DRAWN: DSN CHECKED: DATE: 17.9.2020

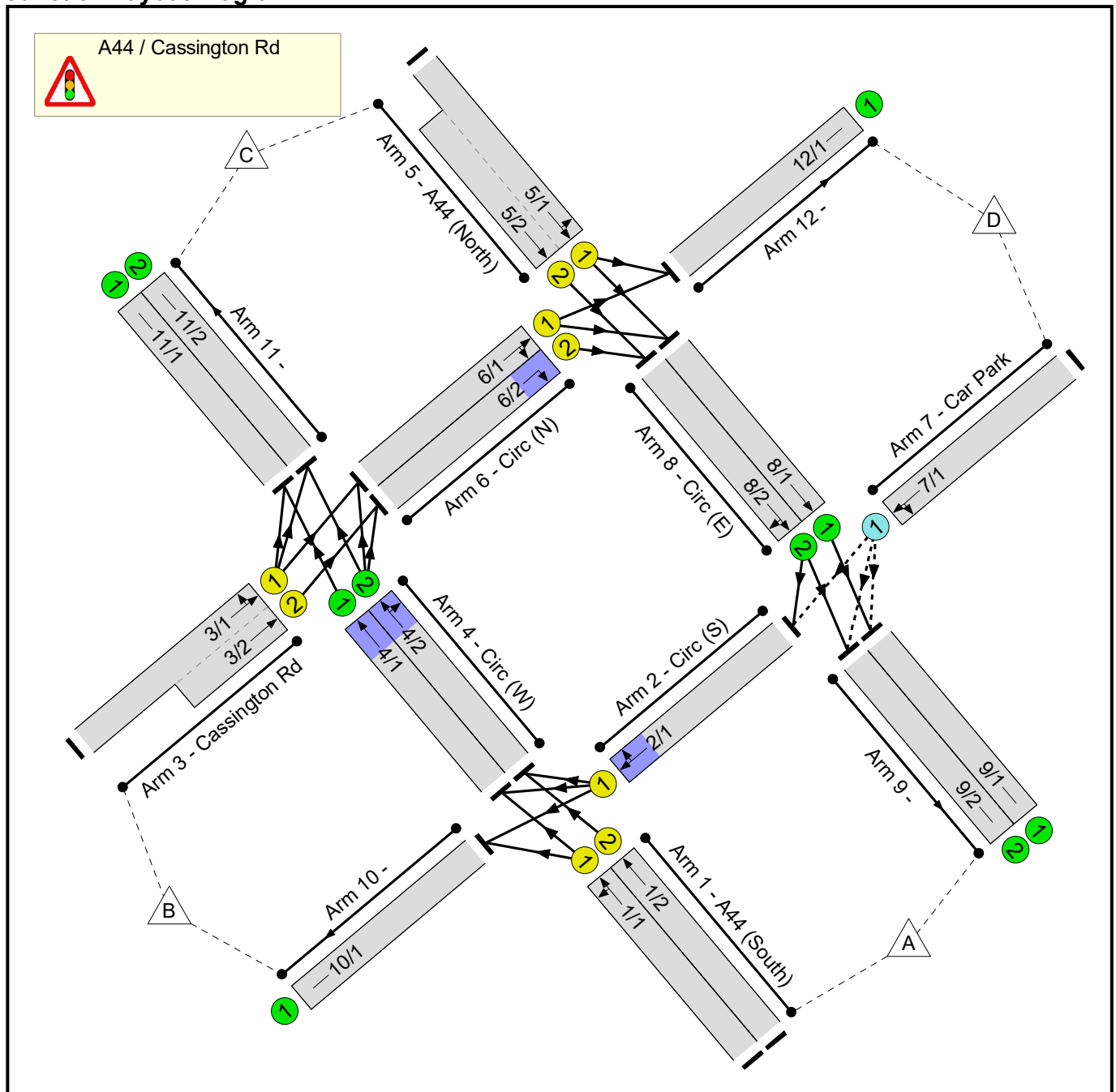
vectos.
 Network Building, 97 Tottenham Court Road, London W1T 4TP
 t: 020 7580 7373 e: enquiries@vectos.co.uk

DRAWING NUMBER: **162751/A/18** REVISION: .

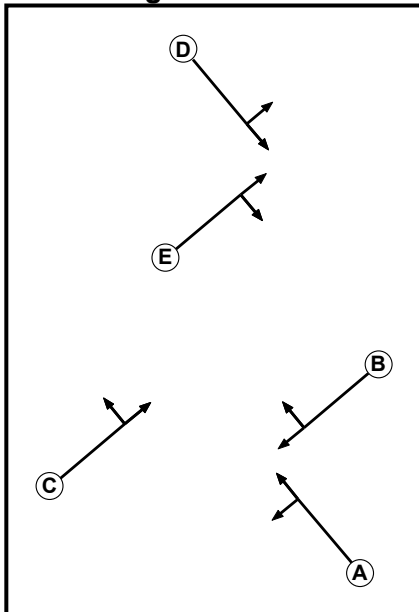
User and Project Details

Project:	Yarnton, Cherwell
Title:	A44 / Cassington Road
Design Layout Ref:	Proposed Junction Layout (Drg. No: 162751/A/18)
File name:	A44_Cassington (162751_A_18) v1.1.lsg3x
Author:	David Noyce
Company:	Vectos (South) Ltd
Address:	Network Building, 97 Tottenham Court Road, London W1T 4TP

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		-9999	7
B	Traffic		-9999	7
C	Traffic		-9999	7
D	Traffic		-9999	7
E	Traffic		-9999	7

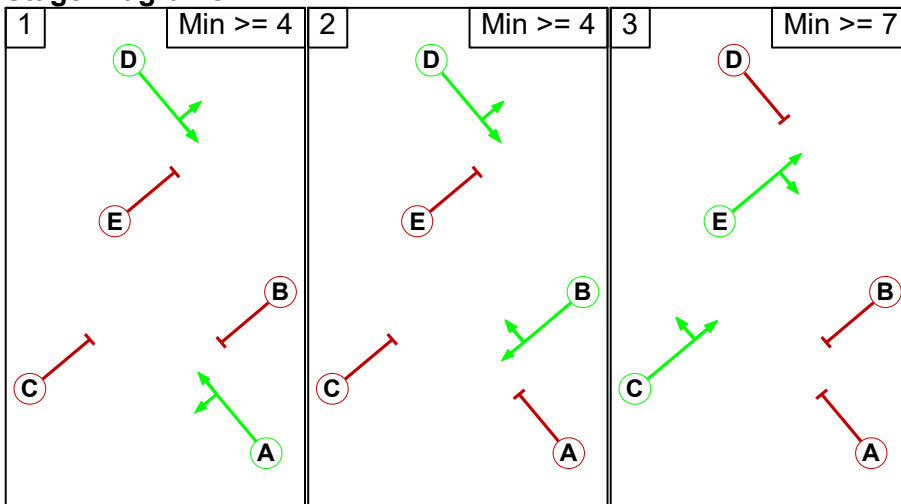
Intergreens

		Starting Phase				
		A	B	C	D	E
Terminating Phase	A	7	11	-	-	
	B	5	8	-	-	
	C	5	5	-	-	
	D	-	-	-	7	
	E	-	-	-	5	

Stage Data

Stage No.	Phases in Stage
1	A D
2	B D
3	C E

Stage Diagrams



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	D	Losing	7	7
3	1	A	Gaining absolute	4	4
3	1	E	Losing	3	3
3	2	E	Losing	3	3

Lane Input Data

Junction: A44 / Cassington Rd												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A44 (South))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Ahead	20.00
											Arm 10 Left	20.00
1/2 (A44 (South))	U	A	2	3	60.0	Geom	-	3.00	0.00	N	Arm 4 Ahead	20.00
2/1 (Circ (S))	U	B	2	3	3.0	Geom	-	3.75	0.00	Y	Arm 4 Right	15.00
											Arm 10 Ahead	15.00
3/1 (Cassington Rd)	U	C	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Ahead	Inf
											Arm 11 Left	15.00
3/2 (Cassington Rd)	U	C	2	3	6.0	Geom	-	3.35	0.00	N	Arm 6 Ahead	15.00
5/1 (A44 (North))	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 8 Ahead	15.00
											Arm 12 Left	15.00
5/2 (A44 (North))	U	D	2	3	10.0	Geom	-	3.50	0.00	N	Arm 8 Ahead	15.00
6/1 (Circ (N))	U	E	2	3	1.0	Geom	-	3.75	0.00	Y	Arm 8 Right	15.00
											Arm 12 Ahead	15.00
6/2 (Circ (N))	U	E	2	3	1.0	Geom	-	3.75	0.00	N	Arm 8 Right	15.00
7/1 (Car Park)	O		2	3	60.0	User	1600	-	-	-	-	-

Give-Way Lane Input Data

Junction: A44 / Cassington Rd											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Block Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in IG (PCU)
7/1 (Car Park)	2/1 (Ahead)	715	0	8/1	0.50	All	-	-	-	-	-
				8/2	0.50	All					
	9/1 (Left)	715	0	8/1	0.50	All					
				8/2	0.50	All					
	9/2 (Left)	715	0	8/1	0.50	All					
				8/2	0.50	All					

Lane Connector Input Data

Junction: A44 / Cassington Rd				
Org Lane	Dest Lane	Junction	Mean Cruise Time	Platoon Dispersion
1/1	4/1	Internal	3	35
1/1	10/1	Internal	5	35
1/2	4/2	Internal	3	35
2/1	4/1	Internal	2	35
2/1	4/2	Internal	2	35
2/1	10/1	Internal	5	35
3/1	6/1	Internal	3	N/A
3/1	11/1	Internal	5	35
3/1	11/2	Internal	5	35
3/2	6/2	Internal	3	N/A
4/1	11/1	Internal	5	35
4/2	6/1	Internal	3	N/A
4/2	6/2	Internal	2	N/A
4/2	11/2	Internal	5	35
5/1	8/1	Internal	3	35
5/1	12/1	Internal	5	35
5/2	8/2	Internal	3	35
6/1	8/1	Internal	2	35
6/1	12/1	Internal	5	35
6/2	8/2	Internal	2	35
7/1	2/1	Internal	2	35
7/1	9/1	Internal	5	35
7/1	9/2	Internal	5	35
8/1	9/1	Internal	5	35
8/2	2/1	Internal	2	35
8/2	9/2	Internal	5	35

Scenario 1: '2028 With Development, AM'
(FG7: '2028 With Development, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					Tot.
	A	B	C	D	Tot.	
A	5	186	1172	0	1363	
B	263	0	76	0	339	
C	1375	53	28	0	1456	
D	0	0	0	0	0	
Tot.	1643	239	1276	0	3158	

Stage Timings

Stage	1	2	3
Duration	23	7	7
Change Point	0	31	45

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Mean Max Queue (pcu)
Network: A44 / Cassington Road	-	-	-	-	-	-	83.4%	-
A44 / Cassington Rd	-	-	-	-	-	-	83.4%	-
1/1	A44 (South) Ahead Left	A	26	657	1781	801	82.0%	11.7
1/2	A44 (South) Ahead	A	26	706	1912	860	82.1%	12.4
2/1	Circ (S) Right Ahead	B	7	81	1809	241	33.6%	1.2
3/1+3/2	Cassington Rd Ahead Left	C	7	339	1894:1900	253+253	66.1 : 67.9%	3.7
5/1+5/2	A44 (North) Ahead Left	D	37	1456	1786:1914	843+903	83.4 : 83.4%	10.0
6/1	Circ (N) Right Ahead	E	11	91	1809	362	25.2%	0.2
6/2	Circ (N) Right	E	11	177	1936	387	45.7%	0.1
7/1	Car Park Ahead Left	-	-	0	1600	182	0.0%	0.0
C1	PRC for Signalled Lanes (%):		7.9	Total Delay for Signalled Lanes (pcuHr):		18.96	Cycle Time (s): 60	
	PRC Over All Lanes (%):		7.9	Total Delay Over All Lanes(pcuHr):		18.96		

Scenario 2: '2028 With Development, PM'
(FG8: '2028 With Development, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					Tot.
	A	B	C	D	Tot.	
A	3	248	1705	10	1966	
B	250	0	65	2	317	
C	1350	50	33	8	1441	
D	4	1	5	0	10	
Tot.	1607	299	1808	20	3734	

Stage Timings

Stage	1	2	3
Duration	52	7	8
Change Point	0	60	74

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Mean Max Queue (pcu)
Network: A44 / Cassington Road	-	-	-	-	-	-	85.7%	-
A44 / Cassington Rd	-	-	-	-	-	-	85.7%	-
1/1	A44 (South) Ahead Left	A	55	950	1781	1108	85.7%	21.9
1/2	A44 (South) Ahead	A	55	1016	1912	1190	85.4%	23.2
2/1	Circ (S) Right Ahead	B	7	89	1809	161	55.3%	2.1
3/1+3/2	Cassington Rd Ahead Left	C	8	317	1902:1900	190+190	83.1 : 83.7%	6.2
5/1+5/2	A44 (North) Ahead Left	D	66	1441	1786:1914	850+910	81.9 : 81.9%	9.9
6/1	Circ (N) Right Ahead	E	12	103	1809	261	39.4%	0.6
6/2	Circ (N) Right	E	12	162	1936	280	57.9%	0.1
7/1	Car Park Ahead Left	-	-	10	1600	103	9.7%	0.2
C1	PRC for Signalled Lanes (%):		5.0	Total Delay for Signalled Lanes (pcuHr):		24.63	Cycle Time (s): 90	
	PRC Over All Lanes (%):		5.0	Total Delay Over All Lanes(pcuHr):		24.76		

Scenario 3: '2031 With Development, AM'
(FG9: '2031 With Development, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					Tot.
	A	B	C	D	Tot.	
A	5	186	1205	0	1396	
B	263	0	76	0	339	
C	1457	55	28	0	1540	
D	0	0	0	0	0	
Tot.	1725	241	1309	0	3275	

Stage Timings

Stage	1	2	3
Duration	23	7	7
Change Point	0	31	45

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Mean Max Queue (pcu)
Network: A44 / Cassington Road	-	-	-	-	-	-	88.2%	-
A44 / Cassington Rd	-	-	-	-	-	-	88.2%	-
1/1	A44 (South) Ahead Left	A	26	674	1781	801	84.1%	12.5
1/2	A44 (South) Ahead	A	26	722	1912	860	83.9%	13.1
2/1	Circ (S) Right Ahead	B	7	83	1809	241	34.4%	1.2
3/1+3/2	Cassington Rd Ahead Left	C	7	339	1894:1900	253+253	66.1 : 67.9%	3.7
5/1+5/2	A44 (North) Ahead Left	D	37	1540	1786:1914	842+903	88.2 : 88.2%	11.8
6/1	Circ (N) Right Ahead	E	11	91	1809	362	25.2%	0.2
6/2	Circ (N) Right	E	11	177	1936	387	45.7%	0.1
7/1	Car Park Ahead Left	-	-	0	1600	181	0.0%	0.0
C1	PRC for Signalled Lanes (%): PRC Over All Lanes (%):		2.0 2.0	Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):		21.23 21.23	Cycle Time (s): 60	

Scenario 4: '2031 With Development, PM'
(FG10: '2031 With Development, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					Tot.
	A	B	C	D	Tot.	
A	3	248	1795	10	2056	
B	250	0	66	2	318	
C	1398	50	33	8	1489	
D	4	1	5	0	10	
Tot.	1655	299	1899	20	3873	

Stage Timings

Stage	1	2	3
Duration	52	7	8
Change Point	0	60	74

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Mean Max Queue (pcu)
Network: A44 / Cassington Road	-	-	-	-	-	-	89.5%	-
A44 / Cassington Rd	-	-	-	-	-	-	89.5%	-
1/1	A44 (South) Ahead Left	A	55	992	1781	1108	89.5%	24.9
1/2	A44 (South) Ahead	A	55	1064	1912	1190	89.4%	26.4
2/1	Circ (S) Right Ahead	B	7	89	1809	161	55.3%	2.1
3/1+3/2	Cassington Rd Ahead Left	C	8	318	1901:1900	190+190	83.6 : 83.7%	6.3
5/1+5/2	A44 (North) Ahead Left	D	66	1489	1786:1914	850+910	84.6 : 84.6%	10.8
6/1	Circ (N) Right Ahead	E	12	103	1809	261	39.4%	0.6
6/2	Circ (N) Right	E	12	162	1936	280	57.9%	0.1
7/1	Car Park Ahead Left	-	-	10	1600	103	9.7%	0.2
C1	PRC for Signalled Lanes (%):		0.5	Total Delay for Signalled Lanes (pcuHr):		28.27	Cycle Time (s): 90	
	PRC Over All Lanes (%):		0.5	Total Delay Over All Lanes(pcuHr):		28.40		