Appendix Y

CAR CLUB VIABILITY

Pentavia Retail Park
London Borough of Barnet
Robert West

Proposal: June 2016

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zipcar

Zipcar & Property Developments

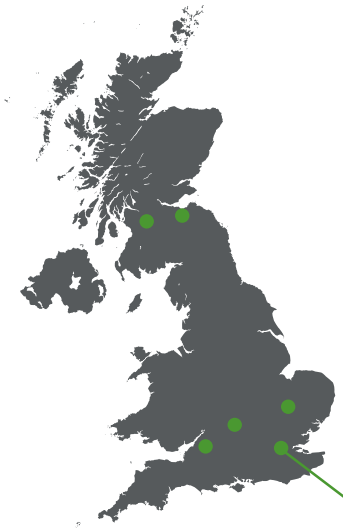
Zipcar works with an ever increasing number of Property Developers, Transport Consultants and Housing Associations across the UK to:

- ✓ Increase the likelihood of gaining planning permission on a site.
- ✓ Addressing specific Section 106 or Travel Plan requirements.
- ✓ Reducing the need to provide costly private parking.
- ✓ Act as a useful marketing tool to help sell properties with a limited parking provision.

Working with Zipcar – 5 Simple Steps

What is Zipcar?

Zipcar is a pay-as-you-go car club designed to provide members with access to cars and vans as quickly and conveniently as possible with the least amount of hassle. Our team is passionate about bringing this innovative concept to every urban street as a simpler, more efficient, more sustainable way to use a car.



2010
Zipcar merged with Streetcar and is the World's largest car-sharing club

Over 900,000 members
worldwide

6 UK cities
London, Bristol, Cambridge, Oxford, Glasgow & Edinburgh

London is the largest UK network with 1,500 bays; 5 times more locations than Starbucks!

Zipcar users are ABC1 adults aged between 25-44 yrs old.

71% use Zipcar for leisure/spontaneous & activities.

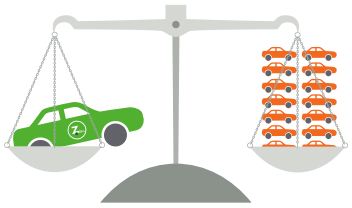
Zipcar users are urban-dwellers that like to explore the city & jump at the chance to engage with nature and the outdoors.

Members use Zipcar as an alternative to the costs and hassles of owning or hiring a car.

A Sustainable Transport Solution

A large proportion of your future residents may have a private vehicle, but may not really need one. They may commute to work using public transport and just have a car for occasional use. A relationship with the world's largest car sharing club would definitely assist in reducing the carbon footprint of your residents, provide a convenient and easily-used service, and save them a substantial amount of money.

Every Zipcar takes an average of 10-15 privately owned cars off the roads of the UK, because members often sell (or don't replace) a car when they join.

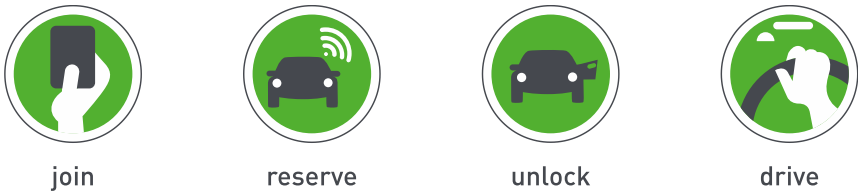


Zipcar is a service that benefits the whole community. We have found that car club members choose to drive a car less after joining Zipcar; the average car club member only actually clocks up between 403 and 414 miles a year which is significantly less than private vehicle owners. This is because they both make better use of public transport and think much harder about their transport options according to what they need to achieve and the cost associated with that decision.

Not only this but car club vehicles are typically between 10% and 33% more efficient in terms of carbon dioxide emissions per KM travelled, in comparison to the average car, because operators chose new and fuel efficient models.

Using Zipcar

The Zipcar process has been designed to provide simplicity and little administration – there are no depots or deposits involved (headaches typically found with regular car hire). Once the person has become a member there is no further form filling required to hire a vehicle anywhere in the world.



Development Viability

Zipcar has been operating in the borough of Barnet since 2005 and is now working in partnership with the council to provide car clubs on-street to residents. We currently have 11 vehicles in the borough and over 2,000 members. The cars are performing well, being used approximately 8-10 hours a day.

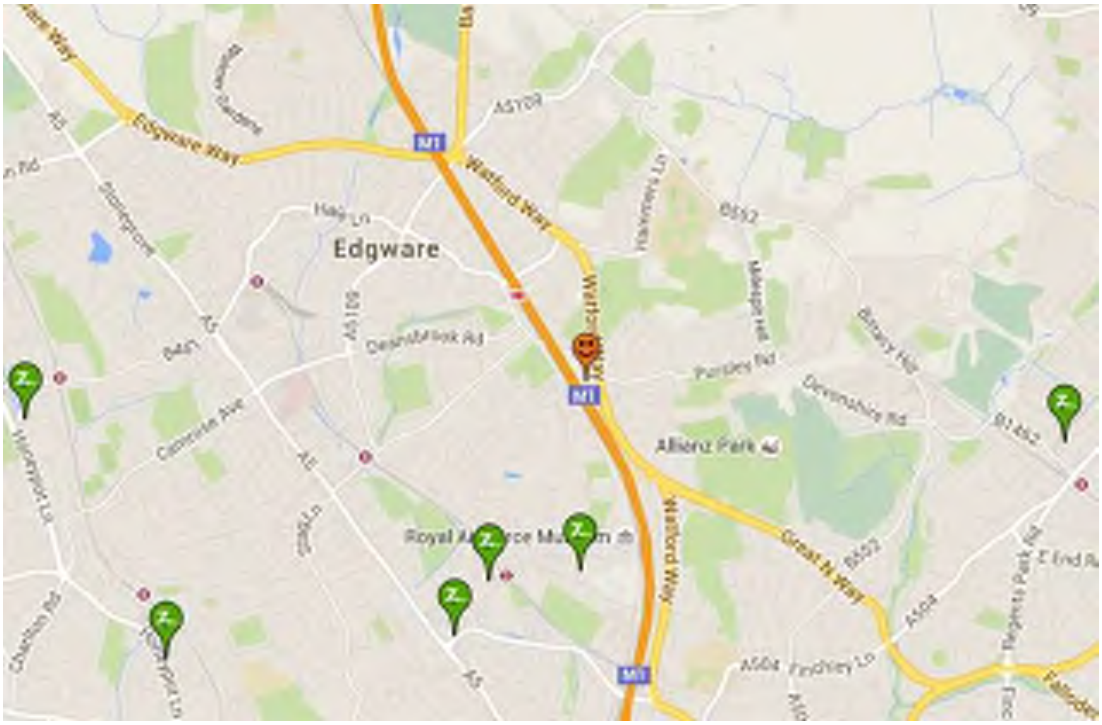
In our opinion a car club could work well at this location given support from the developer in the early phases of the development. The current proximity to local transport links, and proposal to provide dedicated transport links to major stations (Rail and LUL) is encouraging for the car club's chances of success, as synergy with public transport links is a key contributor to good car club performance. This makes it likely that the residents of this development will not need a car for work – essential to the success of the scheme.

The low parking on site should ultimately ensure good uptake of the car club. We normally rely on a parking ratio of less than 0.7 to guarantee car club success.

A developer funded marketing package will help ensure demand for the car on site; the more we are able to incentivise people to try the service, the more people will use it and consequently the time taken to reach commercial viability will be minimised. We anticipate up to 5 car club vehicles should be required. If possible Zipcar would prefer the car club vehicles to be situated in dedicated bays in an accessible location – either privately off-street, or in conjunction with the Local Authority on-street (any Traffic Management Order costs associated with an on-street bay need to be met by the developer). This enables local residents to access the service easily whilst still providing a convenient option for the residents of the development.

Wherever possible the car club location must not be underground as phone signal is required to operate the service.

Existing Network



Pentavia Retail Park – Car Club Proposal

A Zipcar welcome pack for each unit that entitles the occupier to 1 years' free membership (usually £49.59+VAT per year) and £25 driving credit would be suitable for this site. This comes to a total contribution of £37,192.50+VAT for the 750 units detailed, which we would be happy to discount to £25,000+VAT. This sum is to be paid prior to the date of first occupation.

In exchange Zipcar would commit to a contractual obligation to run the car club operation at the development for a minimum of 5 years and offer £30 driving credit per membership at no further cost to the developer.

Zipcar will provide 1 year's free business account (usually £119) for any commercial entity operating from or in conjunction with the site at no further cost to the developer.

Marketing Proposal

A free membership to Zipcar is an excellent marketing tool to utilise with prospective buyers who, due to low parking ratios and parking restrictions, are unable to have their own vehicle on site. We would market the free memberships as a benefit paid for by the developer that provides residents with a cheaper, greener more convenient alternative to private car ownership. In this way Zipcar adds real value to the development and is an excellent solution to the recurring problem of prospective residents not being able to have their own vehicle on site due to a lack of space.

Zipcar would promote its service to the residents of the development through a number of ways.

Bespoke marketing material: This would outline the offers your residents are entitled to. We find that this is crucial in generating early interest in the scheme; these would be part of each residents welcome pack. Additionally we would recommend that a mail shot is sent at a later date reminding residents of the service.

Advertising within the development: Zipcar would advertise within the development itself through posters and leaflets in communal areas.

Launch day event: Our promotions team are very experienced and have a number of fun and exciting ways to inform residents of the fantastic deal that the developer has secured for them. Techniques used by our promotions team include inflatable cars, vehicles with video games in the back, balloons, banners and laptops that allow our team to show new members how the service works and assist in helping them sign up.

This approach would have the most impact if conducted when any new vehicles were implemented on a site, or at any open days or community events within the development.

The Zipcar Fleet

Zipcar has a vehicle type for every occasion. This will ensure that your residents get the best possible service, and can find a vehicle to suit their needs. Zipcar membership also includes Zipvan membership – providing our members with convenient access to larger vehicles when required.

Our vehicles are best in class from an emissions perspective. A Zipcar lives in the fleet for a maximum of eight months, ensuring our members are diving the most modern and efficient fleet in any car club across the world.

Model	Weekday Hourly / Daily	Weekend Hourly / Daily
Toyota Yaris / Ford Fiesta	£6 / £54	£7.50 / £65
VW Golf / Ford Focus	£7 / £64	£8.50 /£75
Toyota Prius (PHEV)	£7 / £64	£8.50 /£75
Audi A3	£8 / £74	£9.50 / £85
Ford CMAX (7 Seater)	£10 / £94	£11.50 / £105
VW Transporter	£10 / £89	£11.50 / £105

Fuel, insurance and 60 free miles per 24 hours are included. Additional miles are 25p per mile (29p for premium vehicles and vans).

Appendix Z

OUTDATED TRIP GENERATION METHODOLOGY

1.1 The following trip generation information is provided for information only. The information is based on the previously approved trip generation methodology with LBB that has now been superseded by that which is contained within the TA, and conforms to TfL's Best Practice guidance.

Residential Use – Vehicle Trips

1.2 The number of total persons and vehicle trips generated by the proposed residential development has been estimated based on survey information collected from comparable sites available within the TRAVL and TRICS databases.

1.3 The selection of comparable residential sites for use in the trip generation exercise has been subject to significant input and subsequent agreement with LBB during the scoping process. At the time of agreement of sites with LBB the proposed level of parking on the site was greater than is now proposed in response to feedback from TfL and the GLA. Where applicable, sites that have been agreed with LBB have been retained within the assessment, with additional sites included via agreement with TfL. It should be noted that the average parking rate within the comparable data set is 0.63 spaces per unit, significantly higher than the actual provision proposed. As such the trips generated by the site selection agreed is considered to be extremely robust.

1.4 The sites presented in the table below were included in the trip generation assessment.

Site No	Site Ref	Survey Date	Location	PTAL	Unit No.	Parking	Parking Rate
1	388	13/09/2005	Hillingdon	2	253	186	0.74
2	699	24/02/2009	Harrow	2	49	11	0.22
3	398	19/10/2004	Barnet	1	269	280	1.04
4	400	13/07/2005	Enfield	1	111	100	0.90
5	888	02/12/2009	Ealing	3	159	24	0.15
6	EN-03-K-03	05/05/2015	Enfield	3	68	50	0.74

1.5 The proposed residential development is expected to include 717 residential units. The vehicle trip rates and associated trip generation for the residential use is presented in the table below.

Peak Periods	Arrivals	Departures	Total	Arrivals	Departures	Total
	Trip Rate (per unit)			Trip Generation		
Morning Peak (08:00-09:00)	0.042	0.141	0.183	30	101	131
Afternoon Peak (17:00-18:00)	0.128	0.083	0.211	92	60	151

1.6 The table indicates that 30 and 92 vehicle arrivals are estimated to occur in the morning and evening peak times respectively; and 92 and 60 vehicle departures are predicted for the morning and evening peaks respectively. 131 two-way vehicle movements are expected in the morning peak and 151 in the evening peak.

Total Development Net Vehicle Trips

1.7 In order to understand the net development increase in vehicle trips Table 13-9 summarises the new trips generated by the leisure and commercial uses (from Table 13-8), and the residential vehicle trips (from Table 13-2) and subtracts the trips that could otherwise be generated by the existing use (Table 8-5).

Peak Periods	Arrivals	Departures	Total
Proposed Residential Trips (+)			
Morning Peak (08:00-09:00)	30	101	131
Evening Peak (17:00-18:00)	92	60	151
Retail / Community Trips (New Trips Only) (+)			
Morning Peak (08:00-09:00)	9	7	16
Evening Peak (17:00-18:00)	11	11	22
Extant Use Trips (-)			
Morning Peak (08:00-09:00)	44	12	56
Evening Peak (17:00-18:00)	62	62	124
Net Development Vehicle Trips			
Morning Peak (08:00-09:00)	**-5**	**96**	**91**
Evening Peak (17:00-18:00)	**34**	**2**	**35**

1.8 The table above demonstrates less net vehicle trips generated by comparison to the methodology adopted within the TA to conform with TfL Best Practice Guidance.

Appendix Aa

RESIDENTIAL TRAFFIC DISTRIBUTION

Traffic Distribution - Residential Departures -Trips within 2km radius

15.7% of trips are predicted to have O/D within 2km form the Site [2011 Census/TA Scoping Note Table 17]

Traffic flows were distributed with the proportions derived form 2011 Census of population (WU03EW - Location of usual residence and place of work by method of travel to work - MSOA level), which showed that 52.6% is expected to travel to the west and 47.4% to the east. All traffic will use A1

15.7% 15.7%

Lawrence street

The Broadway

Flower Lane

Watford Way
A1

Hale Lane

Woodcroft Avenue

Lyndhurst Avenue

Grahame Park Way

M1

Page Street

Bunns Lane

Page Street

Pursley Road

Grahame Park Way

55.3% 47.4% Scoping note nomis

8.3% 7.4%

6.8% 1.5%

1.5%

1.2% 4.0%

1.7% 2.3%

1.7%

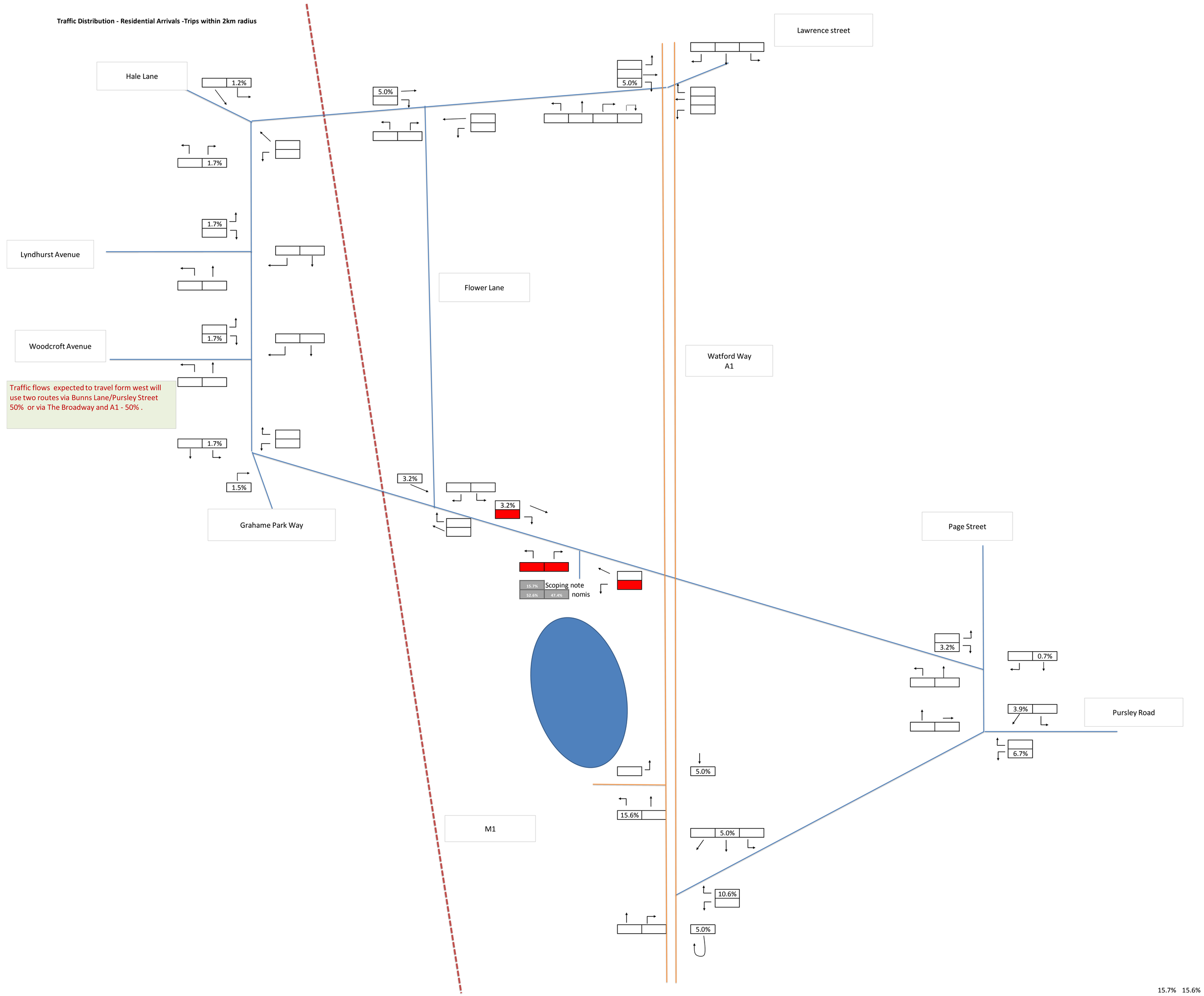
1.5%

15.7%

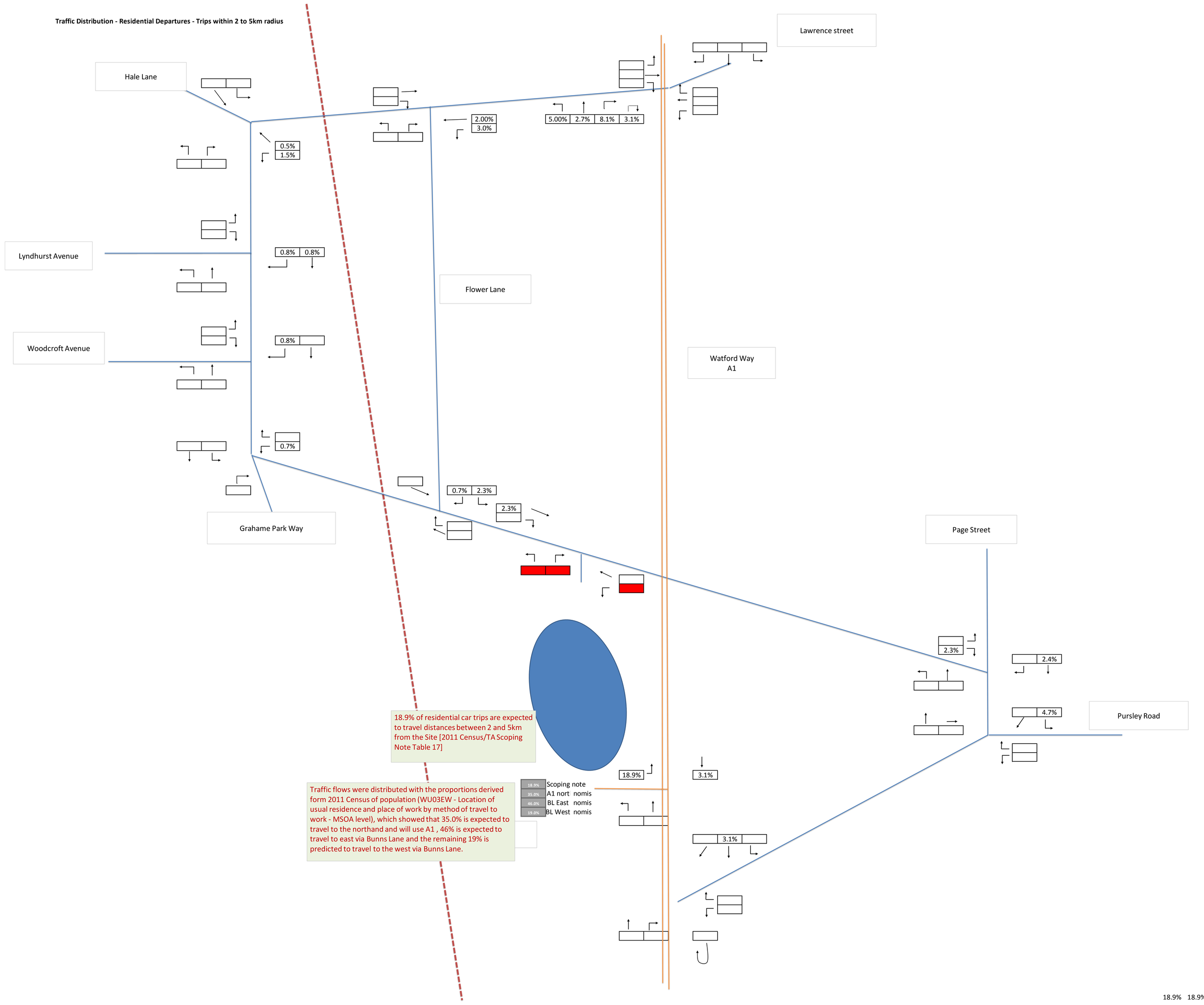
6.7%

6.7%

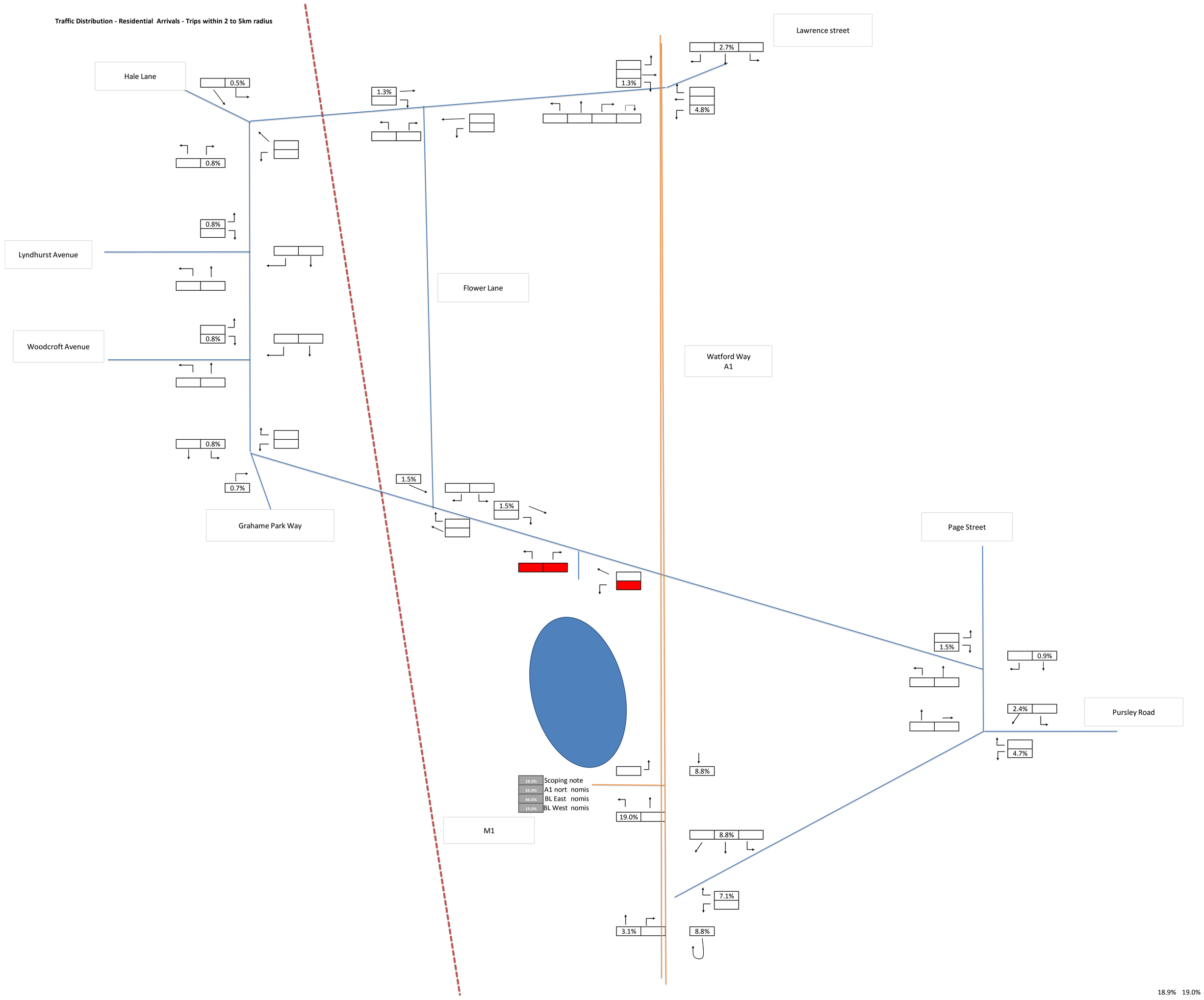
Traffic Distribution - Residential Arrivals -Trips within 2km radius



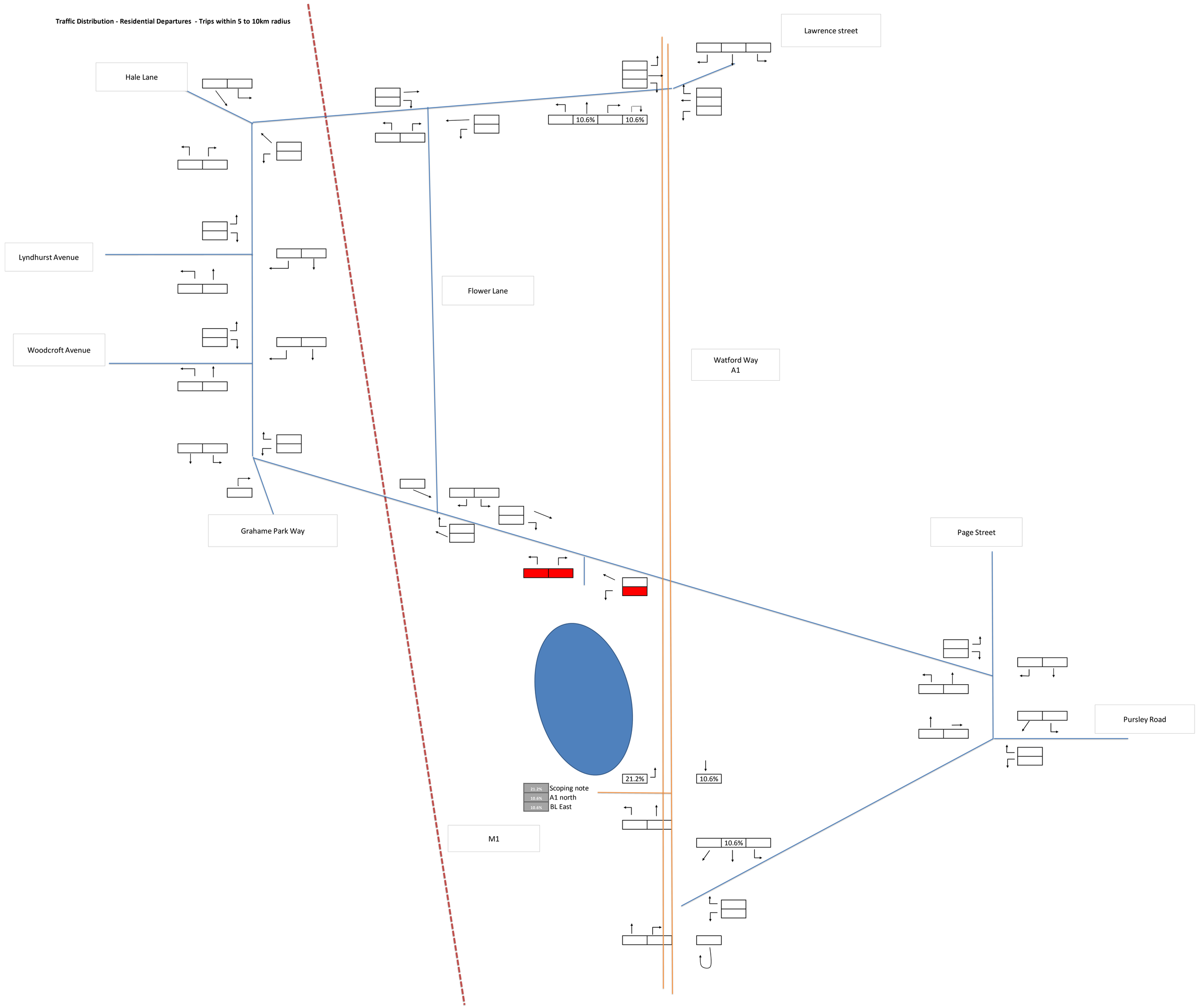
Traffic Distribution - Residential Departures - Trips within 2 to 5km radius



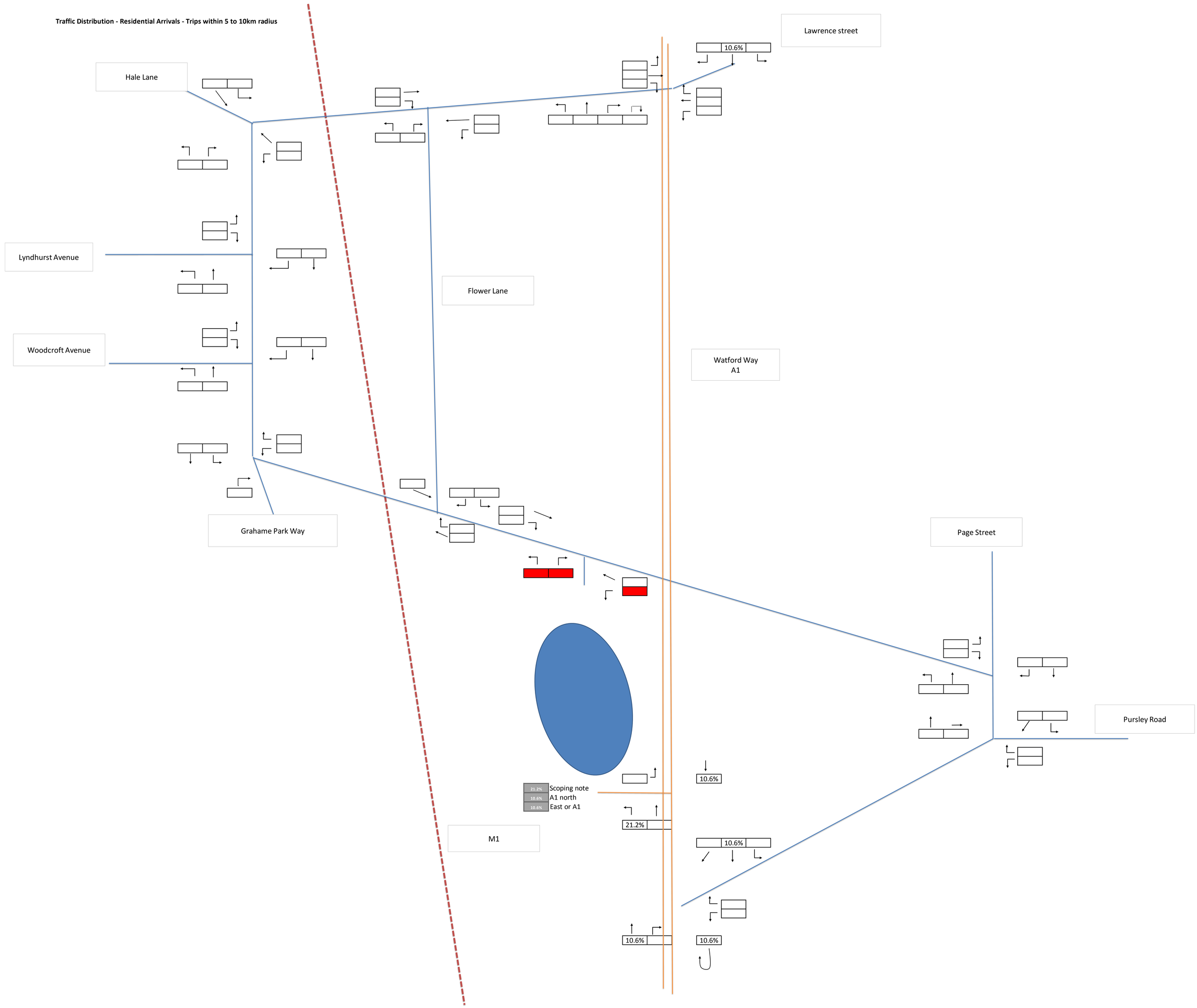
Traffic Distribution - Residential Arrivals - Trips within 2 to 5km radius



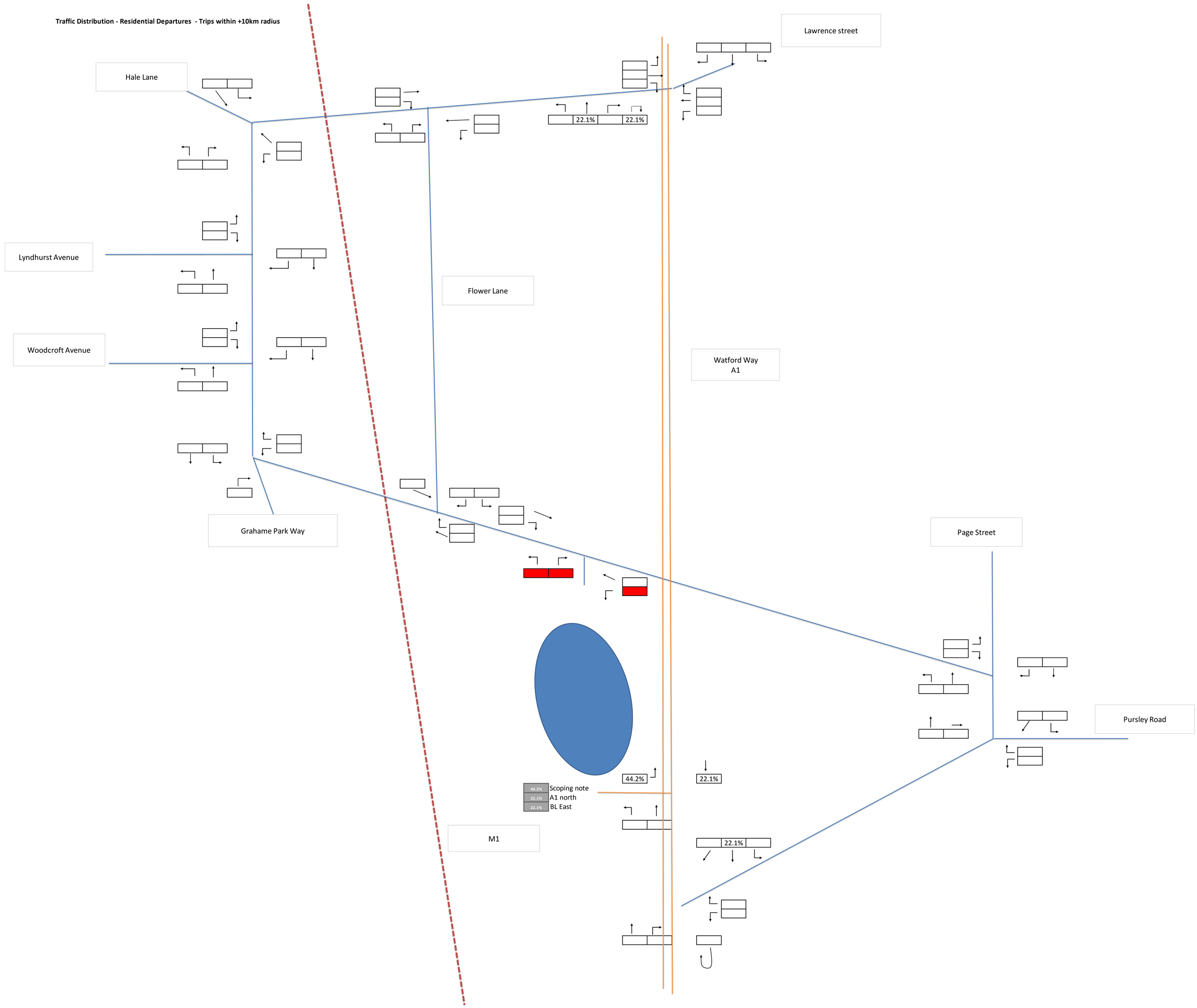
Traffic Distribution - Residential Departures - Trips within 5 to 10km radius



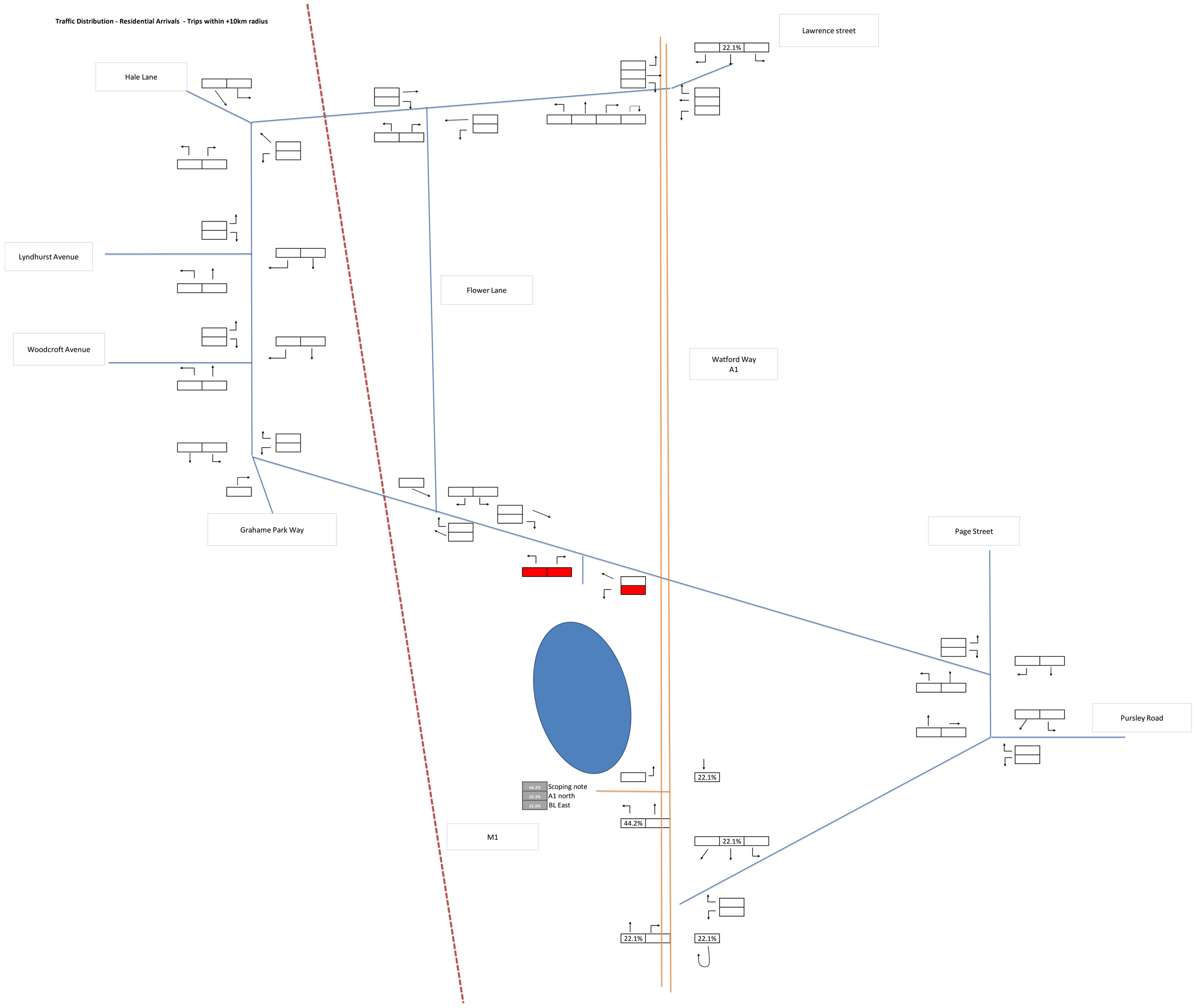
Traffic Distribution - Residential Arrivals - Trips within 5 to 10km radius



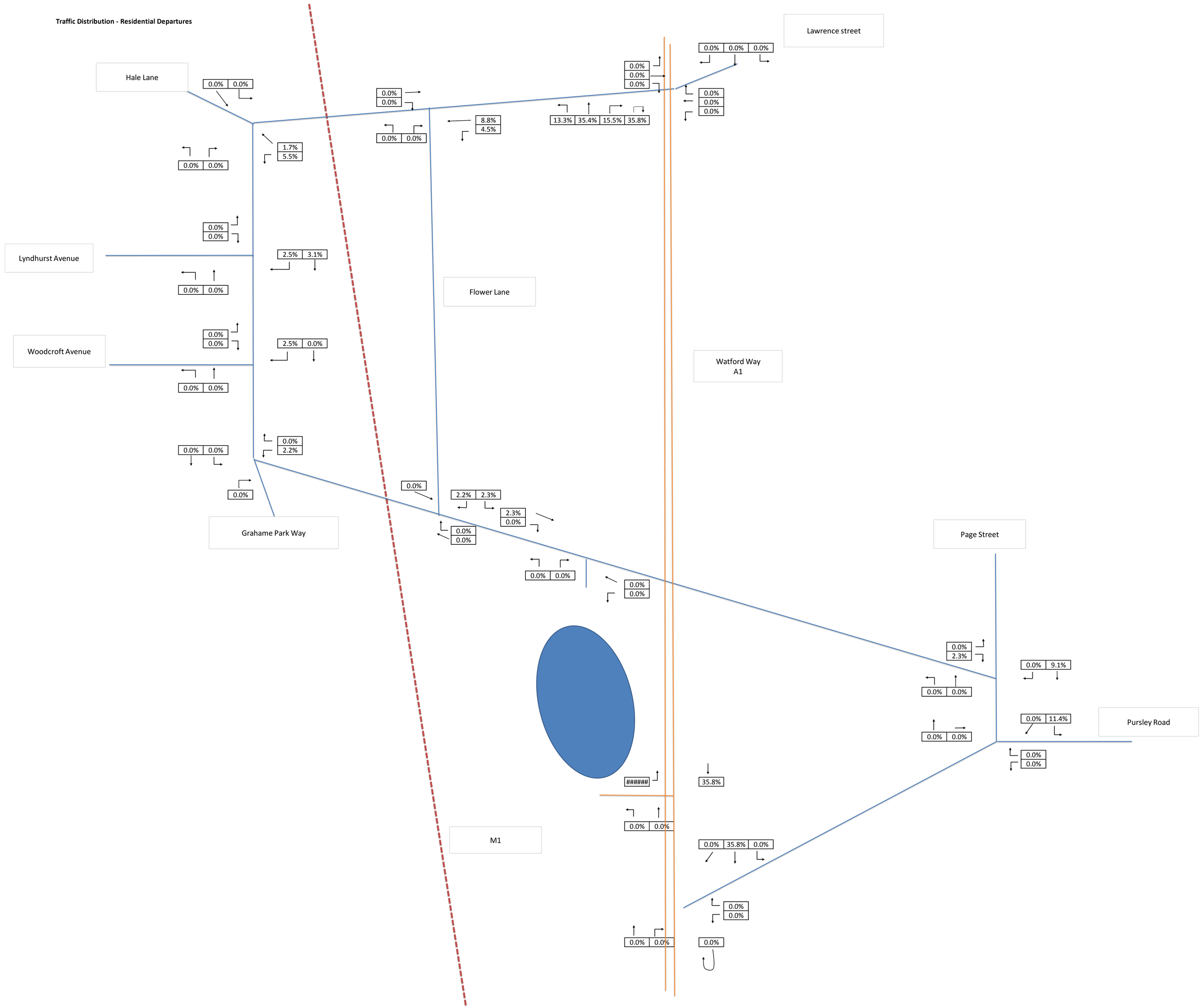
Traffic Distribution - Residential Departures - Trips within +10km radius



Traffic Distribution - Residential Arrivals - Trips within +10km radius



Traffic Distribution - Residential Departures



Residential Departures AM Peak 0800-0900

49 Departures

Hale Lane

Lawrence street

Lyndhurst Avenue

Flower Lane

Woodcroft Avenue

Watford Way
A1

Grahame Park Way

Page Street

Pursley Road

M1

Residential Departures PM Peak 1700-1800

45 Departures

Hale Lane

Lawrence street

Lyndhurst Avenue

Flower Lane

Woodcroft Avenue

Watford Way
A1

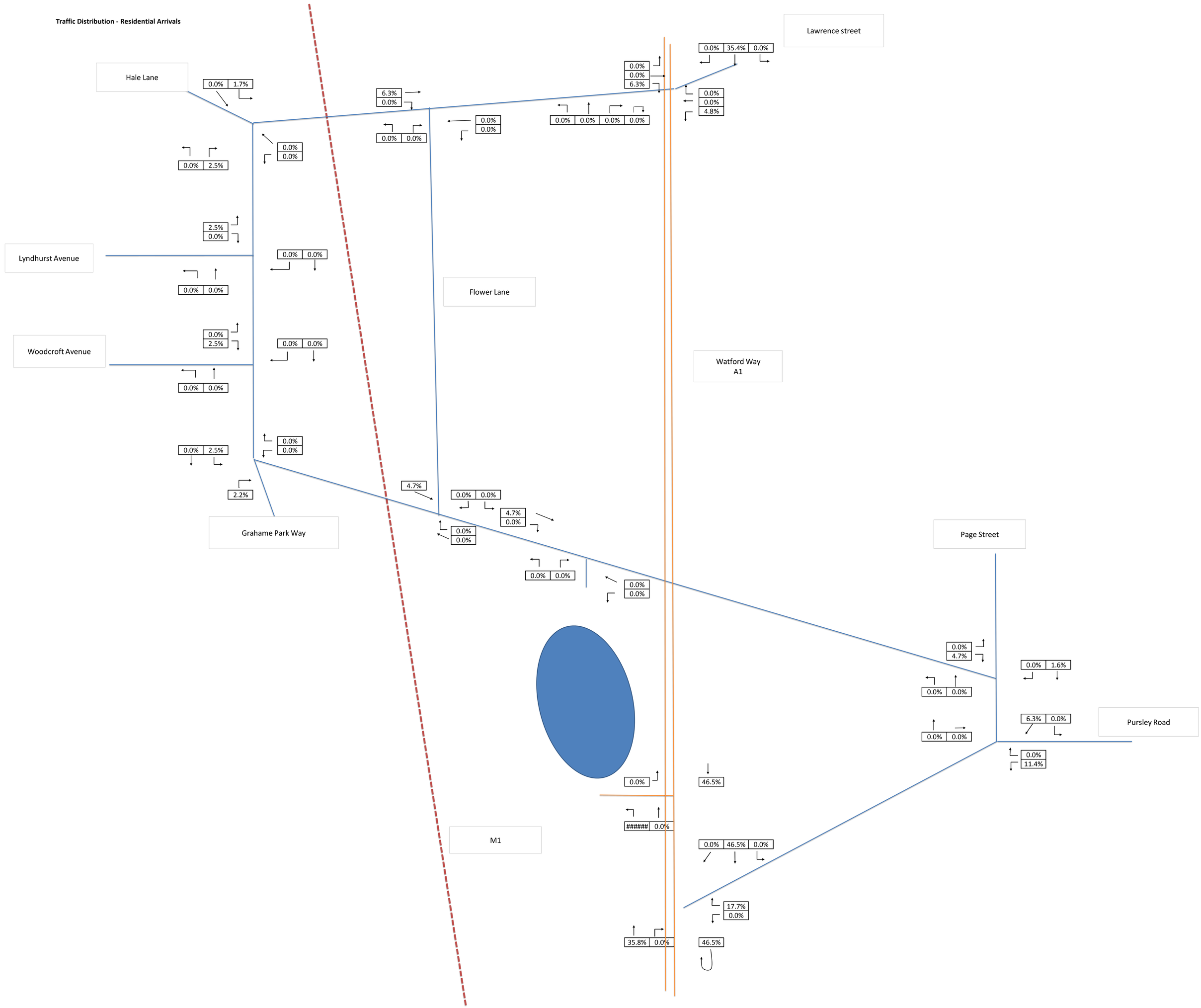
Grahame Park Way

Page Street

Pursley Road

M1

Traffic Distribution - Residential Arrivals



Residential Traffic Flows without Bunns Lane Link AM Peak 0800-0900 (Pcus/hr)

Junction 1 (The Broadway/Flower Lane/Hartley Ave)

Hale lane

A(Hale Lane) 0 0 0

D(The Broadway) 2 0 0 0

A(The Broadway) 4 2 0 0

C(The Broadway) 0 0 2 0

D(A1) 0 9 0 0

Junction 4 (A1/The Broadway/Lawrence Street)

Lawrence Street

A(Lawrence Street) 1 0 0 0

Junction 6 (Hale Lane/ The Broadway/Bunns Lane)

B(The Broadway) 1 3 0

C(Bunns Lane) 0 1 0

C (Flower Lane) 0 0 0

B(Hartley Ave) 0 0 0

B(A1) 6 17 8 18

Lyndhurst Avenue

Bunns Lane

Flower Lane

Woodcroft Avenue

Watford Way
A1

A(Bunns Lane) 0 0 1

B(Buuns Lane) 0 0 1

Junction 5 (Bunns Lane/ Grahame Park Way)

C(Grahame Park Way) 0 1 0

Bunns Lane

C(Bunns Lane) 0 1

Junction 2 (Bunns Lane/Flower Lane)

A(Flower Lane) 1 1 0

Grahame Park Way

B(Bunns Lane) 0 0 0

1

Page Street

Junction 7.1 (Bunns Lane /Page Street)

Bunns Lane

C(Bunns Lane) 0 2 0

A(Page Street) 4 0 0

B(Page Street) 0 0 0

C (Page Street) 0 2 6

A(Pursley Road) 0 0 3

Pursley Road

0.25

B(Page Street) 0 0 0

E(A1) 12 0 0 30 0

Junction 7.2 (Bunns Lane /Page Street/Pursley Road)

Page Street

M1

Junction 3 (A1/Page Street/Hall Lane)

A(Page Street) 0 0 0 5 0

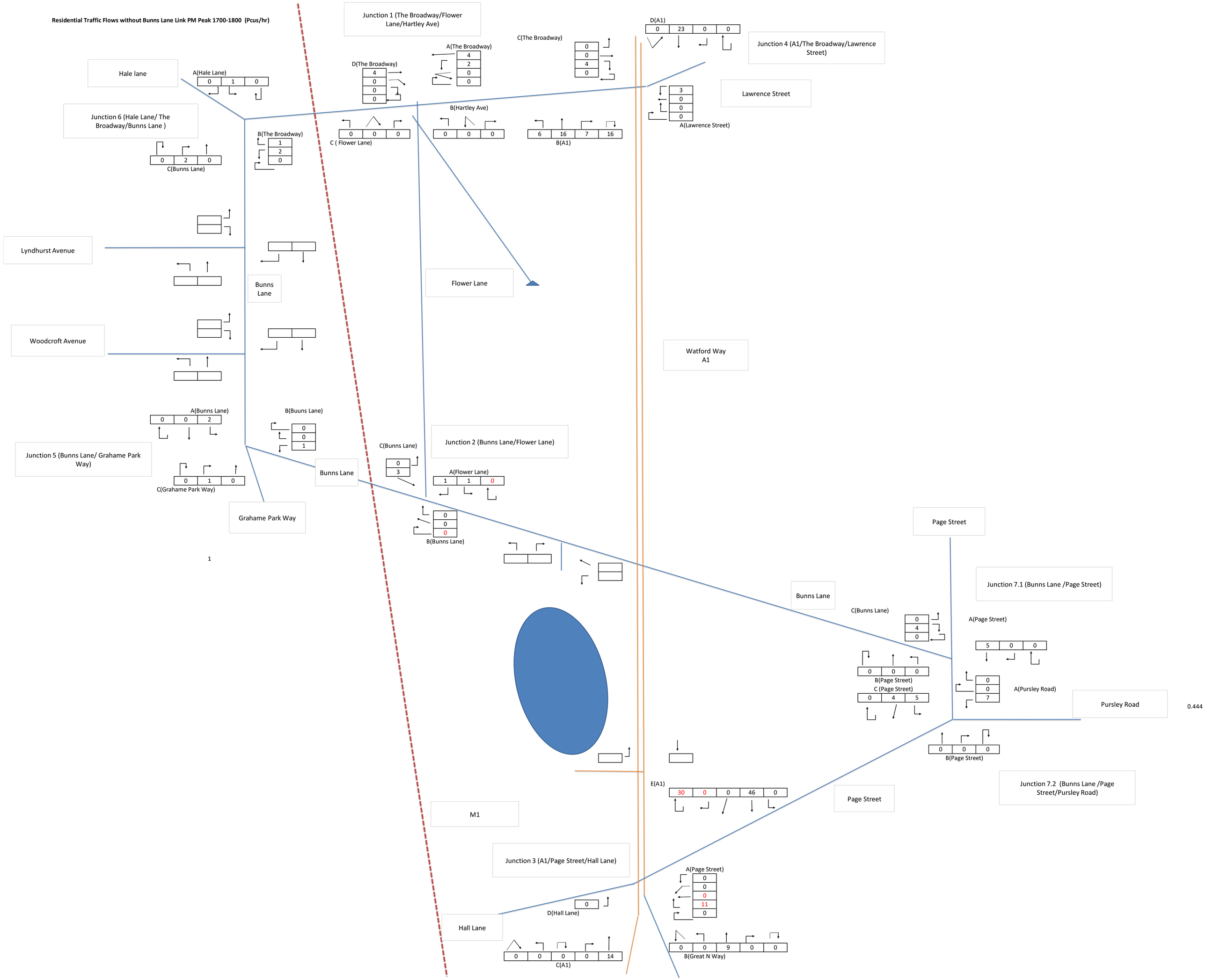
D(Hall Lane) 0

Hall Lane

C(A1) 0 0 0 0 5

B(Great N Way) 0 0 4 0 0

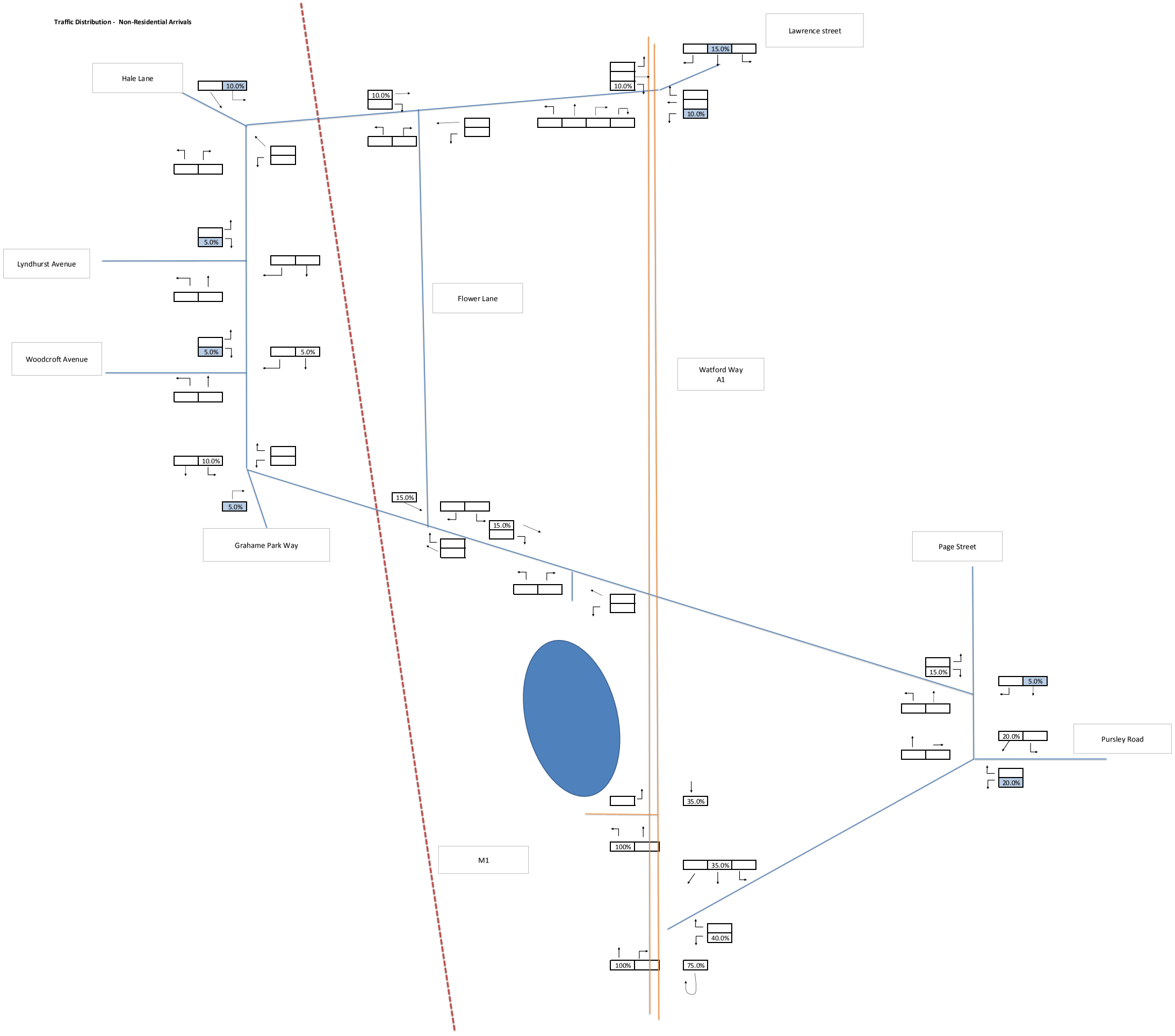
Residential Traffic Flows without Bunns Lane Link PM Peak 1700-1800 (Pcus/hr)



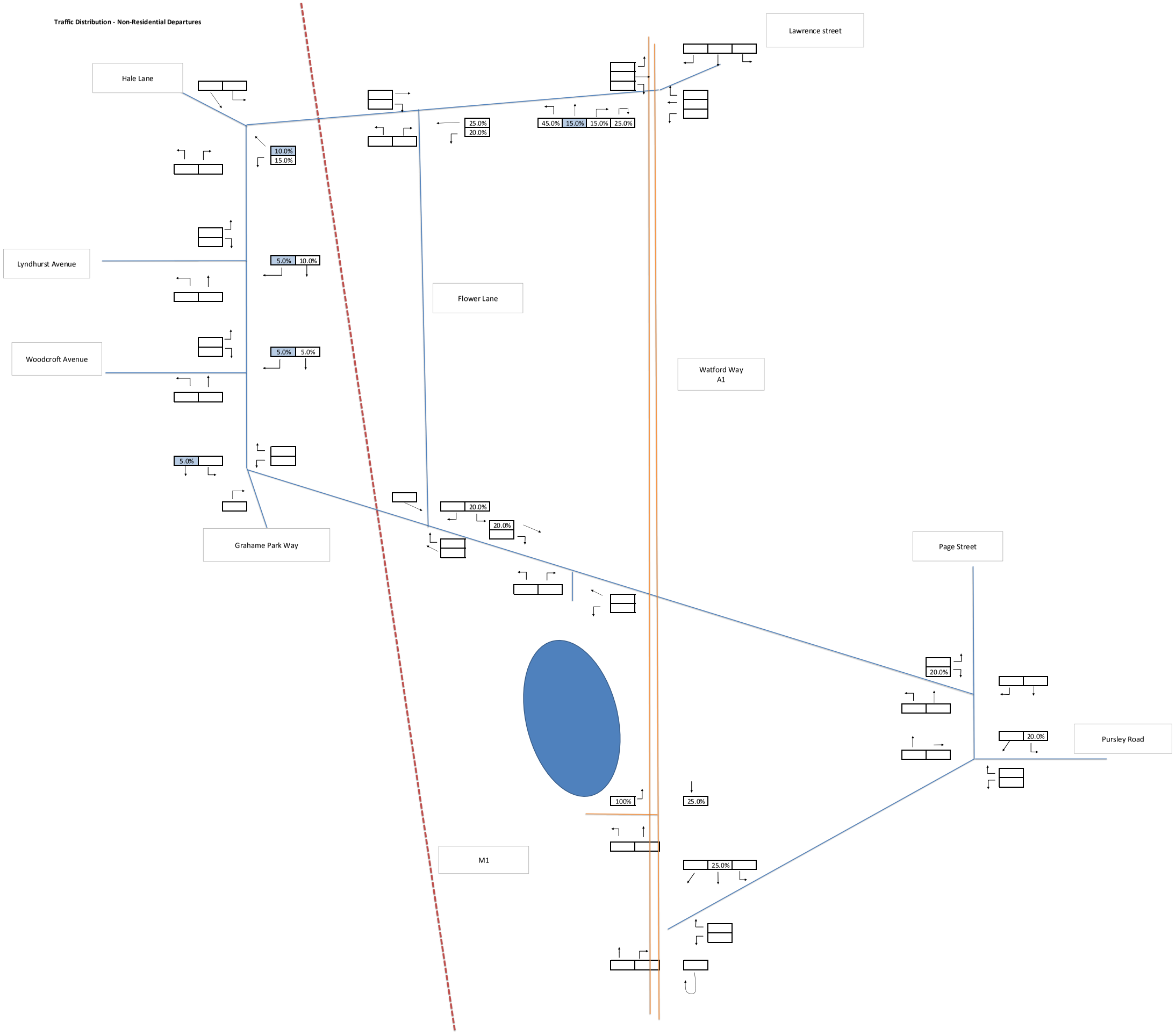
Appendix Ab

NON-RESIDENTIAL TRAFFIC DISTRIBUTION

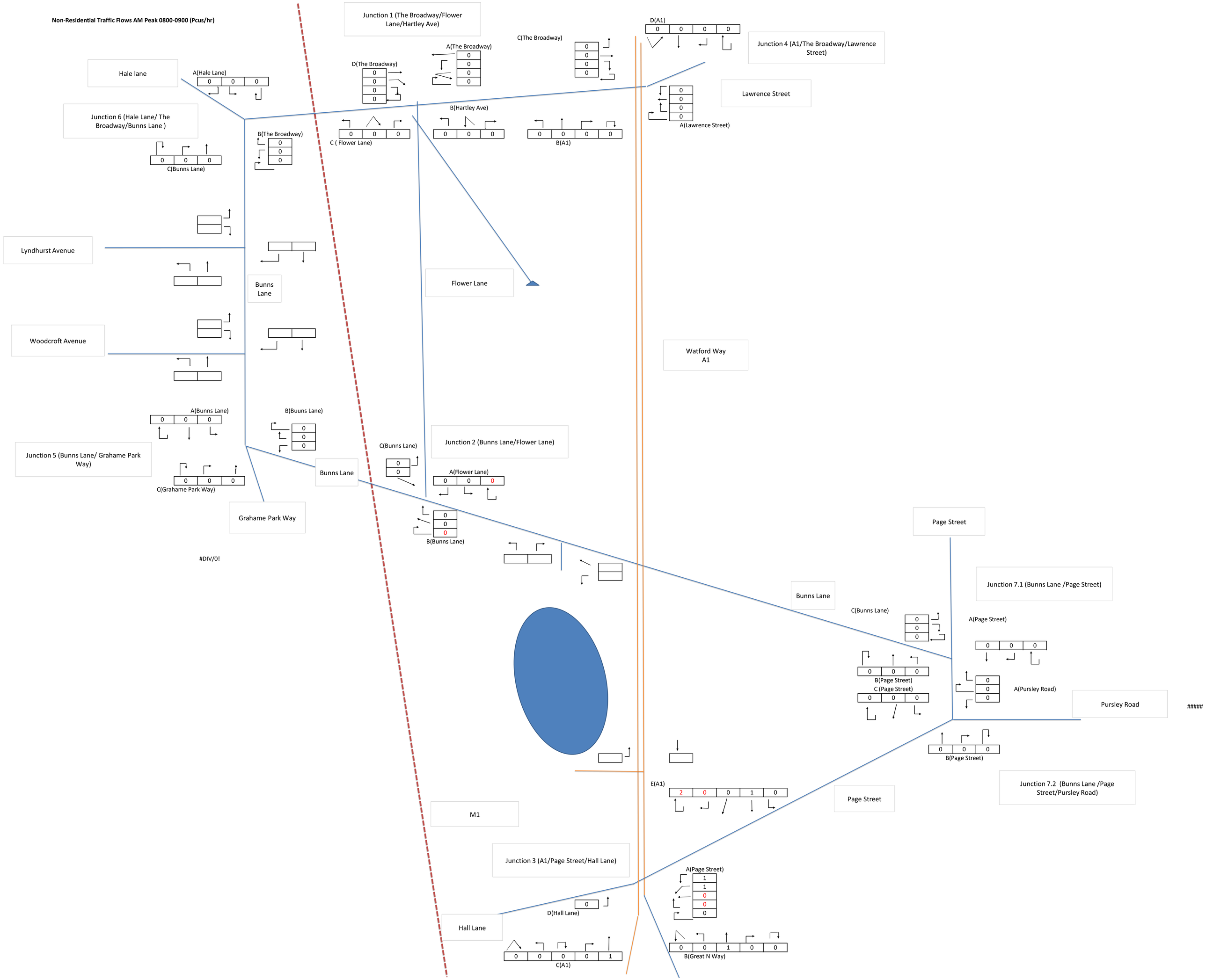
Traffic Distribution - Non-Residential Arrivals



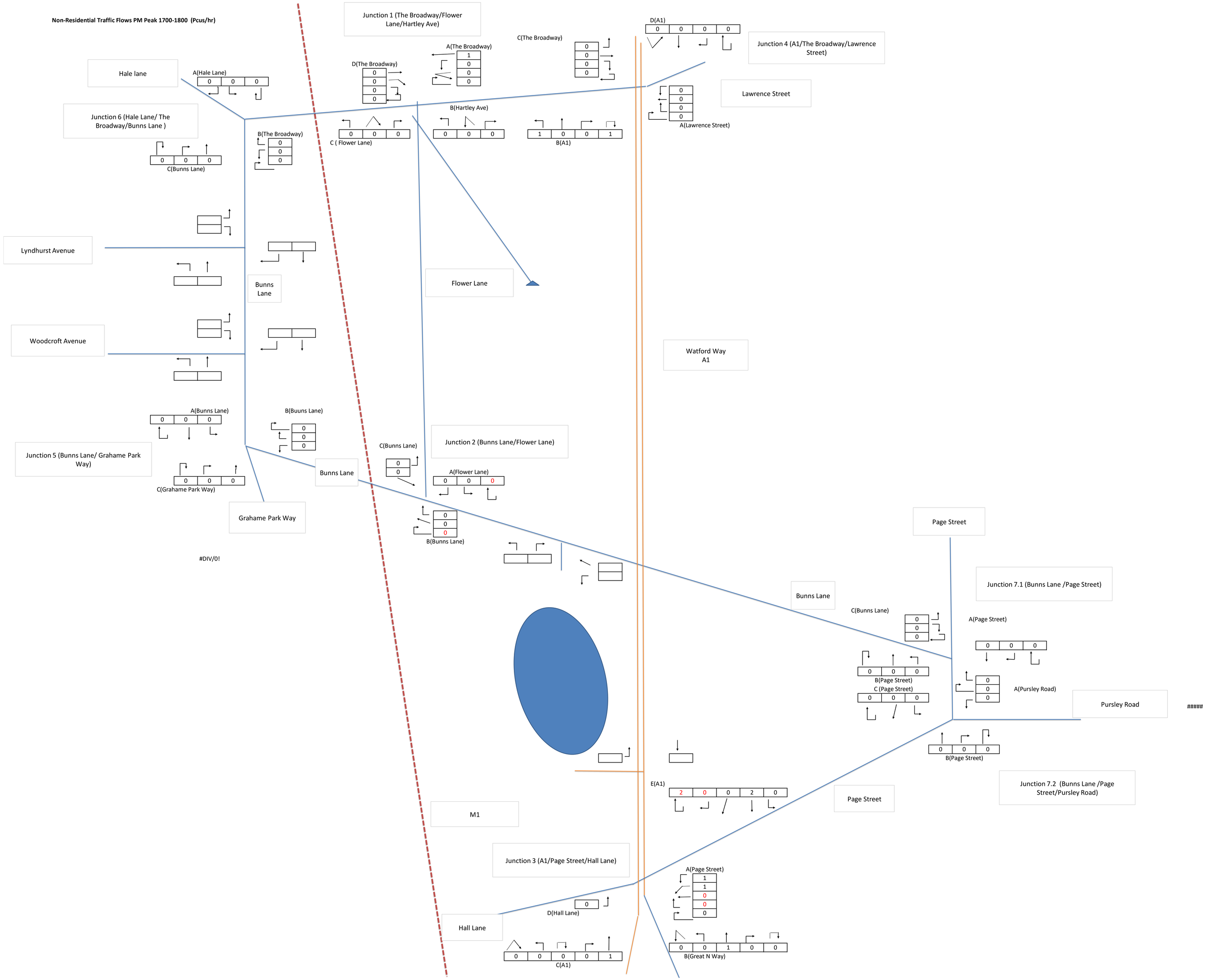
Traffic Distribution - Non-Residential Departures



Non-Residential Traffic Flows AM Peak 0800-0900 (Pcus/hr)



Non-Residential Traffic Flows PM Peak 1700-1800 (Pcus/hr)



Appendix Ac

DEVELOPMENT TRAFFIC FLOWS

2021 Traffic Flows with Committed Development and New Development AM Peak 0800-0900 (Pcus/hr)

Junction 1 (The Broadway/Flower Lane/Hartley Ave)

Hale lane

A(Hale Lane): 323 | 336 | 1

D(The Broadway): 506 | 17 | 30 | 1

A(The Broadway): 529 | 104 | 36 | 1

C(The Broadway): 166 | 208 | 332 | 2

D(A1): 13 | 1872 | 161 | 25

Junction 4 (A1/The Broadway/Lawrence Street)

Lawrence Street

231 | 325 | 72 | 0
A(Lawrence Street)

Junction 6 (Hale Lane/ The Broadway/Bunns Lane)

B(The Broadway): 236 | 401 | 5

0 | 362 | 220
C(Bunns Lane)

56 | 15 | 201
C (Flower Lane)

B(Hartley Ave): 5 | 10 | 13

175 | 1723 | 153 | 53
B(A1)

Lyndhurst Avenue

Bunns Lane

Flower Lane

Woodcroft Avenue

Watford Way
A1

A(Bunns Lane): 2 | 305 | 565

B(Buuns Lane): 0 | 630 | 245

Junction 5 (Bunns Lane/ Grahame Park Way)

19 | 251 | 273
C(Grahame Park Way)

C(Bunns Lane): 105 | 723

Junction 2 (Bunns Lane/Flower Lane)

A(Flower Lane): 52 | 120 | 1

Bunns Lane

Grahame Park Way

255 | 815 | 1
B(Bunns Lane)

0.4624

Page Street

Junction 7.1 (Bunns Lane /Page Street)

Bunns Lane

C(Bunns Lane): 66 | 740 | 0

A(Page Street): 178 | 149 | 0

0 | 127 | 819
B(Page Street)

C (Page Street): 0 | 346 | 574

646 | 2 | 203
A(Pursley Road)

Pursley Road

0.376

300 | 212 | 3
B(Page Street)

E(A1): 34 | 29 | 1346 | 892 | 54

Junction 7.2 (Bunns Lane /Page Street/Pursley Road)

Page Street

M1

Junction 3 (A1/Page Street/Hall Lane)

A(Page Street): 267 | 264 | 16 | 31 | 1

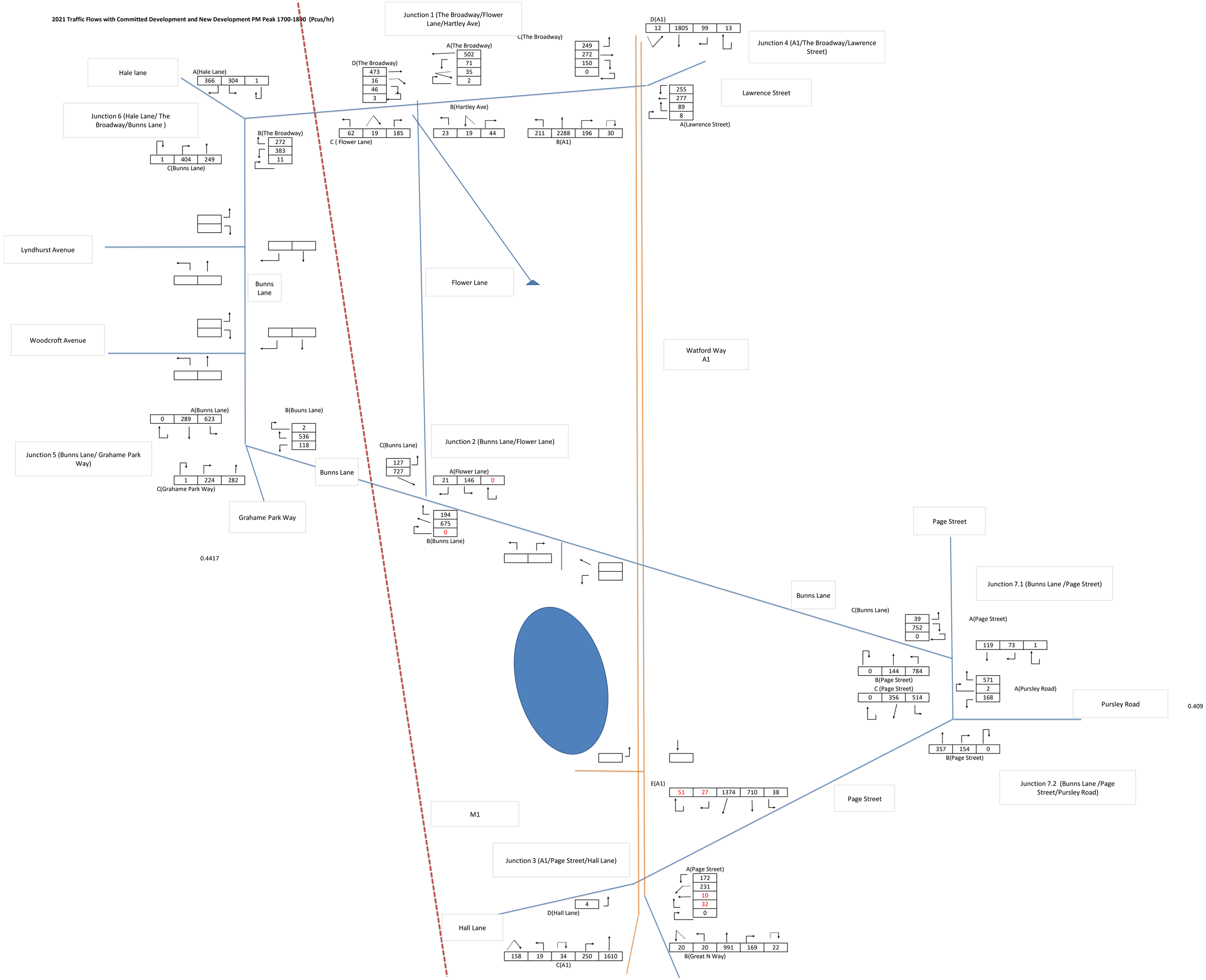
13
D(Hall Lane)

Hall Lane

153 | 7 | 64 | 236 | 1059
C(A1)

20 | 12 | 743 | 180 | 3
B(Great N Way)

2021 Traffic Flows with Committed Development and New Development PM Peak 1700-1800 (Pcus/hr)



2026 Traffic Flows with Committed Development and New Development AM Peak 0800-0900 (Pcus/hr)

Junction 1 (The Broadway/Flower Lane/Hartley Ave)

Hale lane

A(Hale Lane)

335	348	1

D(The Broadway)

524
18
31
1

A(The Broadway)

548
108
38
1

(The Broadway)

172
216
344
2

D(A1)

14	1939	167	26

Junction 4 (A1/The Broadway/Lawrence Street)

Lawrence Street

240
337
75
0

A(Lawrence Street)

Junction 6 (Hale Lane/ The Broadway/Bunns Lane)

B(The Broadway)

245
415
5

0	375	229

C(Bunns Lane)

59	15	208

C (Flower Lane)

B(Hartley Ave)

5	11	13

181	1784	158	54

B(A1)

Lyndhurst Avenue

Bunns Lane

Flower Lane

Woodcroft Avenue

Watford Way
A1

A(Bunns Lane)

2	315	586

B(Buuns Lane)

0
654
253

Junction 5 (Bunns Lane/ Grahame Park Way)

19	261	283

C(Grahame Park Way)

Bunns Lane

C(Bunns Lane)

109
750

Junction 2 (Bunns Lane/Flower Lane)

A(Flower Lane)

54	125	1

Grahame Park Way

265
846
1

B(Bunns Lane)

0.4631

Page Street

Junction 7.1 (Bunns Lane /Page Street)

Bunns Lane

C(Bunns Lane)

68
769
0

A(Page Street)

186	154	0

0	134	852

B(Page Street)

C (Page Street)

0	359	599

674
2
215

A(Pursley Road)

Pursley Road

0.375

311	220	3

B(Page Street)

E(A1)

35	30	1394	923	56

Junction 7.2 (Bunns Lane /Page Street/Pursley Road)

Page Street

M1

Junction 3 (A1/Page Street/Hall Lane)

A(Page Street)

280
277
16
32
1

14

D(Hall Lane)

Hall Lane

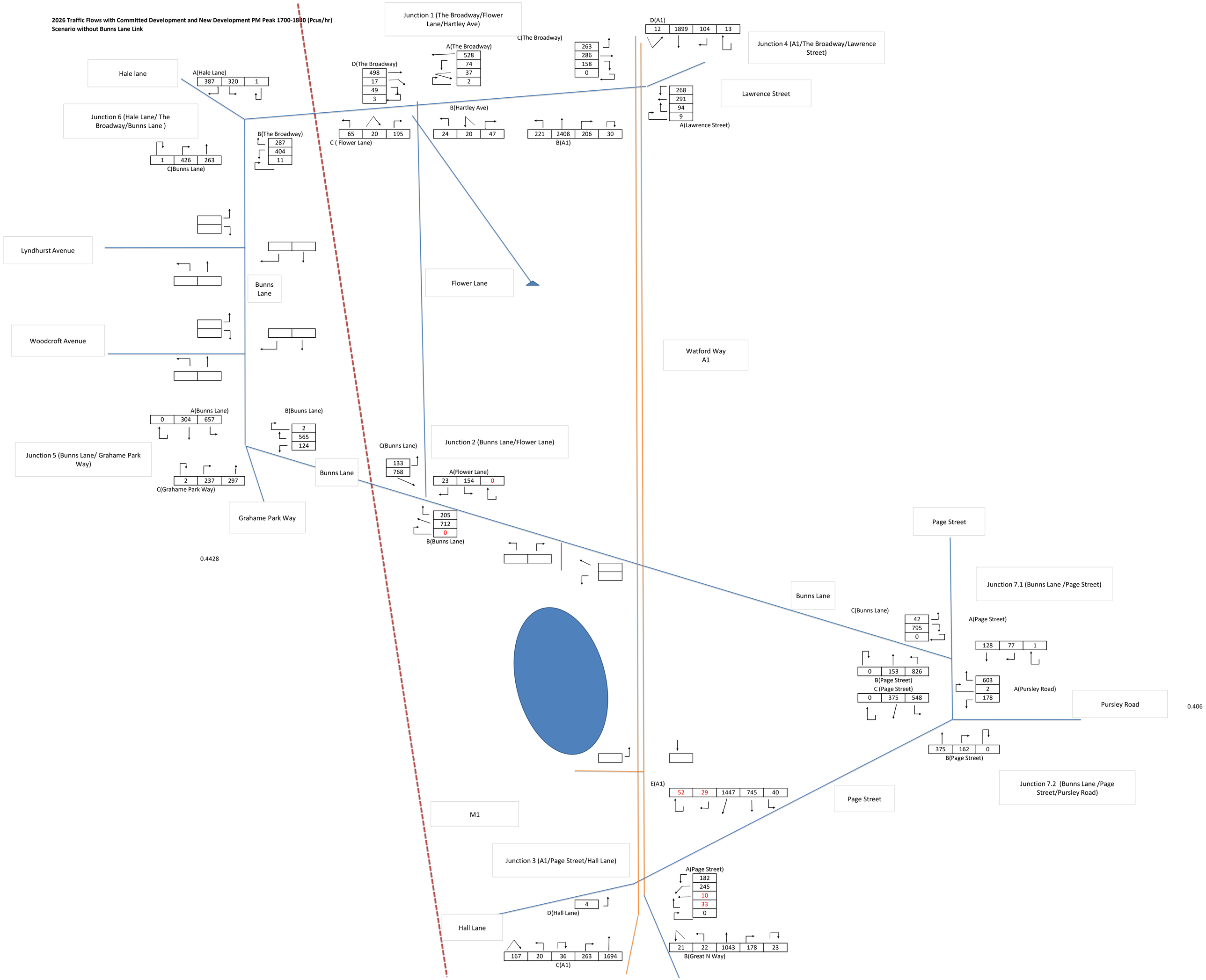
159	7	66	244	1096

C(A1)

21	13	770	187	3

B(Great N Way)

2026 Traffic Flows with Committed Development and New Development PM Peak 1700-1800 (Pcus/hr)
Scenario without Bunns Lane Link



Appendix Ad

2021 & 2026 WITH DEVELOPMENT MODEL RESULTS

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: The Broadway - Flower Lane Junction.j9
Path: C:\Users\Lloyd.Bush\Velocity Transport Planning Ltd\2017 Projects - Documents\Meadow Residential_2110\1130 - Pentavia, Mill Hill\Analysis\Junction Modelling\J1 - Broadway - Flower Ln\June 18
Report generation date: 25/05/2018 20:46:53

»Do Something - 2021 + Committed + New Dev without BL, AM
»Do Something - 2021 + Committed + New Dev without BL, PM
»Do Something - 2026 + Committed + New Dev without BL, AM
»Do Something - 2026 + Committed + New Dev without BL, PM

Summary of junction performance

	AM					PM				
	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity
Do Something - 2021 + Committed + New Dev without BL										
Stream B-C	0.5	32.13	0.35	D	-10 % [Stream B-A]	0.6	26.49	0.39	D	-7 % [Stream B-A]
Stream B-A	3.7	62.18	0.81	F		3.3	50.63	0.79	F	
Stream C-A	1.3	10.15	0.42	B		1.2	9.36	0.41	A	
Stream C-B	0.1	12.29	0.44	B		0.2	10.71	0.45	B	
Do Something - 2026 + Committed + New Dev without BL										
Stream B-C	1.0	60.04	0.52	F	-13 % [Stream B-A]	1.3	54.87	0.60	F	-11 % [Stream B-A]
Stream B-A	5.0	82.77	0.87	F		5.1	75.68	0.87	F	
Stream C-A	1.4	10.36	0.43	B		1.3	9.65	0.43	A	
Stream C-B	0.1	12.57	0.46	B		0.2	11.09	0.47	B	

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. 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	The Broadway - Flower Lane Junction
Location	
Site number	
Date	15/06/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ROBERTWEST\libanbellezza
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	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D1	2016	AM	ONE HOUR	07:45	09:15	15	✓	✓		
D2	2016	PM	ONE HOUR	16:45	18:15	15	✓	✓		
D5	Resi without BL	AM	ONE HOUR	07:45	09:15	15	✓	✓		
D6	Resi without BL	PM	ONE HOUR	16:45	18:15	15	✓	✓		
D7	Non-Resi	AM	ONE HOUR	07:45	09:15	15	✓	✓		
D8	Non-Resi	PM	ONE HOUR	16:45	18:15	15	✓	✓		
D9	Extant Use	AM	ONE HOUR	07:45	09:15	15	✓	✓		
D10	Extant Use	PM	ONE HOUR	16:45	18:15	15	✓	✓		
D11	2021 Committed	AM	ONE HOUR	07:45	09:15	15	✓	✓		
D12	2021 Committed	PM	ONE HOUR	16:45	18:15	15	✓	✓		
D13	2026 Committed	AM	ONE HOUR	07:45	09:15	15	✓	✓		
D14	2026 Committed	PM	ONE HOUR	16:45	18:15	15	✓	✓		
D15	2021 + Committed	AM	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.037+D11+D9
D16	2021 + Committed	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.0558+D12+D10
D19	2021 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*G1+D11+D5+D7
D20	2021 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*G2+D12+D6+D8
D21	2026 + Committed	AM	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*G3+D13+D9
D22	2026 + Committed	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*G4+D14+D10
D25	2026 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*G3+D13+D5+D7
D26	2026 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*G4+D14+D6+D8

Growth Factors

ID	Description	Use TEMPRO	Growth Factor
G1	2016-2021 AM		1.0370
G2	2016-2021 PM		1.0558
G3	2016-2026 AM		1.0740
G4	2016-2026 PM		1.1116

Growth factors are only active if the Demand Set references them in a Relationship.

Do Something - 2021 + Committed + New Dev without BL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D19 - 2021 + Committed + New Dev without BL, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	The Broadway - Flower Lane Junction	T-Junction	Two-way	14.47	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-10	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	The Broadway N		Major
B	Flower Lane		Minor
C	The Broadway SW		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.87			50.0		-

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	One lane plus flare	10.00	6.64	5.13	4.58	4.16		2.00	31	31

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
C	1.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	574	0.091	0.231	0.145	0.330
1	B-C	590	0.079	0.200	-	-
1	C-B	603	0.204	0.204	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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)	Results for central hour only	Run automatically	Relationship type	Relationship
D19	2021 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*G1+D11+D5+D7

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	647	100.000
B		ONE HOUR	✓	262	100.000
C		ONE HOUR	✓	526	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A		
B		
C	[ONEHOUR]	200.00

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	141	506
	B	208	0	54
	C	485	40	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	2	7
	B	12	0	17
	C	6	32	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-C	0.35	32.13	0.5	D	54	54
B-A	0.81	62.18	3.7	F	208	208
C-A	0.42	10.15	1.3	B	485	485
C-B	0.44	12.29	0.1	B	40	40
A-B					141	141
A-C					506	506

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	48	12		315	0.154	48	0.1	0.2	13.487	B
B-A	187	47		326	0.574	185	0.8	1.3	25.166	D
C-A	436	109	179.80	1329	0.328	435	0.7	0.9	8.702	A
C-B	36	9	179.80	101	0.360	36	0.1	0.1	10.415	B
A-B	127	32				127				
A-C	455	114				455				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	59	15		189	0.313	58	0.2	0.4	27.279	D
B-A	229	57		283	0.811	221	1.3	3.3	52.576	F
C-A	534	134	220.20	1278	0.418	533	0.9	1.3	10.147	B
C-B	45	11	220.20	101	0.442	44	0.1	0.1	12.286	B
A-B	155	39				155				
A-C	557	139				557				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	59	15		171	0.348	59	0.4	0.5	32.129	D
B-A	229	57		283	0.812	228	3.3	3.7	62.179	F
C-A	534	134	220.20	1283	0.416	534	1.3	1.3	10.065	B
C-B	45	11	220.20	102	0.438	45	0.1	0.1	12.133	B
A-B	155	39				155				
A-C	557	139				557				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	48	12		302	0.161	50	0.5	0.2	14.362	B
B-A	187	47		326	0.575	196	3.7	1.4	29.396	D
C-A	436	109	179.80	1338	0.326	438	1.3	0.9	8.591	A
C-B	36	9	179.80	103	0.354	37	0.1	0.1	10.220	B
A-B	127	32				127				
A-C	455	114				455				

Do Something - 2021 + Committed + New Dev without BL, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D20 - 2021 + Committed + New Dev without BL, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	The Broadway - Flower Lane Junction	T-Junction	Two-way	12.95	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-7	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	The Broadway N		Major
B	Flower Lane		Minor
C	The Broadway SW		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.87			50.0		-

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	One lane plus flare	10.00	6.64	5.13	4.58	4.16		2.00	31	31

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
C	1.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	564	0.090	0.227	0.143	0.324
1	B-C	603	0.081	0.205	-	-
1	C-B	603	0.204	0.204	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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)	Results for central hour only	Run automatically	Relationship type	Relationship
D20	2021 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*G2+D12+D6+D8

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	591	100.000
B		ONE HOUR	✓	307	100.000
C		ONE HOUR	✓	523	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A		
B		
C	[ONEHOUR]	200.00

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	104	486
	B	228	0	79
	C	465	58	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	3	4
	B	1	0	11
	C	4	10	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-C	0.39	26.49	0.6	D	79	79
B-A	0.79	50.63	3.3	F	228	228
C-A	0.41	9.36	1.2	A	466	466
C-B	0.45	10.71	0.2	B	58	58
A-B					106	106
A-C					488	488

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	71	18		353	0.201	71	0.2	0.2	12.725	B
B-A	205	51		365	0.562	203	0.7	1.2	21.977	C
C-A	419	105	179.80	1308	0.320	418	0.6	0.8	8.024	A
C-B	52	13	179.80	144	0.363	52	0.1	0.1	9.039	A
A-B	96	24				96				
A-C	439	110				439				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	87	22		237	0.368	86	0.2	0.6	23.697	C
B-A	251	63		319	0.787	244	1.2	3.0	44.208	E
C-A	513	128	220.20	1256	0.409	512	0.8	1.2	9.362	A
C-B	64	16	220.20	143	0.446	64	0.1	0.2	10.711	B
A-B	117	29				117				
A-C	538	134				538				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	87	22		222	0.392	87	0.6	0.6	26.486	D
B-A	251	63		319	0.788	250	3.0	3.3	50.633	F
C-A	513	128	220.20	1262	0.407	513	1.2	1.2	9.263	A
C-B	64	16	220.20	145	0.441	64	0.2	0.2	10.533	B
A-B	117	29				117				
A-C	538	134				538				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	71	18		343	0.208	73	0.6	0.3	13.383	B
B-A	205	51		365	0.562	213	3.3	1.4	24.754	C
C-A	419	105	179.80	1316	0.318	421	1.2	0.9	7.923	A
C-B	52	13	179.80	146	0.357	52	0.2	0.1	8.865	A
A-B	96	24				96				
A-C	439	110				439				

Do Something - 2026 + Committed + New Dev without BL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D25 - 2026 + Committed + New Dev without BL, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	The Broadway - Flower Lane Junction	T-Junction	Two-way	18.79	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-13	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	The Broadway N		Major
B	Flower Lane		Minor
C	The Broadway SW		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.87			50.0		-

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	One lane plus flare	10.00	6.64	5.13	4.58	4.16		2.00	31	31

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
C	1.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	574	0.091	0.231	0.145	0.330
1	B-C	591	0.079	0.200	-	-
1	C-B	603	0.204	0.204	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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)	Results for central hour only	Run automatically	Relationship type	Relationship
D25	2026 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*G3+D13+D5+D7

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	669	100.000
B		ONE HOUR	✓	273	100.000
C		ONE HOUR	✓	544	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A		
B		
C	[ONEHOUR]	200.00

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	146	524
	B	216	0	57
	C	502	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	2	7
	B	12	0	16
	C	6	32	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-C	0.52	60.04	1.0	F	57	57
B-A	0.87	82.77	5.0	F	216	216
C-A	0.43	10.36	1.4	B	502	502
C-B	0.46	12.57	0.1	B	42	42
A-B					147	147
A-C					526	526

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	51	13		301	0.170	51	0.1	0.2	14.371	B
B-A	194	49		319	0.609	192	0.8	1.4	27.722	D
C-A	452	113	179.80	1328	0.340	451	0.7	1.0	8.840	A
C-B	38	9	179.80	101	0.372	38	0.1	0.1	10.610	B
A-B	132	33				132				
A-C	472	118				472				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	63	16		150	0.416	61	0.2	0.7	39.471	E
B-A	238	59		274	0.868	226	1.4	4.3	64.565	F
C-A	553	138	220.20	1277	0.433	551	1.0	1.4	10.360	B
C-B	46	12	220.20	101	0.455	46	0.1	0.1	12.572	B
A-B	162	40				162				
A-C	579	145				579				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	63	16		120	0.522	61	0.7	1.0	60.042	F
B-A	238	59		273	0.870	235	4.3	5.0	82.769	F
C-A	553	138	220.20	1280	0.432	553	1.4	1.4	10.332	B
C-B	46	12	220.20	102	0.453	46	0.1	0.1	12.509	B
A-B	162	40				162				
A-C	579	145				579				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	51	13		279	0.183	54	1.0	0.2	16.170	C
B-A	194	49		318	0.610	207	5.0	1.7	35.578	E
C-A	452	113	179.80	1337	0.338	453	1.4	1.0	8.719	A
C-B	38	9	179.80	103	0.365	38	0.1	0.1	10.396	B
A-B	132	33				132				
A-C	472	118				472				

Do Something - 2026 + Committed + New Dev without BL, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D26 - 2026 + Committed + New Dev without BL, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	The Broadway - Flower Lane Junction	T-Junction	Two-way	18.66	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-11	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	The Broadway N		Major
B	Flower Lane		Minor
C	The Broadway SW		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.87			50.0		-

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	One lane plus flare	10.00	6.64	5.13	4.58	4.16		2.00	31	31

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
C	1.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	563	0.090	0.227	0.143	0.324
1	B-C	604	0.081	0.205	-	-
1	C-B	603	0.204	0.204	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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)	Results for central hour only	Run automatically	Relationship type	Relationship
D26	2026 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*G4+D14+D6+D8

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	621	100.000
B		ONE HOUR	✓	324	100.000
C		ONE HOUR	✓	551	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A		
B		
C	[ONEHOUR]	200.00

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	110	512
	B	240	0	84
	C	490	61	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	3	4
	B	1	0	11
	C	4	10	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-C	0.60	54.87	1.3	F	84	84
B-A	0.87	75.68	5.1	F	240	240
C-A	0.43	9.65	1.3	A	491	491
C-B	0.47	11.09	0.2	B	61	61
A-B					112	112
A-C					514	514

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	76	19		333	0.227	75	0.2	0.3	13.951	B
B-A	216	54		354	0.609	213	0.8	1.5	25.110	D
C-A	441	110	179.80	1306	0.338	440	0.7	0.9	8.212	A
C-B	55	14	179.80	144	0.380	55	0.1	0.1	9.296	A
A-B	100	25				100				
A-C	462	115				462				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	93	23		183	0.506	90	0.3	0.9	37.668	E
B-A	264	66		305	0.867	253	1.5	4.4	59.180	F
C-A	540	135	220.20	1254	0.431	538	0.9	1.3	9.653	A
C-B	67	17	220.20	145	0.465	67	0.1	0.2	11.088	B
A-B	123	31				123				
A-C	566	141				566				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	93	23		155	0.599	91	0.9	1.3	54.873	F
B-A	264	66		304	0.870	261	4.4	5.1	75.677	F
C-A	540	135	220.20	1261	0.428	540	1.3	1.3	9.540	A
C-B	67	17	220.20	147	0.459	67	0.2	0.2	10.882	B
A-B	123	31				123				
A-C	566	141				566				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	76	19		313	0.242	80	1.3	0.3	15.676	C
B-A	216	54		354	0.611	230	5.1	1.7	31.705	D
C-A	441	110	179.80	1315	0.335	443	1.3	0.9	8.098	A
C-B	55	14	179.80	147	0.373	55	0.2	0.1	9.095	A
A-B	100	25				100				
A-C	462	115				462				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Bunn's Lane - Flower Lane Junction.j9
Path: C:\Users\Lloyd.Bush\Velocity Transport Planning Ltd\2017 Projects - Documents\Meadow Residential_2110\1130 - Pentavia, Mill Hill\Analysis\Junction Modelling\J2 - Bunn's - Flower Ln\June 18
Report generation date: 25/05/2018 20:51:48

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	Do Something - 2021 + Committed + New Dev without BL							
Stream B-C	1.2	35.40	0.56	E	0.5	11.97	0.34	B
Stream B-A	1.9	131.05	0.71	F	0.3	39.75	0.21	E
Stream C-A	4.9	20.80	0.79	C	2.5	12.91	0.62	B
Stream C-B	2.3	32.75	0.80	D	1.1	20.05	0.69	C
	Do Something - 2026 + Committed + New Dev without BL							
Stream B-C	6.1	156.78	1.02	F	0.6	13.62	0.39	B
Stream B-A	3.8	240.38	0.92	F	0.4	51.20	0.27	F
Stream C-A	6.2	25.41	0.84	D	2.9	14.50	0.67	B
Stream C-B	2.8	37.88	0.83	E	1.4	23.37	0.73	C

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Bunn's Lane - Flower Lane Junction
Location	
Site number	
Date	15/06/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ROBERTWEST\libanbellezza
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	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				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)	Run automatically	Relationship type	Relationship
D1	2016	AM	ONE HOUR	07:45	09:15	15	✓		
D2	2016	PM	ONE HOUR	16:45	18:15	15	✓		
D5	Resi without BL	AM	ONE HOUR	07:45	09:15	15	✓		
D6	Resi without BL	PM	ONE HOUR	16:45	18:15	15	✓		
D7	Non-Resi	AM	ONE HOUR	07:45	09:15	15	✓		
D8	Non-Resi	PM	ONE HOUR	16:45	18:15	15	✓		
D9	Extant	AM	ONE HOUR	07:45	09:15	15	✓		
D10	Extant	PM	ONE HOUR	16:45	18:15	15	✓		
D11	2021 Committed	AM	ONE HOUR	07:45	09:15	15	✓		
D12	2021 Committed	PM	ONE HOUR	16:45	18:15	15	✓		
D13	2026 Committed	AM	ONE HOUR	07:45	09:15	15	✓		
D14	2026 Committed	PM	ONE HOUR	16:45	18:15	15	✓		
D15	2021 + Committed	AM	ONE HOUR	07:45	09:15	15	✓		
D16	2021 + Committed	PM	ONE HOUR	16:45	18:15	15	✓		
D19	2021 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓		
D20	2021 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G2+D12+D6+D8
D21	2026 + Committed	AM	ONE HOUR	07:45	09:15	15	✓		
D22	2026 + Committed	PM	ONE HOUR	16:45	18:15	15	✓		
D25	2026 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓		
D26	2026 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G4+D14+D6+D8

Growth Factors

ID	Description	Use TEMPRO	Growth Factor
G1	2016-2021 AM		1.0370
G2	2016-2021 PM		1.0558
G3	2016-2026 AM		1.0740
G4	2016-2026 PM		1.1116

Growth factors are only active if the Demand Set references them in a Relationship.

Do Something - 2021 + Committed + New Dev without BL, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bunn's Lane - Flower Lane Junction	T-Junction	Two-way	17.59	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Bunn's Lane West		Major
B	Flower Lane		Minor
C	Bunn's Lane East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Bunn's Lane East	7.40		✓	3.10	70.0		-

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 - Flower Lane	One lane plus flare	10.00	6.01	5.29	5.29	5.24		0.50	45	36

Zebra Crossings

Arm	Space between crossing and junction entry (Right / All) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
C - Bunn's Lane East	5.00	2.80	✓	Distance	4.20	3.00	4.40	3.14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	475	0.081	0.205	0.129	0.293
1	B-C	714	0.103	0.260	-	-
1	C-B	675	0.245	0.245	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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
D19	2021 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	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	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bunn's Lane West		ONE HOUR	✓	825	100.000
B - Flower Lane		ONE HOUR	✓	167	100.000
C - Bunn's Lane East		ONE HOUR	✓	1061	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Bunn's Lane West		
B - Flower Lane		
C - Bunn's Lane East	[ONEHOUR]	20.00

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bunn's Lane West	B - Flower Lane	C - Bunn's Lane East
From	A - Bunn's Lane West	0	103	723
	B - Flower Lane	53	0	114
	C - Bunn's Lane East	815	246	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bunn's Lane West	B - Flower Lane	C - Bunn's Lane East
From	A - Bunn's Lane West	0	3	1
	B - Flower Lane	0	0	7
	C - Bunn's Lane East	0	5	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-C	0.56	35.40	1.2	E	105	157
B-A	0.71	131.05	1.9	F	48	73
C-A	0.79	20.80	4.9	C	748	1122
C-B	0.80	32.75	2.3	D	225	338
A-B					94	141
A-C					663	995

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	86	21		492	0.174	85	0.0	0.2	8.824	A
B-A	40	10		215	0.185	39	0.0	0.2	20.307	C
C-A	614	153	15.06	1281	0.479	608	0.0	1.5	9.330	A
C-B	185	46	15.06	321	0.576	182	0.0	0.6	12.818	B
A-B	77	19				77				
A-C	544	136				544				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	102	26		435	0.235	102	0.2	0.3	10.795	B
B-A	47	12		162	0.294	47	0.2	0.4	31.167	D
C-A	733	183	17.98	1227	0.597	730	1.5	2.2	11.885	B
C-B	221	55	17.98	328	0.674	219	0.6	1.1	17.951	C
A-B	92	23				92				
A-C	650	162				650				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	125	31		262	0.479	123	0.3	0.9	25.567	D
B-A	58	15		86	0.677	54	0.4	1.6	100.640	F
C-A	897	224	22.02	1140	0.787	888	2.2	4.6	19.318	C
C-B	271	68	22.02	337	0.802	266	1.1	2.2	30.353	D
A-B	113	28				113				
A-C	796	199				796				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	125	31		224	0.559	124	0.9	1.2	35.397	E
B-A	58	15		82	0.708	57	1.6	1.9	131.046	F
C-A	897	224	22.02	1135	0.791	896	4.6	4.9	20.800	C
C-B	271	68	22.02	340	0.796	270	2.2	2.3	32.752	D
A-B	113	28				113				
A-C	796	199				796				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	102	26		416	0.246	106	1.2	0.3	11.718	B
B-A	47	12		158	0.301	53	1.9	0.5	36.049	E
C-A	733	183	17.98	1219	0.601	743	4.9	2.4	12.673	B
C-B	221	55	17.98	331	0.667	226	2.3	1.2	19.739	C
A-B	92	23				92				
A-C	650	162				650				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	86	21		488	0.176	86	0.3	0.2	8.964	A
B-A	40	10		213	0.187	41	0.5	0.2	20.982	C
C-A	614	153	15.06	1275	0.481	617	2.4	1.5	9.650	A
C-B	185	46	15.06	324	0.571	187	1.2	0.7	13.549	B
A-B	77	19				77				
A-C	544	136				544				

Do Something - 2021 + Committed + New Dev without BL, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bunn's Lane - Flower Lane Junction	T-Junction	Two-way	8.07	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Bunn's Lane West		Major
B	Flower Lane		Minor
C	Bunn's Lane East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Bunn's Lane East	7.40		✓	3.10	70.0		-

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 - Flower Lane	One lane plus flare	10.00	6.01	5.29	5.29	5.24		0.50	45	36

Zebra Crossings

Arm	Space between crossing and junction entry (Right / All) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
C - Bunn's Lane East	5.00	2.80	✓	Distance	4.20	3.00	4.40	3.14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	439	0.075	0.190	0.119	0.271
1	B-C	760	0.109	0.277	-	-
1	C-B	675	0.245	0.245	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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	Relationship type	Relationship
D20	2021 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G2+D12+D6+D8

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	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bunn's Lane West		ONE HOUR	✓	858	100.000
B - Flower Lane		ONE HOUR	✓	163	100.000
C - Bunn's Lane East		ONE HOUR	✓	868	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Bunn's Lane West		
B - Flower Lane		
C - Bunn's Lane East	[ONEHOUR]	20.00

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bunn's Lane West	B - Flower Lane	C - Bunn's Lane East
From	A - Bunn's Lane West	0	127	731
	B - Flower Lane	22	0	141
	C - Bunn's Lane East	678	190	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bunn's Lane West	B - Flower Lane	C - Bunn's Lane East
From	A - Bunn's Lane West	0	0	0
	B - Flower Lane	0	0	4
	C - Bunn's Lane East	1	3	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-C	0.34	11.97	0.5	B	132	197
B-A	0.21	39.75	0.3	E	20	30
C-A	0.62	12.91	2.5	B	622	933
C-B	0.69	20.05	1.1	C	174	262
A-B					116	174
A-C					673	1009

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	108	27		562	0.192	107	0.0	0.2	7.899	A
B-A	17	4		222	0.075	16	0.0	0.1	17.509	C
C-A	510	128	15.06	1317	0.387	506	0.0	1.0	8.034	A
C-B	143	36	15.06	298	0.480	141	0.0	0.4	10.126	B
A-B	95	24				95				
A-C	552	138				552				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	129	32		524	0.246	128	0.2	0.3	9.097	A
B-A	20	5		177	0.112	20	0.1	0.1	22.839	C
C-A	609	152	17.98	1274	0.478	608	1.0	1.5	9.515	A
C-B	171	43	17.98	300	0.569	170	0.4	0.6	13.029	B
A-B	114	28				114				
A-C	659	165				659				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	158	39		460	0.343	157	0.3	0.5	11.843	B
B-A	24	6		116	0.210	24	0.1	0.3	38.888	E
C-A	746	187	22.02	1206	0.619	742	1.5	2.4	12.657	B
C-B	209	52	22.02	303	0.690	207	0.6	1.1	19.447	C
A-B	139	35				139				
A-C	807	202				807				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	158	39		458	0.344	158	0.5	0.5	11.973	B
B-A	24	6		115	0.212	24	0.3	0.3	39.753	E
C-A	746	187	22.02	1203	0.620	746	2.4	2.5	12.909	B
C-B	209	52	22.02	305	0.687	209	1.1	1.1	20.049	C
A-B	139	35				139				
A-C	807	202				807				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	129	32		522	0.247	130	0.5	0.3	9.183	A
B-A	20	5		176	0.113	20	0.3	0.1	23.258	C
C-A	609	152	17.98	1270	0.480	613	2.5	1.5	9.719	A
C-B	171	43	17.98	302	0.565	173	1.1	0.6	13.520	B
A-B	114	28				114				
A-C	659	165				659				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	108	27		561	0.192	108	0.3	0.2	7.960	A
B-A	17	4		220	0.076	17	0.1	0.1	17.716	C
C-A	510	128	15.06	1314	0.388	512	1.5	1.1	8.174	A
C-B	143	36	15.06	300	0.478	144	0.6	0.4	10.418	B
A-B	95	24				95				
A-C	552	138				552				

Do Something - 2026 + Committed + New Dev without BL, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bunn's Lane - Flower Lane Junction	T-Junction	Two-way	29.88	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Bunn's Lane West		Major
B	Flower Lane		Minor
C	Bunn's Lane East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Bunn's Lane East	7.40		✓	3.10	70.0		-

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 - Flower Lane	One lane plus flare	10.00	6.01	5.29	5.29	5.24		0.50	45	36

Zebra Crossings

Arm	Space between crossing and junction entry (Right / All) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
C - Bunn's Lane East	5.00	2.80	✓	Distance	4.20	3.00	4.40	3.14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	475	0.081	0.205	0.129	0.293
1	B-C	714	0.103	0.260	-	-
1	C-B	675	0.245	0.245	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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
D25	2026 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	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	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bunn's Lane West		ONE HOUR	✓	856	100.000
B - Flower Lane		ONE HOUR	✓	173	100.000
C - Bunn's Lane East		ONE HOUR	✓	1102	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Bunn's Lane West		
B - Flower Lane		
C - Bunn's Lane East	[ONEHOUR]	20.00

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bunn's Lane West	B - Flower Lane	C - Bunn's Lane East
From	A - Bunn's Lane West	0	106	750
	B - Flower Lane	55	0	118
	C - Bunn's Lane East	846	256	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bunn's Lane West	B - Flower Lane	C - Bunn's Lane East
From	A - Bunn's Lane West	0	3	1
	B - Flower Lane	0	0	7
	C - Bunn's Lane East	0	5	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-C	1.02	156.78	6.1	F	108	162
B-A	0.92	240.38	3.8	F	50	75
C-A	0.84	25.41	6.2	D	776	1164
C-B	0.83	37.88	2.8	E	235	352
A-B					97	146
A-C					688	1032

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	89	22		483	0.184	88	0.0	0.2	9.088	A
B-A	41	10		205	0.201	40	0.0	0.2	21.716	C
C-A	637	159	15.06	1271	0.501	631	0.0	1.6	9.700	A
C-B	193	48	15.06	323	0.597	190	0.0	0.7	13.573	B
A-B	80	20				80				
A-C	565	141				565				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	106	27		418	0.254	106	0.2	0.3	11.500	B
B-A	49	12		149	0.330	48	0.2	0.5	35.448	E
C-A	761	190	17.98	1213	0.627	757	1.6	2.5	12.679	B
C-B	230	58	17.98	330	0.698	228	0.7	1.2	19.540	C
A-B	95	24				95				
A-C	674	169				674				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	130	32		175	0.740	122	0.3	2.2	61.262	F
B-A	60	15		69	0.871	51	0.5	2.6	162.511	F
C-A	931	233	22.02	1119	0.832	918	2.5	5.8	22.638	C
C-B	282	70	22.02	341	0.827	276	1.2	2.6	34.411	D
A-B	117	29				117				
A-C	826	206				826				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	130	32		128	1.015	115	2.2	6.1	156.783	F
B-A	60	15		65	0.923	55	2.6	3.8	240.380	F
C-A	931	233	22.02	1112	0.838	930	5.8	6.2	25.411	D
C-B	282	70	22.02	344	0.820	281	2.6	2.8	37.881	E
A-B	117	29				117				
A-C	826	206				826				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	106	27		373	0.285	129	6.1	0.4	16.130	C
B-A	49	12		139	0.354	62	3.8	0.6	53.376	F
C-A	761	190	17.98	1204	0.632	775	6.2	2.7	13.889	B
C-B	230	58	17.98	334	0.688	236	2.8	1.3	22.103	C
A-B	95	24				95				
A-C	674	169				674				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	89	22		478	0.186	90	0.4	0.2	9.282	A
B-A	41	10		202	0.203	42	0.6	0.3	22.673	C
C-A	637	159	15.06	1265	0.504	641	2.7	1.7	10.097	B
C-B	193	48	15.06	326	0.591	195	1.3	0.8	14.495	B
A-B	80	20				80				
A-C	565	141				565				

Do Something - 2026 + Committed + New Dev without BL, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Bunn's Lane - Flower Lane Junction	T-Junction	Two-way	9.23	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Bunn's Lane West		Major
B	Flower Lane		Minor
C	Bunn's Lane East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Bunn's Lane East	7.40		✓	3.10	70.0		-

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 - Flower Lane	One lane plus flare	10.00	6.01	5.29	5.29	5.24		0.50	45	36

Zebra Crossings

Arm	Space between crossing and junction entry (Right / All) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
C - Bunn's Lane East	5.00	2.80	✓	Distance	4.20	3.00	4.40	3.14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	439	0.075	0.190	0.119	0.271
1	B-C	760	0.109	0.277	-	-
1	C-B	675	0.245	0.245	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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	Relationship type	Relationship
D26	2026 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G4+D14+D6+D8

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	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bunn's Lane West		ONE HOUR	✓	906	100.000
B - Flower Lane		ONE HOUR	✓	173	100.000
C - Bunn's Lane East		ONE HOUR	✓	915	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Bunn's Lane West		
B - Flower Lane		
C - Bunn's Lane East	[ONEHOUR]	20.00

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Bunn's Lane West	B - Flower Lane	C - Bunn's Lane East
From	A - Bunn's Lane West	0	133	773
	B - Flower Lane	23	0	150
	C - Bunn's Lane East	714	201	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bunn's Lane West	B - Flower Lane	C - Bunn's Lane East
From	A - Bunn's Lane West	0	0	0
	B - Flower Lane	0	0	4
	C - Bunn's Lane East	1	3	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-C	0.39	13.62	0.6	B	139	209
B-A	0.27	51.20	0.4	F	21	32
C-A	0.67	14.50	2.9	B	655	982
C-B	0.73	23.37	1.4	C	185	277
A-B					122	184
A-C					711	1066

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	114	29		552	0.207	113	0.0	0.3	8.190	A
B-A	17	4		209	0.084	17	0.0	0.1	18.713	C
C-A	537	134	15.06	1305	0.412	533	0.0	1.1	8.370	A
C-B	151	38	15.06	299	0.506	150	0.0	0.4	10.785	B
A-B	100	25				100				
A-C	583	146				583				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	136	34		510	0.267	136	0.3	0.4	9.609	A
B-A	21	5		162	0.129	21	0.1	0.1	25.469	D
C-A	641	160	17.98	1258	0.510	639	1.1	1.6	10.111	B
C-B	181	45	17.98	302	0.599	180	0.4	0.7	14.276	B
A-B	120	30				120				
A-C	696	174				696				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	167	42		435	0.384	166	0.4	0.6	13.347	B
B-A	26	6		97	0.263	25	0.1	0.3	49.287	E
C-A	786	196	22.02	1182	0.665	781	1.6	2.9	14.092	B
C-B	221	55	22.02	305	0.725	219	0.7	1.3	22.421	C
A-B	147	37				147				
A-C	853	213				853				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	167	42		431	0.387	167	0.6	0.6	13.617	B
B-A	26	6		96	0.267	26	0.3	0.4	51.195	F
C-A	786	196	22.02	1178	0.667	785	2.9	2.9	14.497	B
C-B	221	55	22.02	307	0.721	221	1.3	1.4	23.374	C
A-B	147	37				147				
A-C	853	213				853				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	136	34		508	0.268	137	0.6	0.4	9.746	A
B-A	21	5		160	0.130	22	0.4	0.2	26.140	D
C-A	641	160	17.98	1253	0.512	646	2.9	1.7	10.410	B
C-B	181	45	17.98	304	0.594	183	1.4	0.7	15.005	C
A-B	120	30				120				
A-C	696	174				696				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	114	29		551	0.207	115	0.4	0.3	8.264	A
B-A	17	4		208	0.084	18	0.2	0.1	18.992	C
C-A	537	134	15.06	1302	0.413	539	1.7	1.2	8.546	A
C-B	151	38	15.06	301	0.503	152	0.7	0.5	11.163	B
A-B	100	25				100				
A-C	583	146				583				

Basic Results Summary

User and Project Details

Project:	**Mill Hill**
Title:	**Five Ways Corner**
Location:	Edgware, London
Additional detail:	
File name:	Five Ways Corner.lsg3x
Author:	Lloyd Bush
Company:	Velocity Transport Planning
Address:	

Basic Results Summary

Network Results

Scenario 3: '2021+Com_Dev+New_Dev without BLL AM' (FG15: '2021+Com_Dev + New_Dev without BLL AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Five Ways Corner	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.9%**	**13**	**0**	**0**	**67.8**	**-**	**-**
J1: Watford Way / Page Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.9%**	**13**	**0**	**0**	**24.3**	**-**	**-**
1/2+1/1	Watford Way Eastbound Entry Left Ahead	U	C1:A C1:C		1	37:36	-	964	1960:1960	1023+62	88.9 : 88.9%	-	-	-	7.5	27.9	19.8
1/3	Watford Way Eastbound Entry Ahead	U	C1:A		1	37	-	695	1804	979	71.0%	-	-	-	3.5	18.2	11.3
1/4	Watford Way Eastbound Entry Ahead	U	C1:A		1	37	-	722	1905	1034	69.8%	-	-	-	3.5	17.5	11.4
3/2+3/1	Page Street Entry Left	U	C1:B		1	18	-	583	1846:1858	386+328	81.7 : 81.7%	-	-	-	5.7	35.5	8.1
4/1	Watford Way Northbound Ahead Left	U	-		-	-	-	832	1930	1930	43.1%	-	-	-	0.4	1.6	0.4
4/2	Watford Way Northbound Ahead	U	-		-	-	-	959	2086	2086	46.0%	-	-	-	0.4	1.6	0.4
4/3+4/4	Watford Way Northbound Right Ahead	U	- C1:D		-	-	-	571	2103:2015	204+547	76.1 : 76.1%	-	-	-	3.2	20.4	7.3
5/1	Hall Lane Left	O	-		-	-	-	13	1924	673	1.9%	13	0	0	0.0	4.4	0.1
Ped Link: P1	Page Street	-	C1:E		1	18	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Great North Way (U-turn) / Watford Way / Fiveways junction	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.5%**	**0**	**0**	**0**	**8.1**	**-**	**-**

Basic Results Summary

1/1	Watford Way Eastbound Entry Ahead	U	-		-	-	-	1177	1986	1986	59.3%	-	-	-	0.7	2.2	0.7
1/2	Watford Way Eastbound Entry Ahead	U	C2:A		1	43	-	880	2170	1364	64.5%	-	-	-	1.9	7.8	6.4
1/3	Watford Way Eastbound Entry Ahead	U	C2:A		1	43	-	852	2012	1265	67.4%	-	-	-	1.8	7.4	4.6
2/1	Watford Way Northbound Entry Ahead	U	-		-	-	-	832	1931	1931	43.1%	-	-	-	0.4	1.6	0.4
2/2	Watford Way Northbound Entry Ahead	U	-		-	-	-	959	2021	2021	47.5%	-	-	-	0.5	1.7	0.5
2/3+2/4	Watford Way Northbound Entry U-Turn Ahead U-Turn2	U	- C2:B		-	-	-	790	2051:2115	777+298	73.5 : 73.5%	-	-	-	2.9	13.1	5.6
J3: Great North Way / Watford Way	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.4%**	**0**	**0**	**0**	**35.4**	**-**	**-**
1/1	Great N Way Exit Ahead	U	C3:J		1	50	-	650	1995	1454	44.7%	-	-	-	0.8	4.7	3.5
1/2	Great N Way Exit Ahead	U	C3:J		1	50	-	683	1995	1454	47.0%	-	-	-	0.8	4.4	3.9
3/2+3/1	Great N Way Westbound Entry Ahead U-Turn	U	C3:D C3:E		1	20	-	672	1990:1990	736+24	88.4 : 88.4%	-	-	-	7.3	39.1	15.6
3/3	Great N Way Westbound Entry Ahead	U	C3:D		1	20	-	290	1923	577	50.3%	-	-	-	2.1	26.5	5.1
4/1	Watford Way Exit Ahead	U	C3:B		1	35	-	789	1955	1061	74.3%	-	-	-	2.5	11.5	5.6
4/2	Watford Way Exit Ahead	U	C3:B		1	35	-	885	2121	1151	76.9%	-	-	-	2.8	11.5	4.9
4/3+4/4	Watford Way Exit U-Turn	U	C3:C		1	7	-	121	2091:2005	282+49	36.5 : 36.5%	-	-	-	0.9	26.2	2.1
6/1	Watford Way 1 Ahead	U	C3:A		1	20	-	522	2007	602	86.7%	-	-	-	6.4	44.1	12.6

Basic Results Summary

6/2	Watford Way 1 Ahead	U	C3:A		1	20	-	515	1986	596	86.4%	-	-	-	6.3	43.9	12.4
6/3	Watford Way 1 Ahead	U	C3:A		1	20	-	482	1930	579	83.2%	-	-	-	5.4	40.6	11.1
Ped Link: P1	Unnamed Ped Link	-	C3:F		1	33	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C3:G		1	18	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Signalised Crossing	-	C3:I		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C3:H		1	33	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P5	Signalised Crossing	-	C3:K		1	6	-	0	-	0	0.0%	-	-	-	-	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	1.3	Total Delay for Signalled Lanes (pcuHr):	20.22
C2	Stream: 1 PRC for Signalled Lanes (%):	33.6	Total Delay for Signalled Lanes (pcuHr):	3.67
C3	Stream: 1 PRC for Signalled Lanes (%):	1.8	Total Delay for Signalled Lanes (pcuHr):	33.76
C3	Stream: 2 PRC for Signalled Lanes (%):	91.5	Total Delay for Signalled Lanes (pcuHr):	1.68
	PRC Over All Lanes (%):	1.3	Total Delay Over All Lanes(pcuHr):	67.81

Cycle Time (s):	70
Cycle Time (s):	70
Cycle Time (s):	70
Cycle Time (s):	70

Basic Results Summary

Scenario 5: '2026+Com_Dev+New_Dev without BLL AM' (FG19: '2026+Com_Dev + New_Dev without BLL AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Five Ways Corner	-	-	-		-	-	-	-	-	-	**91.8%**	**14**	**0**	**0**	**76.4**	-	-
J1: Watford Way / Page Street	-	-	-		-	-	-	-	-	-	**91.8%**	**14**	**0**	**0**	**27.6**	-	-
1/2+1/1	Watford Way Eastbound Entry Left Ahead	U	C1:A C1:C		1	37:36	-	996	1960:1960	1023+62	91.8 : 91.8%	-	-	-	9.0	32.5	22.2
1/3	Watford Way Eastbound Entry Ahead	U	C1:A		1	37	-	719	1804	979	73.4%	-	-	-	3.8	19.0	12.0
1/4	Watford Way Eastbound Entry Ahead	U	C1:A		1	37	-	747	1905	1034	72.2%	-	-	-	3.8	18.2	12.1
3/2+3/1	Page Street Entry Left	U	C1:B		1	18	-	608	1846:1858	386+329	85.1 : 85.1%	-	-	-	6.5	38.5	9.1
4/1	Watford Way Northbound Ahead Left	U	-		-	-	-	867	1930	1930	44.9%	-	-	-	0.4	1.7	0.4
4/2	Watford Way Northbound Ahead	U	-		-	-	-	987	2086	2086	47.3%	-	-	-	0.4	1.6	0.4
4/3+4/4	Watford Way Northbound Right Ahead	U	- C1:D		-	-	-	591	2103:2015	201+547	79.0 : 79.0%	-	-	-	3.7	22.4	8.2
5/1	Hall Lane Left	O	-		-	-	-	14	1924	646	2.2%	14	0	0	0.0	4.9	0.1
Ped Link: P1	Page Street	-	C1:E		1	18	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Great North Way (U-turn) / Watford Way / Fiveways junction	-	-	-		-	-	-	-	-	-	**76.4%**	**0**	**0**	**0**	**8.8**	-	-

Basic Results Summary

1/1	Watford Way Eastbound Entry Ahead	U	-		-	-	-	1219	1986	1986	61.4%	-	-	-	0.8	2.3	0.8
1/2	Watford Way Eastbound Entry Ahead	U	C2:A		1	43	-	913	2170	1364	66.9%	-	-	-	2.1	8.1	7.1
1/3	Watford Way Eastbound Entry Ahead	U	C2:A		1	43	-	881	2012	1265	69.7%	-	-	-	1.9	7.7	5.1
2/1	Watford Way Northbound Entry Ahead	U	-		-	-	-	867	1931	1931	44.9%	-	-	-	0.4	1.7	0.5
2/2	Watford Way Northbound Entry Ahead	U	-		-	-	-	987	2021	2021	48.8%	-	-	-	0.5	1.7	0.5
2/3+2/4	Watford Way Northbound Entry U-Turn Ahead U-Turn2	U	- C2:B		-	-	-	819	2051:2115	773+298	76.4 : 76.4%	-	-	-	3.2	13.9	6.0
J3: Great North Way / Watford Way	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.1%**	**0**	**0**	**0**	**40.0**	**-**	**-**
1/1	Great N Way Exit Ahead	U	C3:J		1	50	-	677	1995	1454	46.6%	-	-	-	0.9	4.8	3.6
1/2	Great N Way Exit Ahead	U	C3:J		1	50	-	704	1995	1454	48.4%	-	-	-	0.9	4.6	4.5
3/2+3/1	Great N Way Westbound Entry Ahead U-Turn	U	C3:D C3:E		1	20	-	685	1990:1990	737+23	90.1 : 90.1%	-	-	-	8.0	42.0	16.4
3/3	Great N Way Westbound Entry Ahead	U	C3:D		1	20	-	312	1923	577	54.1%	-	-	-	2.4	27.2	5.6
4/1	Watford Way Exit Ahead	U	C3:B		1	35	-	819	1955	1061	77.2%	-	-	-	2.8	12.5	6.4
4/2	Watford Way Exit Ahead	U	C3:B		1	35	-	918	2121	1151	79.7%	-	-	-	3.2	12.5	5.6
4/3+4/4	Watford Way Exit U-Turn	U	C3:C		1	7	-	123	2091:2005	285+22	40.0 : 40.0%	-	-	-	0.9	27.6	2.3
6/1	Watford Way 1 Ahead	U	C3:A		1	20	-	542	2007	602	90.0%	-	-	-	7.5	49.9	14.1

Basic Results Summary

6/2	Watford Way 1 Ahead	U	C3:A		1	20	-	534	1986	596	89.6%	-	-	-	7.3	49.4	13.8
6/3	Watford Way 1 Ahead	U	C3:A		1	20	-	498	1930	579	86.0%	-	-	-	6.1	43.9	12.0
Ped Link: P1	Unnamed Ped Link	-	C3:F		1	33	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C3:G		1	18	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Signalised Crossing	-	C3:I		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C3:H		1	33	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P5	Signalised Crossing	-	C3:K		1	6	-	0	-	0	0.0%	-	-	-	-	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	-2.0	Total Delay for Signalled Lanes (pcuHr):	23.07
C2	Stream: 1 PRC for Signalled Lanes (%):	29.2	Total Delay for Signalled Lanes (pcuHr):	3.96
C3	Stream: 1 PRC for Signalled Lanes (%):	-0.2	Total Delay for Signalled Lanes (pcuHr):	38.23
C3	Stream: 2 PRC for Signalled Lanes (%):	85.8	Total Delay for Signalled Lanes (pcuHr):	1.80
	PRC Over All Lanes (%):	-2.0	Total Delay Over All Lanes(pcuHr):	76.44

Cycle Time (s):	70
Cycle Time (s):	70
Cycle Time (s):	70
Cycle Time (s):	70

Basic Results Summary

Scenario 8: '2021+Com_Dev+New_Dev without BLL PM' (FG16: '2021+Com_Dev + New_Dev without BLL PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Five Ways Corner	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.6%**	**4**	**0**	**0**	**90.6**	**-**	**-**
J1: Watford Way / Page Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**71.9%**	**4**	**0**	**0**	**22.6**	**-**	**-**
1/2+1/1	Watford Way Eastbound Entry Left Ahead	U	C1:A C1:C		1	49:48	-	773	1960:1960	1049+54	70.1 : 70.1%	-	-	-	4.2	19.7	14.6
1/3	Watford Way Eastbound Entry Ahead	U	C1:A		1	49	-	721	1804	1002	71.9%	-	-	-	4.2	21.2	14.5
1/4	Watford Way Eastbound Entry Ahead	U	C1:A		1	49	-	749	1905	1058	70.8%	-	-	-	4.2	20.4	14.7
3/2+3/1	Page Street Entry Left	U	C1:B		1	26	-	454	1846:1858	416+256	67.5 : 67.5%	-	-	-	4.3	33.8	7.4
4/1	Watford Way Northbound Ahead Left	U	-		-	-	-	1009	1930	1930	52.3%	-	-	-	0.5	2.0	0.5
4/2	Watford Way Northbound Ahead	U	-		-	-	-	1159	2086	2086	55.6%	-	-	-	0.6	1.9	0.6
4/3+4/4	Watford Way Northbound Right Ahead	U	- C1:D		-	-	-	1047	2103:2015	909+605	69.2 : 69.1%	-	-	-	4.5	15.4	9.7
5/1	Hall Lane Left	O	-		-	-	-	4	1924	571	0.7%	4	0	0	0.0	8.0	0.0
Ped Link: P1	Page Street	-	C1:E		1	26	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		1	39	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Great North Way (U-turn) / Watford Way / Fiveways junction	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.4%**	**0**	**0**	**0**	**13.6**	**-**	**-**

Basic Results Summary

1/1	Watford Way Eastbound Entry Ahead	U	-		-	-	-	908	1986	1986	45.7%	-	-	-	0.4	1.7	0.4
1/2	Watford Way Eastbound Entry Ahead	U	C2:A		1	51	-	914	2170	1254	72.9%	-	-	-	4.3	16.8	19.7
1/3	Watford Way Eastbound Entry Ahead	U	C2:A		1	51	-	837	2012	1162	72.0%	-	-	-	4.0	17.4	20.0
2/1	Watford Way Northbound Entry Ahead	U	-		-	-	-	1009	1931	1931	52.3%	-	-	-	0.6	2.1	5.5
2/2	Watford Way Northbound Entry Ahead	U	-		-	-	-	1159	2021	2021	57.3%	-	-	-	0.7	2.1	0.7
2/3+2/4	Watford Way Northbound Entry U-Turn Ahead U-Turn2	U	- C2:B		-	-	-	1261	2051:2115	1302+266	80.4 : 80.4%	-	-	-	3.6	10.3	8.2
J3: Great North Way / Watford Way	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.6%**	**0**	**0**	**0**	**54.4**	**-**	**-**
1/1	Great N Way Exit Ahead	U	C3:J		1	70	-	510	1995	1574	32.4%	-	-	-	0.5	3.7	2.7
1/2	Great N Way Exit Ahead	U	C3:J		1	70	-	578	1995	1574	36.7%	-	-	-	0.5	3.1	2.1
3/2+3/1	Great N Way Westbound Entry Ahead U-Turn	U	C3:D C3:E		1	27	-	634	1990:1990	680+22	90.3 : 90.3%	-	-	-	9.0	51.3	19.1
3/3	Great N Way Westbound Entry Ahead	U	C3:D		1	27	-	593	1923	684	86.7%	-	-	-	7.5	45.6	16.7
4/1	Watford Way Exit Ahead	U	C3:B		1	48	-	770	1955	1108	69.5%	-	-	-	1.5	7.0	3.0
4/2	Watford Way Exit Ahead	U	C3:B		1	48	-	871	2121	1202	72.5%	-	-	-	1.6	6.7	7.8
4/3+4/4	Watford Way Exit U-Turn	U	C3:C		1	7	-	144	2091:2005	223+2	64.1 : 64.1%	-	-	-	1.9	46.8	4.1
6/1	Watford Way 1 Ahead	U	C3:A		1	33	-	710	2007	758	93.6%	-	-	-	11.2	56.9	22.9

Basic Results Summary

6/2	Watford Way 1 Ahead	U	C3:A		1	33	-	701	1986	750	93.4%	-	-	-	11.0	56.5	22.5
6/3	Watford Way 1 Ahead	U	C3:A		1	33	-	667	1930	729	91.5%	-	-	-	9.6	51.8	20.4
Ped Link: P1	Unnamed Ped Link	-	C3:F		1	40	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C3:G		1	25	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Signalised Crossing	-	C3:I		1	47	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C3:H		1	46	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P5	Signalised Crossing	-	C3:K		1	6	-	0	-	0	0.0%	-	-	-	-	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	25.1	Total Delay for Signalled Lanes (pcuHr):	16.97	Cycle Time (s): 90
C2	Stream: 1 PRC for Signalled Lanes (%):	23.5	Total Delay for Signalled Lanes (pcuHr):	8.31	Cycle Time (s): 90
C3	Stream: 1 PRC for Signalled Lanes (%):	-4.0	Total Delay for Signalled Lanes (pcuHr):	53.38	Cycle Time (s): 90
C3	Stream: 2 PRC for Signalled Lanes (%):	145.1	Total Delay for Signalled Lanes (pcuHr):	1.03	Cycle Time (s): 90
	PRC Over All Lanes (%):	-4.0	Total Delay Over All Lanes(pcuHr):	90.62	

Basic Results Summary

Scenario 10: '2026+Com_Dev+New_Dev without BLL PM' (FG20: '2026+Com_Dev + New_Dev without BLL PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Five Ways Corner	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.3%**	**4**	**0**	**0**	**115.7**	**-**	**-**
J1: Watford Way / Page Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.3%**	**4**	**0**	**0**	**25.0**	**-**	**-**
1/2+1/1	Watford Way Eastbound Entry Left Ahead	U	C1:A C1:C		1	49:48	-	810	1960:1960	1049+54	73.4 : 73.4%	-	-	-	4.7	20.8	16.2
1/3	Watford Way Eastbound Entry Ahead	U	C1:A		1	49	-	755	1804	1002	75.3%	-	-	-	4.7	22.5	15.8
1/4	Watford Way Eastbound Entry Ahead	U	C1:A		1	49	-	790	1905	1058	74.6%	-	-	-	4.8	21.8	16.4
3/2+3/1	Page Street Entry Left	U	C1:B		1	26	-	478	1846:1858	416+258	71.0 : 71.0%	-	-	-	4.6	35.0	8.3
4/1	Watford Way Northbound Ahead Left	U	-		-	-	-	1080	1930	1930	56.0%	-	-	-	0.6	2.1	0.6
4/2	Watford Way Northbound Ahead	U	-		-	-	-	1191	2086	2086	57.1%	-	-	-	0.7	2.0	0.7
4/3+4/4	Watford Way Northbound Right Ahead	U	- C1:D		-	-	-	1109	2103:2015	919+605	72.8 : 72.8%	-	-	-	4.9	15.8	10.5
5/1	Hall Lane Left	O	-		-	-	-	4	1924	513	0.8%	4	0	0	0.0	8.8	0.0
Ped Link: P1	Page Street	-	C1:E		1	26	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:F		1	39	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Great North Way (U-turn) / Watford Way / Fiveways junction	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.0%**	**0**	**0**	**0**	**15.8**	**-**	**-**

Basic Results Summary

1/1	Watford Way Eastbound Entry Ahead	U	-		-	-	-	953	1986	1986	48.0%	-	-	-	0.5	1.7	0.5
1/2	Watford Way Eastbound Entry Ahead	U	C2:A		1	51	-	960	2170	1254	76.6%	-	-	-	4.9	18.2	21.6
1/3	Watford Way Eastbound Entry Ahead	U	C2:A		1	51	-	880	2012	1162	75.7%	-	-	-	4.6	18.7	21.7
2/1	Watford Way Northbound Entry Ahead	U	-		-	-	-	1080	1931	1931	55.9%	-	-	-	0.7	2.3	7.2
2/2	Watford Way Northbound Entry Ahead	U	-		-	-	-	1191	2021	2021	58.9%	-	-	-	0.7	2.2	0.7
2/3+2/4	Watford Way Northbound Entry U-Turn Ahead U-Turn2	U	- C2:B		-	-	-	1335	2051:2115	1305+266	85.0 : 85.0%	-	-	-	4.5	12.1	11.2
J3: Great North Way / Watford Way	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.3%**	**0**	**0**	**0**	**74.9**	**-**	**-**
1/1	Great N Way Exit Ahead	U	C3:J		1	70	-	539	1995	1574	34.2%	-	-	-	0.6	3.9	3.1
1/2	Great N Way Exit Ahead	U	C3:J		1	70	-	604	1995	1574	38.4%	-	-	-	0.5	3.2	2.2
3/2+3/1	Great N Way Westbound Entry Ahead U-Turn	U	C3:D C3:E		1	27	-	662	1990:1990	679+22	94.3 : 94.3%	-	-	-	11.5	62.6	22.3
3/3	Great N Way Westbound Entry Ahead	U	C3:D		1	27	-	629	1923	684	92.0%	-	-	-	9.7	55.7	19.9
4/1	Watford Way Exit Ahead	U	C3:B		1	48	-	816	1955	1108	73.7%	-	-	-	1.7	7.7	3.2
4/2	Watford Way Exit Ahead	U	C3:B		1	48	-	912	2121	1202	75.9%	-	-	-	1.9	7.6	3.9
4/3+4/4	Watford Way Exit U-Turn	U	C3:C		1	7	-	148	2091:2005	223+0	66.3 : 0.0%	-	-	-	2.0	48.0	4.3
6/1	Watford Way 1 Ahead	U	C3:A		1	33	-	745	2007	758	98.3%	-	-	-	16.5	79.6	29.2

Basic Results Summary

6/2	Watford Way 1 Ahead	U	C3:A		1	33	-	737	1986	750	98.2%	-	-	-	16.3	79.8	28.9
6/3	Watford Way 1 Ahead	U	C3:A		1	33	-	706	1930	729	96.8%	-	-	-	14.1	71.9	26.0
Ped Link: P1	Unnamed Ped Link	-	C3:F		1	40	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C3:G		1	25	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Signalised Crossing	-	C3:I		1	47	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C3:H		1	46	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P5	Signalised Crossing	-	C3:K		1	6	-	0	-	0	0.0%	-	-	-	-	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	19.5	Total Delay for Signalled Lanes (pcuHr):	18.83	Cycle Time (s):	90
C2	Stream: 1 PRC for Signalled Lanes (%):	17.5	Total Delay for Signalled Lanes (pcuHr):	9.42	Cycle Time (s):	90
C3	Stream: 1 PRC for Signalled Lanes (%):	-9.2	Total Delay for Signalled Lanes (pcuHr):	73.76	Cycle Time (s):	90
C3	Stream: 2 PRC for Signalled Lanes (%):	134.5	Total Delay for Signalled Lanes (pcuHr):	1.11	Cycle Time (s):	90
	PRC Over All Lanes (%):	-9.2	Total Delay Over All Lanes(pcuHr):	115.66		

Basic Results Summary

User and Project Details

Project:	**Mill Hill**
Title:	**Mill Hill Circus - Roundabout**
Location:	Edgware, London
Additional detail:	
File name:	Mill Hill Circus.lsg3x
Author:	Lloyd Bush
Company:	Velocity Transport Planning
Address:	

Basic Results Summary

Network Results

Scenario 5: '2021+Com_Dev+New_Dev without BLL AM' (FG15: '2021+Com_Dev + New_Dev without BLL AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Mill Hill Circus - Roundabout	-	-	-		-	-	-	-	-	-	**108.0%**	**1956**	**0**	**0**	**133.9**	-	-
Mill Hill Circus	-	-	-		-	-	-	-	-	-	**108.0%**	**1956**	**0**	**0**	**133.9**	-	-
1/1	Lawrence Street Entry Ahead Left	O	-		-	-	-	300	2015	280	107.2%	280	0	0	17.9	214.7	31.2
1/2+1/3	Lawrence Street Entry Ahead Left	O	-		-	-	-	331	2135:1825	263+47	106.8 : 106.8%	620	0	0	18.7	203.6	29.5
2/1	Watford Way Westbound Entry Left Ahead	U	D		1	38	-	957	2024	1226	78.1%	-	-	-	4.5	17.1	15.8
2/2+2/3	Watford Way Westbound Entry Ahead	U	D		1	38	-	1177	2039:1968	1172+268	81.7 : 81.7%	-	-	-	5.3	16.4	16.0
3/1	The Broadway Entry Ahead Left	O	-		-	-	-	362	1857	450	80.4%	362	0	0	4.0	39.7	8.4
3/2+3/3	The Broadway Entry Ahead	O	-		-	-	-	347	2012:1901	224+404	55.3 : 55.3%	694	0	0	2.3	24.1	4.2
4/1	Watford Way Eastbound Entry Left Ahead	U	A		1	39	-	1120	1753	1037	108.0%	-	-	-	54.4	175.0	71.1
4/2+4/3	Watford Way Eastbound Entry Ahead	U	A		1	39	-	957	1984:1984	989+194	80.9 : 80.9%	-	-	-	5.0	19.0	16.3
5/1	Rbt Circulation 4 Ahead Right	U	B		1	18	-	197	1862	498	39.5%	-	-	-	1.7	31.0	4.2
5/2	Rbt Circulation 4 Ahead Right	U	B		1	18	-	304	1777	476	63.9%	-	-	-	2.8	33.4	6.5
5/3	Rbt Circulation 4 Right	U	B		1	18	-	262	1728	462	56.7%	-	-	-	2.6	35.9	5.7

Basic Results Summary

6/1	Rbt Circulation 2 Ahead Right	U	E		1	17	-	210	1800	456	43.4%	-	-	-	0.9	16.0	2.0
6/2	Rbt Circulation 2 Ahead Right	U	E		1	17	-	306	1942	492	59.9%	-	-	-	2.2	27.4	4.6
6/3	Rbt Circulation 2 Right	U	E		1	17	-	72	1864	473	14.6%	-	-	-	0.4	18.9	0.9
7/1	Watford Way Westbound Exit Ahead	U	G		1	52	-	965	1958	1462	65.9%	-	-	-	1.4	5.1	4.4
7/2	Watford Way Westbound Exit Ahead	U	G		1	52	-	1034	2098	1566	65.8%	-	-	-	1.2	4.3	2.7
9/1	Watford Way Eastbound Exit Ahead	U	I		1	50	-	1308	2071	1488	81.9%	-	-	-	3.1	9.3	7.5
9/2	Watford Way Eastbound Exit Ahead	U	I		1	50	-	1197	2211	1588	74.9%	-	-	-	3.2	9.6	14.4
11/1	Rbt Circulation 1 Right Ahead	U	-		-	-	-	1186	2018	2018	54.7%	-	-	-	0.6	2.0	0.6
11/2	Rbt Circulation 1 Right Ahead	U	-		-	-	-	1119	2154	2154	51.9%	-	-	-	0.5	1.8	3.6
11/3	Rbt Circulation 1 Right	U	-		-	-	-	157	2015	2015	7.8%	-	-	-	0.0	1.0	0.0
12/1	Rbt Circulation 3 Ahead	U	-		-	-	-	799	2022	2022	39.4%	-	-	-	0.3	1.5	0.3
12/2	Rbt Circulation 3 Right Ahead	U	-		-	-	-	1035	2169	2169	47.6%	-	-	-	0.5	1.6	0.5
12/3	Rbt Circulation 3 Right	U	-		-	-	-	219	2027	2027	10.8%	-	-	-	0.1	1.0	0.1
Ped Link: P1	Watford Way Crossing 1	-	C		1	14	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Watford Way Crossing 2	-	H		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Watford Way Crossing 3	-	F		1	13	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Watford Way Crossing 4	-	J		1	6	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

C1	Stream: 1	PRC for Signalled Lanes (%):	-20.0	Total Delay for Signalled Lanes (pcuHr):	66.62	Cycle Time (s):	71
C1	Stream: 2	PRC for Signalled Lanes (%):	10.1	Total Delay for Signalled Lanes (pcuHr):	13.38	Cycle Time (s):	71
C1	Stream: 3	PRC for Signalled Lanes (%):	36.5	Total Delay for Signalled Lanes (pcuHr):	2.61	Cycle Time (s):	71
C1	Stream: 4	PRC for Signalled Lanes (%):	9.9	Total Delay for Signalled Lanes (pcuHr):	6.33	Cycle Time (s):	71
		PRC Over All Lanes (%):	-20.0	Total Delay Over All Lanes(pcuHr):	133.89		

Basic Results Summary

Scenario 6: '2021+Com_Dev+New_Dev without BLL PM' (FG16: '2021+Com_Dev + New_Dev without BLL PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Mill Hill Circus - Roundabout	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**99.9%**	**2023**	**0**	**0**	**107.0**	**-**	**-**
Mill Hill Circus	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**99.9%**	**2023**	**0**	**0**	**107.0**	**-**	**-**
1/1	Lawrence Street Entry Ahead Left	O	-		-	-	-	276	2015	319	86.4%	276	0	0	4.5	58.3	7.5
1/2+1/3	Lawrence Street Entry Ahead Left	O	-		-	-	-	354	2135:1825	294+108	88.0 : 88.0%	708	0	0	5.3	53.6	8.2
2/1	Watford Way Westbound Entry Left Ahead	U	D		1	38	-	1331	2024	1360	97.9%	-	-	-	16.1	43.6	35.0
2/2+2/3	Watford Way Westbound Entry Ahead	U	D		1	38	-	1416	2039:1968	1339+79	99.9 : 99.9%	-	-	-	22.2	56.3	42.0
3/1	The Broadway Entry Ahead Left	O	-		-	-	-	305	1857	350	87.2%	305	0	0	4.8	57.1	8.1
3/2+3/3	The Broadway Entry Ahead	O	-		-	-	-	367	2012:1901	256+181	83.9 : 83.9%	734	0	0	4.7	46.2	6.1
4/1	Watford Way Eastbound Entry Left Ahead	U	A		1	36	-	1059	1753	1096	96.7%	-	-	-	12.9	43.7	27.2
4/2+4/3	Watford Way Eastbound Entry Ahead	U	A		1	36	-	882	1984:1984	1125+115	71.1 : 71.1%	-	-	-	3.2	13.1	11.6
5/1	Rbt Circulation 4 Ahead Right	U	B		1	14	-	214	1862	436	49.0%	-	-	-	1.7	28.1	3.7
5/2	Rbt Circulation 4 Ahead Right	U	B		1	14	-	264	1777	416	63.4%	-	-	-	2.4	32.4	5.5
5/3	Rbt Circulation 4 Right	U	B		1	14	-	190	1728	405	46.9%	-	-	-	1.5	29.2	3.7

Basic Results Summary

6/1	Rbt Circulation 2 Ahead Right	U	E		1	10	-	176	1800	309	56.9%	-	-	-	1.2	25.1	2.8
6/2	Rbt Circulation 2 Ahead Right	U	E		1	10	-	202	1942	334	60.5%	-	-	-	1.7	30.1	3.5
6/3	Rbt Circulation 2 Right	U	E		1	10	-	108	1864	320	33.7%	-	-	-	0.6	19.9	1.8
7/1	Watford Way Westbound Exit Ahead	U	G		1	45	-	1367	1958	1407	97.1%	-	-	-	12.4	32.5	31.7
7/2	Watford Way Westbound Exit Ahead	U	G		1	45	-	1280	2098	1508	84.9%	-	-	-	3.4	9.7	7.0
9/1	Watford Way Eastbound Exit Ahead	U	I		1	43	-	1177	2071	1424	82.7%	-	-	-	3.3	9.9	7.1
9/2	Watford Way Eastbound Exit Ahead	U	I		1	43	-	1086	2211	1520	71.4%	-	-	-	2.6	8.7	11.2
11/1	Rbt Circulation 1 Right Ahead	U	-		-	-	-	1047	2018	2018	51.9%	-	-	-	0.5	1.9	0.5
11/2	Rbt Circulation 1 Right Ahead	U	-		-	-	-	990	2154	2154	46.0%	-	-	-	0.4	1.5	0.4
11/3	Rbt Circulation 1 Right	U	-		-	-	-	82	2015	2015	4.1%	-	-	-	0.0	0.9	0.0
12/1	Rbt Circulation 3 Ahead	U	-		-	-	-	1118	2022	2022	55.3%	-	-	-	0.6	2.0	0.6
12/2	Rbt Circulation 3 Right Ahead	U	-		-	-	-	1438	2169	2169	66.3%	-	-	-	1.0	2.5	1.0
12/3	Rbt Circulation 3 Right	U	-		-	-	-	87	2027	2027	4.3%	-	-	-	0.0	0.9	0.0
Ped Link: P1	Watford Way Crossing 1	-	C		1	10	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Watford Way Crossing 2	-	H		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Watford Way Crossing 3	-	F		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Watford Way Crossing 4	-	J		1	6	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

C1	Stream: 1	PRC for Signalled Lanes (%):	-7.4	Total Delay for Signalled Lanes (pcuHr):	21.65	Cycle Time (s):	64
C1	Stream: 2	PRC for Signalled Lanes (%):	-10.9	Total Delay for Signalled Lanes (pcuHr):	41.80	Cycle Time (s):	64
C1	Stream: 3	PRC for Signalled Lanes (%):	-7.9	Total Delay for Signalled Lanes (pcuHr):	15.79	Cycle Time (s):	64
C1	Stream: 4	PRC for Signalled Lanes (%):	8.9	Total Delay for Signalled Lanes (pcuHr):	5.88	Cycle Time (s):	64
		PRC Over All Lanes (%):	-10.9	Total Delay Over All Lanes(pcuHr):	107.02		

Basic Results Summary

Scenario 9: '2026+Com_Dev+New_Dev without BLL AM' (FG19: '2026+Com_Dev + New_Dev without BLL AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Mill Hill Circus - Roundabout	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**114.6%**	**1985**	**0**	**0**	**184.8**	**-**	**-**
Mill Hill Circus	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**114.6%**	**1985**	**0**	**0**	**184.8**	**-**	**-**
1/1	Lawrence Street Entry Ahead Left	O	-		-	-	-	304	2015	270	112.4%	270	0	0	23.9	282.5	36.9
1/2+1/3	Lawrence Street Entry Ahead Left	O	-		-	-	-	348	2135:1825	254+54	113.0 : 113.0%	616	0	0	27.3	282.8	37.1
2/1	Watford Way Westbound Entry Left Ahead	U	D		1	38	-	992	2024	1226	80.9%	-	-	-	5.1	18.4	17.0
2/2+2/3	Watford Way Westbound Entry Ahead	U	D		1	38	-	1216	2039:1968	1172+268	84.4 : 84.4%	-	-	-	6.0	17.7	17.5
3/1	The Broadway Entry Ahead Left	O	-		-	-	-	371	1857	453	81.9%	371	0	0	4.3	41.3	8.9
3/2+3/3	The Broadway Entry Ahead	O	-		-	-	-	364	2012:1901	229+403	57.6 : 57.6%	728	0	0	2.5	24.6	4.5
4/1	Watford Way Eastbound Entry Left Ahead	U	A		1	39	-	1188	1753	1037	114.6%	-	-	-	88.6	268.6	105.7
4/2+4/3	Watford Way Eastbound Entry Ahead	U	A		1	39	-	964	1984:1984	983+201	81.4 : 81.4%	-	-	-	5.1	19.2	16.5
5/1	Rbt Circulation 4 Ahead Right	U	B		1	18	-	200	1862	498	40.1%	-	-	-	1.6	28.9	4.3
5/2	Rbt Circulation 4 Ahead Right	U	B		1	18	-	317	1777	476	66.7%	-	-	-	3.0	33.6	6.8
5/3	Rbt Circulation 4 Right	U	B		1	18	-	273	1728	462	59.0%	-	-	-	2.6	34.6	6.0

Basic Results Summary

6/1	Rbt Circulation 2 Ahead Right	U	E		1	17	-	211	1800	456	41.9%	-	-	-	0.8	15.8	2.1
6/2	Rbt Circulation 2 Ahead Right	U	E		1	17	-	312	1942	492	59.3%	-	-	-	2.2	27.5	4.8
6/3	Rbt Circulation 2 Right	U	E		1	17	-	85	1864	473	16.5%	-	-	-	0.4	17.9	0.9
7/1	Watford Way Westbound Exit Ahead	U	G		1	52	-	991	1958	1462	67.7%	-	-	-	1.4	5.2	4.4
7/2	Watford Way Westbound Exit Ahead	U	G		1	52	-	1078	2098	1566	68.4%	-	-	-	1.4	4.6	3.0
9/1	Watford Way Eastbound Exit Ahead	U	I		1	50	-	1379	2071	1488	81.7%	-	-	-	3.2	9.6	7.7
9/2	Watford Way Eastbound Exit Ahead	U	I		1	50	-	1215	2211	1588	75.7%	-	-	-	3.2	9.7	14.5
11/1	Rbt Circulation 1 Right Ahead	U	-		-	-	-	1254	2018	2018	54.7%	-	-	-	0.6	2.0	0.6
11/2	Rbt Circulation 1 Right Ahead	U	-		-	-	-	1132	2154	2154	52.6%	-	-	-	0.6	1.8	4.1
11/3	Rbt Circulation 1 Right	U	-		-	-	-	164	2015	2015	8.1%	-	-	-	0.0	1.0	0.0
12/1	Rbt Circulation 3 Ahead	U	-		-	-	-	819	2022	2022	40.4%	-	-	-	0.3	1.5	0.3
12/2	Rbt Circulation 3 Right Ahead	U	-		-	-	-	1079	2169	2169	49.4%	-	-	-	0.5	1.6	0.5
12/3	Rbt Circulation 3 Right	U	-		-	-	-	226	2027	2027	11.1%	-	-	-	0.1	1.0	0.1
Ped Link: P1	Watford Way Crossing 1	-	C		1	14	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Watford Way Crossing 2	-	H		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Watford Way Crossing 3	-	F		1	13	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Watford Way Crossing 4	-	J		1	6	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

C1	Stream: 1	PRC for Signalled Lanes (%):	-27.3	Total Delay for Signalled Lanes (pcuHr):	100.97	Cycle Time (s):	71
C1	Stream: 2	PRC for Signalled Lanes (%):	6.6	Total Delay for Signalled Lanes (pcuHr):	14.53	Cycle Time (s):	71
C1	Stream: 3	PRC for Signalled Lanes (%):	31.7	Total Delay for Signalled Lanes (pcuHr):	2.82	Cycle Time (s):	71
C1	Stream: 4	PRC for Signalled Lanes (%):	10.1	Total Delay for Signalled Lanes (pcuHr):	6.47	Cycle Time (s):	71
		PRC Over All Lanes (%):	-27.3	Total Delay Over All Lanes(pcuHr):	184.82		

Basic Results Summary

Scenario 10: '2026+Com_Dev+New_Dev without BLL PM' (FG20: '2026+Com_Dev + New_Dev without BLL PM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Mill Hill Circus - Roundabout	-	-	-		-	-	-	-	-	-	**105.3%**	**2132**	**0**	**0**	**213.2**	-	-
Mill Hill Circus	-	-	-		-	-	-	-	-	-	**105.3%**	**2132**	**0**	**0**	**213.2**	-	-
1/1	Lawrence Street Entry Ahead Left	O	-		-	-	-	290	2015	302	96.0%	290	0	0	7.8	96.9	11.1
1/2+1/3	Lawrence Street Entry Ahead Left	O	-		-	-	-	373	2135:1825	278+100	98.7 : 98.7%	746	0	0	10.7	103.7	13.8
2/1	Watford Way Westbound Entry Left Ahead	U	D		1	38	-	1406	2024	1360	103.4%	-	-	-	39.3	100.6	59.4
2/2+2/3	Watford Way Westbound Entry Ahead	U	D		1	38	-	1482	2039:1968	1342+66	105.3 : 105.3%	-	-	-	52.3	126.9	78.5
3/1	The Broadway Entry Ahead Left	O	-		-	-	-	318	1857	344	92.4%	318	0	0	6.5	73.1	9.9
3/2+3/3	The Broadway Entry Ahead	O	-		-	-	-	389	2012:1901	244+169	94.2 : 94.2%	778	0	0	8.1	74.7	9.6
4/1	Watford Way Eastbound Entry Left Ahead	U	A		1	37	-	1153	1753	1096	105.2%	-	-	-	42.2	131.7	58.5
4/2+4/3	Watford Way Eastbound Entry Ahead	U	A		1	37	-	887	1984:1984	1124+116	71.5 : 71.5%	-	-	-	3.2	13.2	11.6
5/1	Rbt Circulation 4 Ahead Right	U	B		1	13	-	234	1862	407	55.2%	-	-	-	1.9	30.6	4.0
5/2	Rbt Circulation 4 Ahead Right	U	B		1	13	-	270	1777	389	69.4%	-	-	-	2.7	36.6	5.9
5/3	Rbt Circulation 4 Right	U	B		1	13	-	197	1728	378	52.1%	-	-	-	1.7	31.6	4.0

Basic Results Summary

6/1	Rbt Circulation 2 Ahead Right	U	E		1	10	-	183	1800	309	59.2%	-	-	-	1.4	28.4	2.8
6/2	Rbt Circulation 2 Ahead Right	U	E		1	10	-	215	1942	334	64.4%	-	-	-	2.0	33.4	3.6
6/3	Rbt Circulation 2 Right	U	E		1	10	-	112	1864	320	35.0%	-	-	-	0.6	19.7	1.7
7/1	Watford Way Westbound Exit Ahead	U	G		1	45	-	1444	1958	1407	99.9%	-	-	-	20.0	51.3	42.9
7/2	Watford Way Westbound Exit Ahead	U	G		1	45	-	1340	2098	1508	84.7%	-	-	-	3.4	9.4	7.4
9/1	Watford Way Eastbound Exit Ahead	U	I		1	43	-	1282	2071	1424	86.1%	-	-	-	4.0	11.7	8.9
9/2	Watford Way Eastbound Exit Ahead	U	I		1	43	-	1096	2211	1520	72.1%	-	-	-	2.7	8.8	12.5
11/1	Rbt Circulation 1 Right Ahead	U	-		-	-	-	1141	2018	2018	53.7%	-	-	-	0.6	1.9	0.6
11/2	Rbt Circulation 1 Right Ahead	U	-		-	-	-	1001	2154	2154	46.5%	-	-	-	0.4	1.6	0.4
11/3	Rbt Circulation 1 Right	U	-		-	-	-	83	2015	2015	4.1%	-	-	-	0.0	0.9	0.0
12/1	Rbt Circulation 3 Ahead	U	-		-	-	-	1182	2022	2022	56.5%	-	-	-	0.6	2.0	0.6
12/2	Rbt Circulation 3 Right Ahead	U	-		-	-	-	1518	2169	2169	66.7%	-	-	-	1.0	2.5	1.0
12/3	Rbt Circulation 3 Right	U	-		-	-	-	78	2027	2027	3.8%	-	-	-	0.0	0.9	0.0
Ped Link: P1	Watford Way Crossing 1	-	C		1	9	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Watford Way Crossing 2	-	H		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Watford Way Crossing 3	-	F		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Watford Way Crossing 4	-	J		1	6	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

C1	Stream: 1	PRC for Signalled Lanes (%):	-16.9	Total Delay for Signalled Lanes (pcuHr):	51.80	Cycle Time (s):	64
C1	Stream: 2	PRC for Signalled Lanes (%):	-17.0	Total Delay for Signalled Lanes (pcuHr):	95.59	Cycle Time (s):	64
C1	Stream: 3	PRC for Signalled Lanes (%):	-10.9	Total Delay for Signalled Lanes (pcuHr):	23.37	Cycle Time (s):	64
C1	Stream: 4	PRC for Signalled Lanes (%):	4.6	Total Delay for Signalled Lanes (pcuHr):	6.68	Cycle Time (s):	64
		PRC Over All Lanes (%):	-17.0	Total Delay Over All Lanes(pcuHr):	213.23		

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: Bunn's Lane - GPW Roundabout - Proposed Layout.j9
Path: C:\Users\Lloyd.Bush\Velocity Transport Planning Ltd\2017 Projects - Documents\Meadow Residential_2110\1130 - Pentavia, Mill Hill\Analysis\Junction Modelling\J5 - Bunn's - GPW\June 18
Report generation date: 25/05/2018 20:56:11

»Do Something - 2021 + Committed + New Dev without BL, AM
»Do Something - 2021 + Committed + New Dev without BL, PM
»Do Something - 2026 + Committed + New Dev without BL, AM
»Do Something - 2026 + Committed + New Dev without BL, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	Do Something - 2021 + Committed + New Dev without BL							
Arm A	3.4	13.18	0.78	B	3.7	13.53	0.79	B
Arm B	15.4	60.04	0.97	F	2.4	12.44	0.72	B
Arm C	3.5	22.31	0.79	C	2.2	14.32	0.69	B
	Do Something - 2026 + Committed + New Dev without BL							
Arm A	4.1	15.55	0.81	C	5.0	17.62	0.84	C
Arm B	25.5	90.38	1.01	F	3.1	14.96	0.76	B
Arm C	4.3	26.91	0.82	D	2.8	17.88	0.75	C

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Bunn's Lane - Grahame Park Way Miniroundabout
Location	
Site number	
Date	15/06/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ROBERTWEST\libanbellezza
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

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	5.75				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)	Run automatically	Relationship type	Relationship
D1	2016	AM	ONE HOUR	07:45	09:15	15	✓		
D2	2016	PM	ONE HOUR	16:45	18:15	15	✓		
D5	Resi without BL	AM	ONE HOUR	07:45	09:15	15	✓		
D6	Resi without BL	PM	ONE HOUR	16:45	18:15	15	✓		
D7	Non-Resi	AM	ONE HOUR	07:45	09:15	15	✓		
D8	Non-Resi	PM	ONE HOUR	16:45	18:15	15	✓		
D9	Extant	AM	ONE HOUR	07:45	09:15	15	✓		
D10	Extant	PM	ONE HOUR	16:45	18:15	15	✓		
D11	2021 Committed	AM	ONE HOUR	07:45	09:15	15	✓		
D12	2021 Committed	PM	ONE HOUR	16:45	18:15	15	✓		
D13	2026 Committed	AM	ONE HOUR	07:45	09:15	15	✓		
D14	2026 Committed	PM	ONE HOUR	16:45	18:15	15	✓		
D15	2021 + Committed	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G1+D11+D9
D16	2021 + Committed	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G2+D12+D10
D19	2021 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G1+D11+D5+D7
D20	2021 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G2+D12+D6+D8
D21	2026 + Committed	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G3+D13+D9
D22	2026 + Committed	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G4+D14+D10
D25	2026 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G3+D13+D5+D7
D26	2026 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G4+D14+D6+D8

Growth Factors

ID	Description	Use TEMPRO	Growth Factor
G1	2016-2021 AM		1.0370
G2	2016-2021 PM		1.0558
G3	2016-2026 AM		1.0740
G4	2016-2026 PM		1.1116

Growth factors are only active if the Demand Set references them in a Relationship.

Do Something - 2021 + Committed + New Dev without BL, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bunn's Lane - Grahame Park Way	Mini-roundabout	A, B, C	33.17	D

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Bunn's Lane NW	
B	Bunn's Lane E	
C	Grahame Park Way	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.93	4.59	6.41	24.0	18.05	16.07	0.0	✓
B	2.96	2.63	6.37	20.0	13.75	6.71	0.0	✓
C	6.12	6.10	6.52	10.7	16.33	14.40	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.638	1328
B	0.554	1109
C	0.629	1197

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
A	Percentage		110.00
B	Percentage		110.00

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	Relationship type	Relationship
D19	2021 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G1+D11+D5+D7

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	862	100.000
B		ONE HOUR	✓	876	100.000
C		ONE HOUR	✓	531	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	1	565	296
	B	631	0	245
	C	264	248	19

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	100	1	5
	B	0	0	1
	C	4	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.78	13.18	3.4	B	792	1187
B	0.97	60.04	15.4	F	804	1206
C	0.79	22.31	3.5	C	487	731

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	649	162	199	1287	0.505	645	669	0.0	1.0	5.579	A
B	660	165	236	1066	0.619	653	609	0.0	1.6	8.598	A
C	400	100	472	874	0.457	396	417	0.0	0.8	7.485	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	776	194	238	1259	0.616	773	801	1.0	1.6	7.361	A
B	788	197	283	1036	0.760	782	729	1.6	3.0	13.863	B
C	477	119	565	817	0.584	475	500	0.8	1.4	10.456	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	950	237	290	1224	0.776	943	958	1.6	3.3	12.536	B
B	965	241	344	997	0.968	929	888	3.0	11.9	40.322	E
C	585	146	671	752	0.777	577	603	1.4	3.2	19.796	C

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	950	237	293	1221	0.778	949	977	3.3	3.4	13.181	B
B	965	241	347	995	0.970	951	895	11.9	15.4	60.044	F
C	585	146	686	743	0.787	583	611	3.2	3.5	22.307	C

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	776	194	243	1256	0.618	782	845	3.4	1.6	7.712	A
B	788	197	286	1034	0.762	835	740	15.4	3.4	21.784	C
C	477	119	603	794	0.601	485	518	3.5	1.6	11.929	B

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	649	162	202	1285	0.506	652	682	1.6	1.0	5.712	A
B	660	165	238	1064	0.620	667	616	3.4	1.7	9.206	A
C	400	100	481	868	0.460	402	424	1.6	0.9	7.774	A

Do Something - 2021 + Committed + New Dev without BL, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bunn's Lane - Grahame Park Way	Mini-roundabout	A, B, C	13.38	B

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Bunn's Lane NW	
B	Bunn's Lane E	
C	Grahame Park Way	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.93	4.59	6.41	24.0	18.05	16.07	0.0	✓
B	2.96	2.63	6.37	20.0	13.75	6.71	0.0	✓
C	6.12	6.10	6.52	10.7	16.33	14.40	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.638	1328
B	0.554	1109
C	0.629	1197

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
A	Percentage		110.00
B	Percentage		110.00

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	Relationship type	Relationship
D20	2021 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G2+D12+D6+D8

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	909	100.000
B		ONE HOUR	✓	658	100.000
C		ONE HOUR	✓	508	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	624	285
	B	537	2	118
	C	280	226	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	1	0	1
	C	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.79	13.53	3.7	B	835	1252
B	0.72	12.44	2.4	B	603	905
C	0.69	14.32	2.2	B	467	700

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	685	171	173	1322	0.518	681	611	0.0	1.1	5.573	A
B	495	124	216	1075	0.461	492	638	0.0	0.8	6.136	A
C	383	96	403	930	0.412	380	304	0.0	0.7	6.511	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	818	204	207	1299	0.630	815	732	1.1	1.7	7.413	A
B	591	148	258	1049	0.564	590	764	0.8	1.3	7.808	A
C	457	114	484	880	0.520	456	364	0.7	1.1	8.458	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	1002	250	252	1267	0.790	994	894	1.7	3.5	12.842	B
B	724	181	315	1014	0.714	720	932	1.3	2.4	12.045	B
C	560	140	590	813	0.689	556	444	1.1	2.1	13.787	B

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	1002	250	254	1266	0.791	1001	899	3.5	3.7	13.533	B
B	724	181	317	1013	0.715	724	938	2.4	2.4	12.441	B
C	560	140	594	811	0.691	560	447	2.1	2.2	14.320	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	818	204	210	1297	0.631	826	741	3.7	1.7	7.758	A
B	591	148	261	1047	0.565	596	774	2.4	1.3	8.059	A
C	457	114	489	877	0.522	462	369	2.2	1.1	8.759	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	685	171	175	1321	0.518	688	618	1.7	1.1	5.707	A
B	495	124	218	1074	0.461	497	644	1.3	0.9	6.262	A
C	383	96	408	928	0.413	385	307	1.1	0.7	6.647	A

Do Something - 2026 + Committed + New Dev without BL, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bunn's Lane - Grahame Park Way	Mini-roundabout	A, B, C	46.71	E

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Bunn's Lane NW	
B	Bunn's Lane E	
C	Grahame Park Way	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.93	4.59	6.41	24.0	18.05	16.07	0.0	✓
B	2.96	2.63	6.37	20.0	13.75	6.71	0.0	✓
C	6.12	6.10	6.52	10.7	16.33	14.40	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.638	1328
B	0.554	1109
C	0.629	1197

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
A	Percentage		110.00
B	Percentage		110.00

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	Relationship type	Relationship
D25	2026 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G3+D13+D5+D7

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	893	100.000
B		ONE HOUR	✓	908	100.000
C		ONE HOUR	✓	551	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	1	586	306
	B	655	0	253
	C	274	258	19

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	100	1	5
	B	0	0	1
	C	4	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.81	15.55	4.1	C	821	1231
B	1.01	90.38	25.5	F	833	1250
C	0.82	26.91	4.3	D	505	758

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	673	168	207	1281	0.525	669	693	0.0	1.1	5.837	A
B	684	171	244	1061	0.645	677	631	0.0	1.8	9.219	A
C	415	104	489	864	0.480	411	432	0.0	0.9	7.891	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	804	201	248	1253	0.642	801	830	1.1	1.7	7.925	A
B	816	204	293	1030	0.793	809	756	1.8	3.5	15.835	C
C	495	124	585	805	0.615	493	517	0.9	1.5	11.427	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	985	246	300	1216	0.810	976	980	1.7	3.9	14.476	B
B	1000	250	356	989	1.011	945	920	3.5	17.3	52.627	F
C	606	152	683	745	0.814	597	619	1.5	3.9	23.046	C

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	985	246	304	1214	0.811	984	999	3.9	4.1	15.555	C
B	1000	250	359	987	1.013	967	929	17.3	25.5	90.377	F
C	606	152	699	735	0.825	605	628	3.9	4.3	26.908	D

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	804	201	254	1249	0.644	813	902	4.1	1.9	8.427	A
B	816	204	297	1027	0.795	901	770	25.5	4.4	40.034	E
C	495	124	651	765	0.648	505	547	4.3	1.9	14.320	B

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	673	168	210	1279	0.526	676	709	1.9	1.1	6.003	A
B	684	171	247	1059	0.646	694	640	4.4	1.9	10.116	B
C	415	104	501	856	0.484	418	440	1.9	1.0	8.296	A

Do Something - 2026 + Committed + New Dev without BL, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do Something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bunn's Lane - Grahame Park Way	Mini-roundabout	A, B, C	16.84	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Bunn's Lane NW	
B	Bunn's Lane E	
C	Grahame Park Way	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.93	4.59	6.41	24.0	18.05	16.07	0.0	✓
B	2.96	2.63	6.37	20.0	13.75	6.71	0.0	✓
C	6.12	6.10	6.52	10.7	16.33	14.40	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.638	1328
B	0.554	1109
C	0.629	1197

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
A	Percentage		110.00
B	Percentage		110.00

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	Relationship type	Relationship
D26	2026 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G4+D14+D6+D8

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	958	100.000
B		ONE HOUR	✓	693	100.000
C		ONE HOUR	✓	535	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	658	300
	B	567	2	124
	C	295	239	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	1	0	1
	C	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.84	17.62	5.0	C	880	1319
B	0.76	14.96	3.1	B	636	954
C	0.75	17.88	2.8	C	492	738

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	722	180	182	1316	0.548	717	644	0.0	1.2	5.963	A
B	522	130	227	1068	0.489	518	672	0.0	0.9	6.502	A
C	404	101	425	917	0.441	401	320	0.0	0.8	6.937	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	862	215	219	1291	0.668	859	772	1.2	2.0	8.274	A
B	623	156	272	1041	0.599	621	806	0.9	1.5	8.541	A
C	482	121	510	863	0.558	480	383	0.8	1.2	9.351	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	1055	264	266	1258	0.839	1044	940	2.0	4.7	16.090	C
B	763	191	331	1004	0.760	757	980	1.5	3.0	14.224	B
C	591	148	622	793	0.745	585	466	1.2	2.7	16.793	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	1055	264	268	1256	0.840	1054	948	4.7	5.0	17.622	C
B	763	191	334	1002	0.762	763	989	3.0	3.1	14.963	B
C	591	148	626	790	0.747	590	470	2.7	2.8	17.877	C

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	862	215	222	1288	0.669	873	783	5.0	2.1	8.906	A
B	623	156	276	1038	0.601	629	819	3.1	1.5	8.947	A
C	482	121	517	859	0.561	488	389	2.8	1.3	9.861	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	722	180	185	1314	0.549	725	651	2.1	1.2	6.144	A
B	522	130	229	1067	0.489	524	680	1.5	1.0	6.667	A
C	404	101	430	913	0.442	406	323	1.3	0.8	7.121	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: The Broadway - Bunn's Lane - Hale Lane Roundabout.j9
Path: C:\Users\Lloyd.Bush\Velocity Transport Planning Ltd\2017 Projects - Documents\Meadow Residential_2110\1130 - Pentavia, Mill Hill\Analysis\Junction Modelling\J6 - Broadway - Bunn's - Hale Ln\June 18
Report generation date: 25/05/2018 20:58:45

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	Do something - 2021 + Committed + New Dev without BL					
Arm A	43.7	199.82	1.13	56.9	287.48	1.18
Arm B	30.4	155.79	1.08	42.1	201.78	1.12
Arm C	13.3	133.07	1.02	20.1	168.75	1.07
	Do something - 2026 + Committed + New Dev without BL					
Arm A	61.0	310.59	1.20	86.5	490.96	1.28
Arm B	42.4	208.71	1.13	64.6	356.65	1.20
Arm C	17.8	168.83	1.06	28.5	244.27	1.12

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	The Broadway - Bunn's Lane - Hale Lane Miniroundabout
Location	
Site number	
Date	15/06/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ROBERTWEST\libanbellezza
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

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	5.75				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)	Run automatically	Relationship type	Relationship
D1	2016	AM	ONE HOUR	07:45	09:15	15	✓		
D2	2016	PM	ONE HOUR	16:45	18:15	15	✓		
D5	Resi without BL	AM	ONE HOUR	07:45	09:15	15	✓		
D6	Resi without BL	PM	ONE HOUR	16:45	18:15	15	✓		
D7	Non-Resi	AM	ONE HOUR	07:45	09:15	15	✓		
D8	Non-Resi	PM	ONE HOUR	16:45	18:15	15	✓		
D9	Extant	AM	ONE HOUR	07:45	09:15	15	✓		
D10	Extant	PM	ONE HOUR	16:45	18:15	15	✓		
D11	2021 Committed	AM	ONE HOUR	07:45	09:15	15	✓		
D12	2021 Committed	PM	ONE HOUR	16:45	18:15	15	✓		
D13	2026 Committed	AM	ONE HOUR	07:45	09:15	15	✓		
D14	2026 Committed	PM	ONE HOUR	16:45	18:15	15	✓		
D15	2021 + Committed	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G1+D11+D9
D16	2021 + Committed	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G2+D12+D10
D19	2021 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G1+D11+D5+D7
D20	2021 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G2+D12+D6+D8
D21	2026 + Committed	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G3+D13+D9
D22	2026 + Committed	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G4+D14+D10
D25	2026 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G3+D13+D5+D7
D26	2026 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G4+D14+D6+D8

Growth Factors

ID	Description	Use TEMPRO	Growth Factor
G1	2016-2021 AM		1.0370
G2	2016-2021 PM		1.0558
G3	2016-2026 AM		1.0740
G4	2016-2026 PM		1.1116

Growth factors are only active if the Demand Set references them in a Relationship.

Do something - 2021 + Committed + New Dev without BL, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	The Broadway - Bunn's Lane - Hale Lane	Mini-roundabout	A, B, C	164.29	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Hale Lane	
B	The Broadway	
C	Bunns Lane	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	5.55	5.51	5.73	0.4	14.86	9.25	0.0	✓
B	5.12	5.12	5.12	0.0	16.77	14.07	0.0	✓
C	4.30	4.30	4.30	0.0	8.77	3.62	0.0	✓

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
A		
B		
C	✓	100

Exit Restrictions

Arm	Exit restriction present	Linked exit restriction present	Maximum capacity (PCU/hr)
A			
B	✓		710
C			

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
B	37.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.579	1061
B	0.575	1204
C	0.528	932

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 segment length (min)	Run automatically	Relationship type	Relationship
D19	2021 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G1+D11+D5+D7

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	649	100.000
B		ONE HOUR	✓	594	100.000
C		ONE HOUR	✓	543	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A		
B	[ONEHOUR]	300.00
C		

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	1	328	320
	B	224	5	365
	C	216	328	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	2
	B	7	0	12
	C	2	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	1.13	199.82	43.7	F	597	895
B	1.08	155.79	30.4	F	547	820
C	1.02	133.07	13.3	F	483	451

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	489	489	122	0	162	249		875	0.559	484	168	0.0	1.2	9.105	A
B	449	449	112	0	0	240	225.86	800	0.561	444	494	0.0	1.2	9.974	A
C	396	247	62	162	0	172		752	0.328	245	511	0.0	0.5	7.070	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	584	584	146	0	194	298		844	0.692	581	203	1.2	2.2	13.481	B
B	536	536	134	0	0	287	269.69	858	0.625	534	592	1.2	1.6	11.081	B
C	473	295	74	194	0	207		734	0.401	294	614	0.5	0.7	8.163	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	716	716	179	0	237	338		661	1.083	638	226	2.2	21.7	84.119	F
B	656	656	164	0	0	315	330.31	628	1.045	597	661	1.6	16.4	71.489	F
C	579	361	90	237	0	232		374	0.963	333	681	0.7	7.6	65.518	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	716	716	179	0	237	343		631	1.134	628	228	21.7	43.7	199.823	F
B	656	656	164	0	0	310	330.31	608	1.080	600	660	16.4	30.4	155.787	F
C	579	361	90	237	0	233		352	1.024	338	678	7.6	13.3	133.071	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	584	584	146	0	194	327		677	0.863	662	230	43.7	24.2	185.941	F
B	536	536	134	0	0	327	269.69	626	0.856	606	661	30.4	12.8	133.450	F
C	473	295	74	194	0	235		354	0.833	321	698	13.3	6.6	111.801	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	489	489	122	0	162	275		858	0.570	581	188	24.2	1.4	17.882	C
B	449	449	112	0	0	287	225.86	942	0.476	496	569	12.8	0.9	8.964	A
C	396	247	62	162	0	193		742	0.333	271	591	6.6	0.5	8.051	A

Do something - 2021 + Committed + New Dev without BL, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	The Broadway - Bunn's Lane - Hale Lane	Mini-roundabout	A, B, C	219.88	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Hale Lane	
B	The Broadway	
C	Bunns Lane	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	5.55	5.51	5.73	0.4	14.86	9.25	0.0	✓
B	5.12	5.12	5.12	0.0	16.77	14.07	0.0	✓
C	4.30	4.30	4.30	0.0	8.77	3.62	0.0	✓

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
A		
B		
C	✓	100

Exit Restrictions

Arm	Exit restriction present	Linked exit restriction present	Maximum capacity (PCU/hr)
A			
B	✓		710
C			

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
B	37.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.579	1061
B	0.575	1204
C	0.528	932

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 segment length (min)	Run automatically	Relationship type	Relationship
D20	2021 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G2+D12+D6+D8

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	664	100.000
B		ONE HOUR	✓	631	100.000
C		ONE HOUR	✓	630	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A		
B	[ONEHOUR]	500.00
C		

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	1	299	364
	B	264	11	357
	C	250	379	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	1
	B	5	0	9
	C	0	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	1.18	287.48	56.9	F	610	915
B	1.12	201.78	42.1	F	582	873
C	1.07	168.75	20.1	F	560	522

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	501	501	125	0	188	291		859	0.582	495	198	0.0	1.4	9.743	A
B	477	477	119	0	0	273	376.43	773	0.617	471	513	0.0	1.6	11.693	B
C	460	285	71	188	0	205		758	0.377	283	538	0.0	0.6	7.544	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	598	598	149	0	225	349		824	0.726	593	239	1.4	2.5	15.301	C
B	570	570	143	0	0	327	449.49	863	0.660	569	616	1.6	1.9	12.151	B
C	549	341	85	225	0	248		736	0.463	340	648	0.6	0.8	9.062	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	732	732	183	0	276	386		646	1.134	629	258	2.5	28.2	104.566	F
B	698	698	175	0	0	347	550.51	636	1.098	614	669	1.9	22.8	89.044	F
C	672	417	104	276	0	268		407	1.025	376	693	0.8	11.1	78.727	F

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	732	732	183	0	276	392		619	1.183	617	260	28.2	56.9	259.589	F
B	698	698	175	0	0	340	550.51	625	1.118	621	669	22.8	42.1	201.777	F
C	672	417	104	276	0	271		390	1.071	381	690	11.1	20.1	168.753	F

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	598	598	149	0	225	384		647	0.924	636	264	56.9	47.5	287.482	F
B	570	570	143	0	0	350	449.49	645	0.884	630	669	42.1	27.1	196.119	F
C	549	341	85	225	0	275		386	0.883	373	706	20.1	12.0	163.990	F

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	501	501	125	0	188	340		829	0.604	684	244	47.5	1.6	63.009	F
B	477	477	119	0	0	377	376.43	920	0.519	581	648	27.1	1.1	14.521	B
C	460	285	71	188	0	254		733	0.389	331	704	12.0	0.6	9.994	A

Do something - 2026 + Committed + New Dev without BL, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	The Broadway - Bunn's Lane - Hale Lane	Mini-roundabout	A, B, C	232.27	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Hale Lane	
B	The Broadway	
C	Bunns Lane	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	5.55	5.51	5.73	0.4	14.86	9.25	0.0	✓
B	5.12	5.12	5.12	0.0	16.77	14.07	0.0	✓
C	4.30	4.30	4.30	0.0	8.77	3.62	0.0	✓

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
A		
B		
C	✓	100

Exit Restrictions

Arm	Exit restriction present	Linked exit restriction present	Maximum capacity (PCU/hr)
A			
B	✓		710
C			

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
B	37.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.579	1061
B	0.575	1204
C	0.528	932

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 segment length (min)	Run automatically	Relationship type	Relationship
D25	2026 + Committed + New Dev without BL	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D1*G3+D13+D5+D7

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	673	100.000
B		ONE HOUR	✓	615	100.000
C		ONE HOUR	✓	564	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A		
B	[ONEHOUR]	300.00
C		

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	1	339	333
	B	232	5	378
	C	224	339	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	2
	B	7	0	12
	C	2	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	1.20	310.59	61.0	F	619	928
B	1.13	208.71	42.4	F	566	849
C	1.06	168.83	17.8	F	501	467

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	508	508	127	0	169	257		870	0.584	502	174	0.0	1.4	9.657	A
B	465	465	116	0	0	249	225.86	802	0.580	459	511	0.0	1.3	10.360	B
C	411	255	64	169	0	178		749	0.341	253	530	0.0	0.5	7.237	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	606	606	152	0	202	309		838	0.724	602	210	1.4	2.5	14.976	B
B	555	555	139	0	0	298	269.69	865	0.641	553	613	1.3	1.7	11.462	B
C	490	305	76	202	0	215		730	0.418	304	637	0.5	0.7	8.431	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	742	742	186	0	247	341		647	1.147	632	226	2.5	30.0	109.252	F
B	679	679	170	0	0	313	330.31	618	1.100	596	660	1.7	22.5	90.102	F
C	601	374	93	247	0	231		367	1.018	336	678	0.7	10.1	80.168	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	742	742	186	0	247	348		620	1.198	618	227	30.0	61.0	275.713	F
B	679	679	170	0	0	306	330.31	603	1.127	600	660	22.5	42.4	208.713	F
C	601	374	93	247	0	233		352	1.062	343	673	10.1	17.8	168.826	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	606	606	152	0	202	338		649	0.934	638	231	61.0	53.0	310.590	F
B	555	555	139	0	0	316	269.69	624	0.889	609	661	42.4	28.8	207.567	F
C	490	305	76	202	0	236		348	0.877	333	689	17.8	10.7	161.808	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	508	508	127	0	169	301		842	0.602	713	218	53.0	1.6	76.883	F
B	465	465	116	0	0	353	225.86	907	0.512	575	661	28.8	1.1	15.308	C
C	411	255	64	169	0	223		726	0.352	296	705	10.7	0.6	9.196	A

Do something - 2026 + Committed + New Dev without BL, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	The Broadway - Bunn's Lane - Hale Lane	Mini-roundabout	A, B, C	365.22	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Hale Lane	
B	The Broadway	
C	Bunns Lane	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	5.55	5.51	5.73	0.4	14.86	9.25	0.0	✓
B	5.12	5.12	5.12	0.0	16.77	14.07	0.0	✓
C	4.30	4.30	4.30	0.0	8.77	3.62	0.0	✓

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
A		
B		
C	✓	100

Exit Restrictions

Arm	Exit restriction present	Linked exit restriction present	Maximum capacity (PCU/hr)
A			
B	✓		710
C			

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
B	37.00	3.00	2.90	1.00	6.00	6.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.579	1061
B	0.575	1204
C	0.528	932

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 segment length (min)	Run automatically	Relationship type	Relationship
D26	2026 + Committed + New Dev without BL	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D2*G4+D14+D6+D8

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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	700	100.000
B		ONE HOUR	✓	664	100.000
C		ONE HOUR	✓	664	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A		
B	[ONEHOUR]	500.00
C		

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	1	314	384
	B	278	11	375
	C	264	399	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	1
	B	5	0	9
	C	0	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	1.28	490.96	86.5	F	643	965
B	1.20	356.65	64.6	F	612	918
C	1.12	244.27	28.5	F	591	549

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	528	528	132	0	199	306		850	0.621	521	208	0.0	1.6	10.749	B
B	502	502	126	0	0	288	376.43	780	0.644	495	540	0.0	1.7	12.381	B
C	485	300	75	199	0	216		752	0.399	298	567	0.0	0.7	7.876	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	630	630	158	0	238	367		813	0.775	624	251	1.6	3.2	18.428	C
B	600	600	150	0	0	344	449.49	882	0.680	599	647	1.7	2.1	12.645	B
C	579	359	90	238	0	261		729	0.492	357	682	0.7	0.9	9.652	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	772	772	193	0	291	391		629	1.226	620	256	3.2	41.0	144.652	F
B	735	735	184	0	0	342	550.51	623	1.179	610	669	2.1	33.3	120.280	F
C	709	439	110	291	0	266		402	1.093	381	686	0.9	15.6	99.847	F

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	772	772	193	0	291	398		605	1.275	604	256	41.0	82.8	378.677	F
B	735	735	184	0	0	334	550.51	611	1.203	609	668	33.3	64.6	299.809	F
C	709	439	110	291	0	266		392	1.121	387	677	15.6	28.5	225.053	F

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	630	630	158	0	238	393		617	1.021	615	260	82.8	86.5	490.955	F
B	600	600	150	0	0	339	449.49	631	0.951	621	669	64.6	59.2	356.652	F
C	579	359	90	238	0	271		396	0.905	383	690	28.5	22.5	244.273	F

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
A	528	528	132	0	199	370		677	0.780	669	271	86.5	51.2	372.852	F
B	502	502	126	0	0	369	376.43	657	0.764	646	670	59.2	23.2	234.276	F
C	485	300	75	199	0	282		374	0.803	359	734	22.5	7.9	164.241	F

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: Miniroundabouts.j9
Path: C:\Users\Lloyd.Bush\Velocity Transport Planning Ltd\2017 Projects - Documents\Meadow Residential_2110\1130 - Pentavia, Mill Hill\Analysis\Junction Modelling\J7 - Bunn's - Pursley - Page St\June 18
Report generation date: 25/05/2018 21:04:19

»Do something - 2021 Future + New Dev without BL, AM
»Do something - 2021 Future + New Dev without BL, PM
»Do something - 2026 Future + New Dev without BL, AM
»Do something - 2026 Future + New Dev without BL, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	Do something - 2021 Future + New Dev without BL							
1 - Page Street - Bunns Lane - A1 - Page Street N	38.6	445.14	1.29	F	7.2	128.32	0.97	F
1 - Page Street - Bunns Lane - B1 - Page Street S	8.0	41.67	0.93	E	7.9	39.53	0.93	E
1 - Page Street - Bunns Lane - C1 - Bunns Lane	135.3	743.55	1.39	F	80.4	381.33	1.16	F
2 - Page Street - Pursley Road - A2 - Pursley Road	199.8	1044.63	1.38	F	128.8	672.58	1.28	F
2 - Page Street - Pursley Road - B2 - Page Street S	118.0	1100.69	1.41	F	106.8	716.95	1.40	F
2 - Page Street - Pursley Road - C2 - Page Street N	7.9	37.86	0.92	E	7.9	36.58	0.92	E
	Do something - 2026 Future + New Dev without BL							
1 - Page Street - Bunns Lane - A1 - Page Street N	47.9	526.07	1.34	F	10.5	174.73	1.04	F
1 - Page Street - Bunns Lane - B1 - Page Street S	8.0	41.71	0.93	E	7.9	39.63	0.93	E
1 - Page Street - Bunns Lane - C1 - Bunns Lane	165.3	896.07	1.45	F	132.3	625.07	1.24	F
2 - Page Street - Pursley Road - A2 - Pursley Road	240.7	1238.26	1.44	F	173.9	909.28	1.35	F
2 - Page Street - Pursley Road - B2 - Page Street S	139.8	1298.53	1.49	F	136.1	926.08	1.48	F
2 - Page Street - Pursley Road - C2 - Page Street N	7.9	37.73	0.92	E	7.9	36.09	0.92	E

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.

File summary

File Description

Title	Bunns Lane - Pursley Road - Page Street Miniroundabouts
Location	
Site number	
Date	15/06/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ROBERTWEST\libanbellezza
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	perTimeSegment	s	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	5.75				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 period length (min)	Time segment length (min)	Run automatically	Relationship type	Relationship
D1	2016	AM	DIRECT	08:00	09:00	60	15	✓		
D2	2016	PM	DIRECT	17:00	18:00	60	15	✓		
D5	Resi without BL	AM	DIRECT	08:00	09:00	60	15	✓		
D6	Resi without BL	PM	DIRECT	17:00	18:00	60	15	✓		
D7	Non-Resi	AM	DIRECT	08:00	09:00	60	15	✓		
D8	Non-Resi	PM	DIRECT	17:00	18:00	60	15	✓		
D9	Extant Use	AM	DIRECT	08:00	09:00	60	15	✓		
D10	Extant Use	PM	DIRECT	17:00	18:00	60	15	✓		
D11	2021 Committed Dev	AM	DIRECT	08:00	09:00	60	15	✓		
D12	2021 Committed Dev	PM	DIRECT	17:00	18:00	60	15	✓		
D13	2026 Committed Dev	AM	DIRECT	08:00	09:00	60	15	✓		
D14	2026 Committed Dev	PM	DIRECT	17:00	18:00	60	15	✓		
D15	2021 Future	AM	DIRECT	08:00	09:00	60	15	✓	Simple	D1*G1+D11+D9
D16	2021 Future	PM	DIRECT	17:00	18:00	60	15	✓	Simple	D2*G2+D12+D10
D19	2021 Future + New Dev without BL	AM	DIRECT	08:00	09:00	60	15	✓	Simple	D1*G1+D11+D5+D7
D20	2021 Future + New Dev without BL	PM	DIRECT	17:00	18:00	60	15	✓	Simple	D2*G2+D12+D6+D8
D21	2026 Future	AM	DIRECT	08:00	09:00	60	15	✓	Simple	D1*G3+D13+D9
D22	2026 Future	PM	DIRECT	17:00	18:00	60	15	✓	Simple	D2*G4+D14+D10
D25	2026 Future + New Dev without BL	AM	DIRECT	08:00	09:00	60	15	✓	Simple	D1*G3+D13+D5+D7
D26	2026 Future + New Dev without BL	PM	DIRECT	17:00	18:00	60	15	✓	Simple	D2*G4+D14+D6+D8

Growth Factors

ID	Description	Use TEMPRO	Growth Factor
G1	2016-2021 AM		1.0370
G2	2016-2021 PM		1.0558
G3	2016-2026 AM		1.0740
G4	2016-2026 PM		1.1116

Growth factors are only active if the Demand Set references them in a Relationship.

Do something - 2021 Future + New Dev without BL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	1 - Page Street - Bunns Lane	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms B1 and C1 have 85% of the total flow for the roundabout for one or more time segments]
Last Run	Last Run	1 - Page Street - Bunns Lane - B1 - Page Street S - Capacity	Pedestrian Crossing causes blocking on previous arm due to traffic queing to leave the junction in 4 timesegment(s).

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Page Street - Bunns Lane	Mini-roundabout	A1, B1, C1	420.61	F
2	Page Street - Pursley Road	Mini-roundabout	A2, B2, C2	688.75	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Junction	Arm	Name	Description
1 - Page Street - Bunns Lane	A1	Page Street N	
	B1	Page Street S	
	C1	Bunns Lane	
2 - Page Street - Pursley Road	A2	Pursley Road	
	B2	Page Street S	
	C2	Page Street N	

Mini Roundabout Geometry

Junction	Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Page Street - Bunns Lane	A1 - Page Street N	3.37	3.11	5.39	9.2	16.05	13.16	0.0	✓
	B1 - Page Street S	3.92	3.55	5.68	8.1	19.15	15.69	0.0	✓
	C1 - Bunns Lane	3.82	3.09	4.47	11.1	16.00	10.80	0.0	
2 - Page Street - Pursley Road	A2 - Pursley Road	4.58	4.30	5.76	1.9	9.56	5.53	0.0	
	B2 - Page Street S	3.58	3.26	3.97	5.8	16.78	16.76	0.0	
	C2 - Page Street N	3.42	3.02	3.70	1.0	12.98	8.81	0.0	

Zebra Crossings

Junction	Arm	Space between crossing and junction entry (Zebra) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (m)	Crossing time (s)	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
1 - Page Street - Bunns Lane	A1 - Page Street N	3.50	3.50	✓	Distance			3.13	2.24	3.77	2.69
	C1 - Bunns Lane	1.00	1.20		Distance	7.70	5.50				
2 - Page Street - Pursley Road	B2 - Page Street S	3.00	3.00	✓	Distance			3.29	2.35	3.44	2.46

Slope / Intercept / Capacity

Arm Intercept Adjustments

Junction	Arm	Type	Reason	Direct intercept adjustment (PCU/TS)
1 - Page Street - Bunns Lane	A1 - Page Street N	Direct		-59.70
	B1 - Page Street S	Direct		-21.36
	C1 - Bunns Lane	Direct		-13.89
2 - Page Street - Pursley Road	A2 - Pursley Road	Direct		15.25
	B2 - Page Street S	Direct		-26.77
	C2 - Page Street N	Direct		20.89

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/TS)
1 - Page Street - Bunns Lane	A1 - Page Street N	0.541	171.137
	B1 - Page Street S	0.579	245.305
	C1 - Bunns Lane	0.634	210.179
2 - Page Street - Pursley Road	A2 - Pursley Road	0.655	253.069
	B2 - Page Street S	0.679	227.945
	C2 - Page Street N	0.600	246.604

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	Relationship type	Relationship
D19	2021 Future + New Dev without BL	AM	DIRECT	08:00	09:00	60	15	✓	Simple	D1*G1+D11+D5+D7

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/TS)	Flow multiplier (%)	Internal storage space (PCU)
1 - Page Street - Bunns Lane	B1 - Page Street S	2	C2	Queue limited	Normal	0.00	100.00	8.00
2 - Page Street - Pursley Road	C2 - Page Street N	1	B1	Queue limited	Normal	0.00	100.00	8.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - Page Street - Bunns Lane	A1 - Page Street N		DIRECT	✓	100.000
	B1 - Page Street S	✓			
	C1 - Bunns Lane		DIRECT	✓	100.000
2 - Page Street - Pursley Road	A2 - Pursley Road		DIRECT	✓	100.000
	B2 - Page Street S		DIRECT	✓	100.000
	C2 - Page Street N	✓			

Demand overview (Pedestrians)

Junction	Arm	Profile type
1 - Page Street - Bunns Lane	A1 - Page Street N	[DIRECT]
	B1 - Page Street S	
	C1 - Bunns Lane	[DIRECT]
2 - Page Street - Pursley Road	A2 - Pursley Road	
	B2 - Page Street S	[DIRECT]
	C2 - Page Street N	

Origin-Destination Data

1 - Page Street - Bunns Lane 08:00 - 08:15

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	38.04	38.37
	B1 - Page Street S	51.81	0.00	210.47
	C1 - Bunns Lane	12.44	188.55	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.50	0.50
	B1 - Page Street S	0.20	0.00	0.80
	C1 - Bunns Lane	0.06	0.94	0.00

1 - Page Street - Bunns Lane 08:15 - 08:30

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	62.11	38.37
	B1 - Page Street S	27.96	0.00	213.59
	C1 - Bunns Lane	15.56	189.66	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.62	0.38
	B1 - Page Street S	0.12	0.00	0.88
	C1 - Bunns Lane	0.08	0.92	0.00

1 - Page Street - Bunns Lane 08:30 - 08:45

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	40.33	33.18
	B1 - Page Street S	33.15	0.00	190.77
	C1 - Bunns Lane	18.67	214.55	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.55	0.45
	B1 - Page Street S	0.15	0.00	0.85
	C1 - Bunns Lane	0.08	0.92	0.00

1 - Page Street - Bunns Lane 08:45 - 09:00

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	46.55	37.33
	B1 - Page Street S	16.56	0.00	195.96
	C1 - Bunns Lane	18.67	148.18	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.55	0.45
	B1 - Page Street S	0.08	0.00	0.92
	C1 - Bunns Lane	0.11	0.89	0.00

2 - Page Street - Pursley Road 08:00 - 08:15

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	67.18	170.03
	B2 - Page Street S	53.92	0.00	91.26
	C2 - Page Street N	152.07	73.52	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.28	0.72
	B2 - Page Street S	0.37	0.00	0.63
	C2 - Page Street N	0.67	0.33	0.00

2 - Page Street - Pursley Road 08:15 - 08:30

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	49.67	161.74
	B2 - Page Street S	53.92	0.00	78.81
	C2 - Page Street N	161.62	89.15	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.23	0.77
	B2 - Page Street S	0.41	0.00	0.59
	C2 - Page Street N	0.64	0.36	0.00

2 - Page Street - Pursley Road 08:30 - 08:45

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	51.74	153.44
	B2 - Page Street S	61.18	0.00	69.48
	C2 - Page Street N	185.48	97.44	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.25	0.75
	B2 - Page Street S	0.47	0.00	0.53
	C2 - Page Street N	0.66	0.34	0.00

2 - Page Street - Pursley Road 08:45 - 09:00

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	38.26	151.37
	B2 - Page Street S	42.52	0.00	60.15
	C2 - Page Street N	107.70	86.03	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.20	0.80
	B2 - Page Street S	0.41	0.00	0.59
	C2 - Page Street N	0.56	0.44	0.00

Vehicle Mix

1 - Page Street - Bunns Lane 08:00 - 08:15

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	8	3
	B1 - Page Street S	0	0	1
	C1 - Bunns Lane	0	1	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.084	1.030
	B1 - Page Street S	1.000	1.000	1.010
	C1 - Bunns Lane	1.000	1.010	1.000

1 - Page Street - Bunns Lane 08:15 - 08:30

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	3
	B1 - Page Street S	0	0	1
	C1 - Bunns Lane	7	2	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.030
	B1 - Page Street S	1.000	1.000	1.010
	C1 - Bunns Lane	1.070	1.020	1.000

1 - Page Street - Bunns Lane 08:30 - 08:45

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	0
	B1 - Page Street S	0	0	3
	C1 - Bunns Lane	0	1	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.000
	B1 - Page Street S	1.000	1.000	1.030
	C1 - Bunns Lane	1.000	1.010	1.000

1 - Page Street - Bunns Lane 08:45 - 09:00

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	0
	B1 - Page Street S	0	0	2
	C1 - Bunns Lane	0	1	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.000
	B1 - Page Street S	1.000	1.000	1.020
	C1 - Bunns Lane	1.000	1.010	1.000

2 - Page Street - Pursley Road 08:00 - 08:15

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	2	1
	B2 - Page Street S	0	0	2
	C2 - Page Street N	1	4	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.018	1.010
	B2 - Page Street S	1.000	1.000	1.020
	C2 - Page Street N	1.009	1.038	1.000

2 - Page Street - Pursley Road 08:15 - 08:30

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	7	1
	B2 - Page Street S	4	0	0
	C2 - Page Street N	3	0	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.066	1.010
	B2 - Page Street S	1.040	1.000	1.000
	C2 - Page Street N	1.029	1.000	1.000

2 - Page Street - Pursley Road 08:30 - 08:45

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	3
	B2 - Page Street S	0	0	1
	C2 - Page Street N	1	1	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.030
	B2 - Page Street S	1.000	1.000	1.010
	C2 - Page Street N	1.010	1.010	1.000

2 - Page Street - Pursley Road 08:45 - 09:00

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	3
	B2 - Page Street S	2	0	0
	C2 - Page Street N	2	0	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.030
	B2 - Page Street S	1.020	1.000	1.000
	C2 - Page Street N	1.019	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (Veh/TS)	Demand in PCU (PCU/TS)	Pedestrian Demand (Ped/TS)
08:00-08:15	1 - Page Street - Bunns Lane	A1 - Page Street N	76.41	80.75	3.76
		B1 - Page Street S	262.29	264.38	
		C1 - Bunns Lane	200.99	202.83	3.76
	2 - Page Street - Pursley Road	A2 - Pursley Road	237.21	240.13	
		B2 - Page Street S	145.18	147.01	3.76
		C2 - Page Street N	225.59	229.83	
08:15-08:30	1 - Page Street - Bunns Lane	A1 - Page Street N	100.48	101.63	4.49
		B1 - Page Street S	241.55	243.67	
		C1 - Bunns Lane	205.22	210.04	4.49
	2 - Page Street - Pursley Road	A2 - Pursley Road	211.40	216.27	
		B2 - Page Street S	132.74	134.89	4.49
		C2 - Page Street N	250.77	255.50	
08:30-08:45	1 - Page Street - Bunns Lane	A1 - Page Street N	73.52	73.52	5.51
		B1 - Page Street S	223.92	229.61	
		C1 - Bunns Lane	233.21	235.33	5.51
	2 - Page Street - Pursley Road	A2 - Pursley Road	205.18	209.75	
		B2 - Page Street S	130.66	131.36	5.51
		C2 - Page Street N	282.92	285.70	
08:45-09:00	1 - Page Street - Bunns Lane	A1 - Page Street N	83.89	83.89	5.51
		B1 - Page Street S	212.51	216.41	
		C1 - Bunns Lane	166.85	168.30	5.51
	2 - Page Street - Pursley Road	A2 - Pursley Road	189.62	194.13	
		B2 - Page Street S	102.66	103.51	5.51
		C2 - Page Street N	193.73	195.81	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - Page Street - Bunns Lane	A1 - Page Street N	1.29	445.14	38.6	F	83.35	333.41
	B1 - Page Street S	0.93	41.67	8.0	E	177.23	708.90
	C1 - Bunns Lane	1.39	743.55	135.3	F	201.91	807.62
2 - Page Street - Pursley Road	A2 - Pursley Road	1.38	1044.63	199.8	F	211.55	846.19
	B2 - Page Street S	1.41	1100.69	118.0	F	127.70	510.79
	C2 - Page Street N	0.92	37.86	7.9	E	196.75	787.00

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	76.40	76.40	167.83	3.76	75.12	1.017	67.52	46.11	0.0	8.9	83
	B1 - Page Street S	185.88	185.88	33.91		200.36	0.928	177.94	201.44	0.0	7.9	33
	C1 - Bunns Lane	202.99	202.99	35.15	3.76	186.18	1.090	178.79	176.70	0.0	24.2	75
2 - Page Street - Pursley Road	A2 - Pursley Road	239.21	239.21	63.69		173.69	1.377	171.18	168.18	0.0	68.0	19
	B2 - Page Street S	145.18	145.18	121.67	3.76	102.83	1.412	100.58	113.19	0.0	44.6	21
	C2 - Page Street N	202.12	202.12	37.36		220.08	0.918	194.51	184.89	0.0	7.6	29

08:15 - 08:30

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	100.48	100.48	150.68	4.49	77.16	1.294	76.37	33.13	8.9	32.9	27
	B1 - Page Street S	176.95	176.95	30.27		199.20	0.888	176.95	196.78	7.9	7.9	40
	C1 - Bunns Lane	205.21	205.21	21.13	4.49	163.05	1.261	162.68	186.08	24.2	66.7	26
2 - Page Street - Pursley Road	A2 - Pursley Road	211.40	211.40	69.47		157.52	1.347	157.35	165.05	68.0	122.0	55
	B2 - Page Street S	132.74	132.74	116.77	4.49	98.57	1.350	98.52	110.05	44.6	78.9	57
	C2 - Page Street N	196.29	196.29	38.48		218.87	0.897	196.03	176.81	7.6	7.9	37

08:30 - 08:45

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	73.52	73.52	153.26	5.51	70.74	1.033	70.09	38.74	32.9	36.3	44
	B1 - Page Street S	175.50	175.50	29.33		198.12	0.886	175.50	194.02	7.9	7.9	40
	C1 - Bunns Lane	233.21	233.21	25.72	5.51	166.35	1.394	166.27	179.11	66.7	133.7	55
2 - Page Street - Pursley Road	A2 - Pursley Road	205.18	205.18	66.98		158.36	1.295	158.29	168.74	122.0	168.8	83
	B2 - Page Street S	130.66	130.66	120.49	5.51	99.19	1.305	99.10	104.77	78.9	110.4	89
	C2 - Page Street N	194.23	194.23	41.50		218.68	0.888	194.23	178.10	7.9	7.9	36

08:45 - 09:00

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	83.89	83.89	150.41	5.51	81.48	1.030	80.78	28.00	36.3	39.4	43
	B1 - Page Street S	170.56	170.56	36.18		192.22	0.887	170.56	195.01	7.9	7.9	4
	C1 - Bunns Lane	166.85	166.85	13.84	5.51	164.91	1.011	164.57	192.90	133.7	135.9	74
2 - Page Street - Pursley Road	A2 - Pursley Road	189.62	189.62	85.52		159.62	1.190	159.59	153.10	168.8	198.9	10
	B2 - Page Street S	102.66	102.66	119.35	5.51	94.67	1.088	94.57	125.76	110.4	118.4	11
	C2 - Page Street N	194.41	194.41	44.28		217.69	0.893	194.34	169.64	7.9	7.9	3

Do something - 2021 Future + New Dev without BL, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	1 - Page Street - Bunns Lane	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms B1 and C1 have 89% of the total flow for the roundabout for one or more time segments]
Last Run	Last Run	1 - Page Street - Bunns Lane - B1 - Page Street S - Capacity	Pedestrian Crossing causes blocking on previous arm due to traffic queing to leave the junction in 2 timesegment(s).

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Page Street - Bunns Lane	Mini-roundabout	A1, B1, C1	205.82	F
2	Page Street - Pursley Road	Mini-roundabout	A2, B2, C2	434.91	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Junction	Arm	Name	Description
1 - Page Street - Bunns Lane	A1	Page Street N	
	B1	Page Street S	
	C1	Bunns Lane	
2 - Page Street - Pursley Road	A2	Pursley Road	
	B2	Page Street S	
	C2	Page Street N	

Mini Roundabout Geometry

Junction	Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Page Street - Bunns Lane	A1 - Page Street N	3.37	3.11	5.39	9.2	16.05	13.16	0.0	✓
	B1 - Page Street S	3.92	3.55	5.68	8.1	19.15	15.69	0.0	✓
	C1 - Bunns Lane	3.82	3.09	4.47	11.1	16.00	10.80	0.0	
2 - Page Street - Pursley Road	A2 - Pursley Road	4.58	4.30	5.76	1.9	9.56	5.53	0.0	
	B2 - Page Street S	3.58	3.26	3.97	5.8	16.78	16.76	0.0	
	C2 - Page Street N	3.42	3.02	3.70	1.0	12.98	8.81	0.0	

Zebra Crossings

Junction	Arm	Space between crossing and junction entry (Zebra) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (m)	Crossing time (s)	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
1 - Page Street - Bunns Lane	A1 - Page Street N	3.50	3.50	✓	Distance			3.13	2.24	3.77	2.69
	C1 - Bunns Lane	1.00	1.20		Distance	7.70	5.50				
2 - Page Street - Pursley Road	B2 - Page Street S	3.00	3.00	✓	Distance			3.29	2.35	3.44	2.46

Slope / Intercept / Capacity

Arm Intercept Adjustments

Junction	Arm	Type	Reason	Direct intercept adjustment (PCU/TS)
1 - Page Street - Bunns Lane	A1 - Page Street N	Direct		-59.70
	B1 - Page Street S	Direct		-21.36
	C1 - Bunns Lane	Direct		-13.89
2 - Page Street - Pursley Road	A2 - Pursley Road	Direct		15.25
	B2 - Page Street S	Direct		-26.77
	C2 - Page Street N	Direct		20.89

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/TS)
1 - Page Street - Bunns Lane	A1 - Page Street N	0.541	171.137
	B1 - Page Street S	0.579	245.305
	C1 - Bunns Lane	0.634	210.179
2 - Page Street - Pursley Road	A2 - Pursley Road	0.655	253.069
	B2 - Page Street S	0.679	227.945
	C2 - Page Street N	0.600	246.604

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	Relationship type	Relationship
D20	2021 Future + New Dev without BL	PM	DIRECT	17:00	18:00	60	15	✓	Simple	D2*G2+D12+D6+D8

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/TS)	Flow multiplier (%)	Internal storage space (PCU)
1 - Page Street - Bunns Lane	B1 - Page Street S	2	C2	Queue limited	Normal	0.00	100.00	8.00
2 - Page Street - Pursley Road	C2 - Page Street N	1	B1	Queue limited	Normal	0.00	100.00	8.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - Page Street - Bunns Lane	A1 - Page Street N		DIRECT	✓	100.000
	B1 - Page Street S	✓			
	C1 - Bunns Lane		DIRECT	✓	100.000
2 - Page Street - Pursley Road	A2 - Pursley Road		DIRECT	✓	100.000
	B2 - Page Street S		DIRECT	✓	100.000
	C2 - Page Street N	✓			

Demand overview (Pedestrians)

Junction	Arm	Profile type
1 - Page Street - Bunns Lane	A1 - Page Street N	[DIRECT]
	B1 - Page Street S	
	C1 - Bunns Lane	[DIRECT]
2 - Page Street - Pursley Road	A2 - Pursley Road	
	B2 - Page Street S	[DIRECT]
	C2 - Page Street N	

Origin-Destination Data

1 - Page Street - Bunns Lane 17:00 - 17:15

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	30.12	17.95
	B1 - Page Street S	23.23	0.00	184.77
	C1 - Bunns Lane	7.39	198.04	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.63	0.37
	B1 - Page Street S	0.11	0.00	0.89
	C1 - Bunns Lane	0.04	0.96	0.00

1 - Page Street - Bunns Lane 17:15 - 17:30

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	23.06	10.56
	B1 - Page Street S	41.18	0.00	213.27
	C1 - Bunns Lane	11.61	182.49	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.69	0.31
	B1 - Page Street S	0.16	0.00	0.84
	C1 - Bunns Lane	0.06	0.94	0.00

1 - Page Street - Bunns Lane 17:30 - 17:45

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	41.01	23.23
	B1 - Page Street S	30.62	0.00	176.32
	C1 - Bunns Lane	11.61	190.93	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.64	0.36
	B1 - Page Street S	0.15	0.00	0.85
	C1 - Bunns Lane	0.06	0.94	0.00

1 - Page Street - Bunns Lane 17:45 - 18:00

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	34.67	20.06
	B1 - Page Street S	43.29	0.00	209.05
	C1 - Bunns Lane	9.50	182.49	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.63	0.37
	B1 - Page Street S	0.17	0.00	0.83
	C1 - Bunns Lane	0.05	0.95	0.00

2 - Page Street - Pursley Road 17:00 - 17:15

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	49.01	144.64
	B2 - Page Street S	36.95	0.00	67.57
	C2 - Page Street N	131.42	95.74	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.25	0.75
	B2 - Page Street S	0.35	0.00	0.65
	C2 - Page Street N	0.58	0.42	0.00

2 - Page Street - Pursley Road 17:15 - 17:30

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	37.79	148.87
	B2 - Page Street S	38.01	0.00	105.58
	C2 - Page Street N	120.08	87.46	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.20	0.80
	B2 - Page Street S	0.26	0.00	0.74
	C2 - Page Street N	0.58	0.42	0.00

2 - Page Street - Pursley Road 17:30 - 17:45

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	46.23	131.98
	B2 - Page Street S	36.95	0.00	74.96
	C2 - Page Street N	135.92	98.02	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.26	0.74
	B2 - Page Street S	0.33	0.00	0.67
	C2 - Page Street N	0.58	0.42	0.00

2 - Page Street - Pursley Road 17:45 - 18:00

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	49.40	140.42
	B2 - Page Street S	41.18	0.00	111.91
	C2 - Page Street N	134.86	84.30	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.26	0.74
	B2 - Page Street S	0.27	0.00	0.73
	C2 - Page Street N	0.62	0.38	0.00

Vehicle Mix

1 - Page Street - Bunns Lane 17:00 - 17:15

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	6
	B1 - Page Street S	0	0	2
	C1 - Bunns Lane	0	2	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.060
	B1 - Page Street S	1.000	1.000	1.020
	C1 - Bunns Lane	1.000	1.019	1.000

1 - Page Street - Bunns Lane 17:15 - 17:30

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	10
	B1 - Page Street S	3	0	1
	C1 - Bunns Lane	0	1	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.100
	B1 - Page Street S	1.030	1.000	1.010
	C1 - Bunns Lane	1.000	1.010	1.000

1 - Page Street - Bunns Lane 17:30 - 17:45

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	0
	B1 - Page Street S	0	0	1
	C1 - Bunns Lane	0	2	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.000
	B1 - Page Street S	1.000	1.000	1.010
	C1 - Bunns Lane	1.000	1.020	1.000

1 - Page Street - Bunns Lane 17:45 - 18:00

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	0
	B1 - Page Street S	0	0	0
	C1 - Bunns Lane	0	1	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.000
	B1 - Page Street S	1.000	1.000	1.000
	C1 - Bunns Lane	1.000	1.010	1.000

2 - Page Street - Pursley Road 17:00 - 17:15

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	2
	B2 - Page Street S	3	0	0
	C2 - Page Street N	3	1	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.020
	B2 - Page Street S	1.030	1.000	1.000
	C2 - Page Street N	1.028	1.009	1.000

2 - Page Street - Pursley Road 17:15 - 17:30

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	1
	B2 - Page Street S	0	0	1
	C2 - Page Street N	2	0	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.010
	B2 - Page Street S	1.000	1.000	1.010
	C2 - Page Street N	1.019	1.000	1.000

2 - Page Street - Pursley Road 17:30 - 17:45

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	2
	B2 - Page Street S	0	0	0
	C2 - Page Street N	2	0	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.020
	B2 - Page Street S	1.000	1.000	1.000
	C2 - Page Street N	1.019	1.000	1.000

2 - Page Street - Pursley Road 17:45 - 18:00

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	0
	B2 - Page Street S	0	0	0
	C2 - Page Street N	1	1	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.000
	B2 - Page Street S	1.000	1.000	1.000
	C2 - Page Street N	1.010	1.010	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (Veh/TS)	Demand in PCU (PCU/TS)	Pedestrian Demand (Ped/TS)
17:00-17:15	1 - Page Street - Bunns Lane	A1 - Page Street N	48.06	49.14	3.76
		B1 - Page Street S	207.99	211.69	
		C1 - Bunns Lane	205.43	209.24	3.76
	2 - Page Street - Pursley Road	A2 - Pursley Road	193.65	196.55	
		B2 - Page Street S	104.52	105.63	3.76
		C2 - Page Street N	227.16	231.70	
17:15-17:30	1 - Page Street - Bunns Lane	A1 - Page Street N	33.62	34.67	4.49
		B1 - Page Street S	254.45	257.82	
		C1 - Bunns Lane	194.10	195.89	4.49
	2 - Page Street - Pursley Road	A2 - Pursley Road	186.65	188.14	
		B2 - Page Street S	143.59	144.64	4.49
		C2 - Page Street N	207.55	209.85	
17:30-17:45	1 - Page Street - Bunns Lane	A1 - Page Street N	64.24	64.24	5.51
		B1 - Page Street S	206.94	208.70	
		C1 - Bunns Lane	202.55	206.30	5.51
	2 - Page Street - Pursley Road	A2 - Pursley Road	178.21	180.85	
		B2 - Page Street S	111.91	111.91	5.51
		C2 - Page Street N	233.94	236.56	
17:45-18:00	1 - Page Street - Bunns Lane	A1 - Page Street N	54.73	54.73	5.51
		B1 - Page Street S	252.34	252.34	
		C1 - Bunns Lane	191.99	193.78	5.51
	2 - Page Street - Pursley Road	A2 - Pursley Road	189.82	189.82	
		B2 - Page Street S	153.09	153.09	5.51
		C2 - Page Street N	219.16	221.27	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - Page Street - Bunns Lane	A1 - Page Street N	0.97	128.32	7.2	F	50.39	201.56
	B1 - Page Street S	0.93	39.53	7.9	E	187.91	751.65
	C1 - Bunns Lane	1.16	381.33	80.4	F	199.41	797.65
2 - Page Street - Pursley Road	A2 - Pursley Road	1.28	672.58	128.8	F	187.21	748.83
	B2 - Page Street S	1.40	716.95	106.8	F	128.15	512.60
	C2 - Page Street N	0.92	36.58	7.9	E	201.58	806.33

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	De (
1 - Page Street - Bunns Lane	A1 - Page Street N	49.06	49.06	175.51	3.76	60.65	0.809	45.94	26.82	0.0	3.1	53.
	B1 - Page Street S	190.56	190.56	16.81		205.95	0.925	182.70	204.65	0.0	7.9	32.
	C1 - Bunns Lane	209.43	209.43	20.40	3.76	188.55	1.111	181.93	179.11	0.0	27.5	81.
2 - Page Street - Pursley Road	A2 - Pursley Road	195.65	195.65	82.92		182.25	1.074	174.15	147.43	0.0	21.5	71.
	B2 - Page Street S	104.52	104.52	128.75	3.76	109.56	0.954	96.88	128.32	0.0	7.6	54.
	C2 - Page Street N	203.94	203.94	34.25		221.09	0.922	196.10	191.38	0.0	7.8	30.

17:15 - 17:30

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	33.62	33.62	175.95	4.49	72.58	0.464	35.83	40.64	3.1	0.9	25
	B1 - Page Street S	188.76	188.76	11.41		212.57	0.888	188.77	200.37	7.9	7.9	37
	C1 - Bunns Lane	194.10	194.10	30.16	4.49	188.48	1.029	186.43	170.02	27.5	35.2	16
2 - Page Street - Pursley Road	A2 - Pursley Road	186.65	186.65	84.38		145.91	1.278	145.51	143.56	21.5	62.6	27
	B2 - Page Street S	143.59	143.59	114.80	4.49	102.80	1.397	102.20	115.09	7.6	49.1	27
	C2 - Page Street N	200.11	200.11	27.74		227.32	0.880	200.20	189.25	7.8	7.8	33

17:30 - 17:45

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	64.24	64.24	164.99	5.51	66.17	0.970	58.37	37.54	0.9	6.8	84
	B1 - Page Street S	184.54	184.54	21.06		206.86	0.892	184.50	202.30	7.9	7.9	39
	C1 - Bunns Lane	202.55	202.55	27.41	5.51	175.57	1.156	175.12	178.15	35.2	62.6	26
2 - Page Street - Pursley Road	A2 - Pursley Road	178.21	178.21	84.99		151.06	1.183	150.88	146.84	62.6	89.9	46
	B2 - Page Street S	111.91	111.91	115.30	5.51	97.85	1.140	97.67	120.57	49.1	63.3	51
	C2 - Page Street N	202.95	202.95	29.03		226.65	0.895	202.80	183.94	7.8	7.9	36

17:45 - 18:00

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	54.73	54.73	164.68	5.51	60.13	0.910	54.23	41.12	6.8	7.3	12
	B1 - Page Street S	187.84	187.84	19.84		210.43	0.892	187.80	199.06	7.9	7.9	39
	C1 - Bunns Lane	191.99	191.99	32.03	5.51	174.06	1.099	173.77	175.61	62.6	80.8	38
2 - Page Street - Pursley Road	A2 - Pursley Road	189.82	189.82	76.95		149.53	1.258	149.47	155.61	89.9	130.3	67
	B2 - Page Street S	153.09	153.09	110.64	5.51	109.13	1.403	109.07	115.77	63.3	107.3	71
	C2 - Page Street N	199.35	199.35	33.21		224.49	0.888	199.34	186.50	7.9	7.9	35

Do something - 2026 Future + New Dev without BL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	1 - Page Street - Bunns Lane	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms B1 and C1 have 85% of the total flow for the roundabout for one or more time segments]
Last Run	Last Run	1 - Page Street - Bunns Lane - B1 - Page Street S - Capacity	Pedestrian Crossing causes blocking on previous arm due to traffic queing to leave the junction in 4 timesegment(s).

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Page Street - Bunns Lane	Mini-roundabout	A1, B1, C1	507.96	F
2	Page Street - Pursley Road	Mini-roundabout	A2, B2, C2	825.02	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Junction	Arm	Name	Description
1 - Page Street - Bunns Lane	A1	Page Street N	
	B1	Page Street S	
	C1	Bunns Lane	
2 - Page Street - Pursley Road	A2	Pursley Road	
	B2	Page Street S	
	C2	Page Street N	

Mini Roundabout Geometry

Junction	Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Page Street - Bunns Lane	A1 - Page Street N	3.37	3.11	5.39	9.2	16.05	13.16	0.0	✓
	B1 - Page Street S	3.92	3.55	5.68	8.1	19.15	15.69	0.0	✓
	C1 - Bunns Lane	3.82	3.09	4.47	11.1	16.00	10.80	0.0	
2 - Page Street - Pursley Road	A2 - Pursley Road	4.58	4.30	5.76	1.9	9.56	5.53	0.0	
	B2 - Page Street S	3.58	3.26	3.97	5.8	16.78	16.76	0.0	
	C2 - Page Street N	3.42	3.02	3.70	1.0	12.98	8.81	0.0	

Zebra Crossings

Junction	Arm	Space between crossing and junction entry (Zebra) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (m)	Crossing time (s)	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
1 - Page Street - Bunns Lane	A1 - Page Street N	3.50	3.50	✓	Distance			3.13	2.24	3.77	2.69
	C1 - Bunns Lane	1.00	1.20		Distance	7.70	5.50				
2 - Page Street - Pursley Road	B2 - Page Street S	3.00	3.00	✓	Distance			3.29	2.35	3.44	2.46

Slope / Intercept / Capacity

Arm Intercept Adjustments

Junction	Arm	Type	Reason	Direct intercept adjustment (PCU/TS)
1 - Page Street - Bunns Lane	A1 - Page Street N	Direct		-59.70
	B1 - Page Street S	Direct		-21.36
	C1 - Bunns Lane	Direct		-13.89
2 - Page Street - Pursley Road	A2 - Pursley Road	Direct		15.25
	B2 - Page Street S	Direct		-26.77
	C2 - Page Street N	Direct		20.89

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/TS)
1 - Page Street - Bunns Lane	A1 - Page Street N	0.541	171.137
	B1 - Page Street S	0.579	245.305
	C1 - Bunns Lane	0.634	210.179
2 - Page Street - Pursley Road	A2 - Pursley Road	0.655	253.069
	B2 - Page Street S	0.679	227.945
	C2 - Page Street N	0.600	246.604

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	Relationship type	Relationship
D25	2026 Future + New Dev without BL	AM	DIRECT	08:00	09:00	60	15	✓	Simple	D1*G3+D13+D5+D7

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/TS)	Flow multiplier (%)	Internal storage space (PCU)
1 - Page Street - Bunns Lane	B1 - Page Street S	2	C2	Queue limited	Normal	0.00	100.00	8.00
2 - Page Street - Pursley Road	C2 - Page Street N	1	B1	Queue limited	Normal	0.00	100.00	8.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - Page Street - Bunns Lane	A1 - Page Street N		DIRECT	✓	100.000
	B1 - Page Street S	✓			
	C1 - Bunns Lane		DIRECT	✓	100.000
2 - Page Street - Pursley Road	A2 - Pursley Road		DIRECT	✓	100.000
	B2 - Page Street S		DIRECT	✓	100.000
	C2 - Page Street N	✓			

Demand overview (Pedestrians)

Junction	Arm	Profile type
1 - Page Street - Bunns Lane	A1 - Page Street N	[DIRECT]
	B1 - Page Street S	
	C1 - Bunns Lane	[DIRECT]
2 - Page Street - Pursley Road	A2 - Pursley Road	
	B2 - Page Street S	[DIRECT]
	C2 - Page Street N	

Origin-Destination Data

1 - Page Street - Bunns Lane 08:00 - 08:15

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	39.07	39.74
	B1 - Page Street S	53.63	0.00	218.95
	C1 - Bunns Lane	12.89	195.10	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.50	0.50
	B1 - Page Street S	0.20	0.00	0.80
	C1 - Bunns Lane	0.06	0.94	0.00

1 - Page Street - Bunns Lane 08:15 - 08:30

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	64.22	39.74
	B1 - Page Street S	28.92	0.00	222.17
	C1 - Bunns Lane	16.11	196.32	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.62	0.38
	B1 - Page Street S	0.12	0.00	0.88
	C1 - Bunns Lane	0.08	0.92	0.00

1 - Page Street - Bunns Lane 08:30 - 08:45

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	41.66	34.37
	B1 - Page Street S	34.29	0.00	198.54
	C1 - Bunns Lane	19.33	222.10	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.55	0.45
	B1 - Page Street S	0.15	0.00	0.85
	C1 - Bunns Lane	0.08	0.92	0.00

1 - Page Street - Bunns Lane 08:45 - 09:00

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	48.11	38.66
	B1 - Page Street S	17.11	0.00	203.91
	C1 - Bunns Lane	19.33	153.36	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.55	0.45
	B1 - Page Street S	0.08	0.00	0.92
	C1 - Bunns Lane	0.11	0.89	0.00

2 - Page Street - Pursley Road 08:00 - 08:15

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	71.37	178.06
	B2 - Page Street S	55.85	0.00	94.51
	C2 - Page Street N	159.14	76.03	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.29	0.71
	B2 - Page Street S	0.37	0.00	0.63
	C2 - Page Street N	0.68	0.32	0.00

2 - Page Street - Pursley Road 08:15 - 08:30

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	53.33	169.47
	B2 - Page Street S	55.85	0.00	81.62
	C2 - Page Street N	169.25	92.29	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.24	0.76
	B2 - Page Street S	0.41	0.00	0.59
	C2 - Page Street N	0.65	0.35	0.00

2 - Page Street - Pursley Road 08:30 - 08:45

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	55.48	160.88
	B2 - Page Street S	63.37	0.00	71.96
	C2 - Page Street N	193.95	100.88	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.26	0.74
	B2 - Page Street S	0.47	0.00	0.53
	C2 - Page Street N	0.66	0.34	0.00

2 - Page Street - Pursley Road 08:45 - 09:00

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	41.52	158.73
	B2 - Page Street S	44.03	0.00	62.29
	C2 - Page Street N	113.40	89.07	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.21	0.79
	B2 - Page Street S	0.41	0.00	0.59
	C2 - Page Street N	0.56	0.44	0.00

Vehicle Mix

1 - Page Street - Bunns Lane 08:00 - 08:15

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	8	3
	B1 - Page Street S	0	0	1
	C1 - Bunns Lane	0	1	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.085	1.030
	B1 - Page Street S	1.000	1.000	1.010
	C1 - Bunns Lane	1.000	1.010	1.000

1 - Page Street - Bunns Lane 08:15 - 08:30

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	3
	B1 - Page Street S	0	0	1
	C1 - Bunns Lane	7	2	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.030
	B1 - Page Street S	1.000	1.000	1.010
	C1 - Bunns Lane	1.070	1.020	1.000

1 - Page Street - Bunns Lane 08:30 - 08:45

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	0
	B1 - Page Street S	0	0	3
	C1 - Bunns Lane	0	1	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.000
	B1 - Page Street S	1.000	1.000	1.030
	C1 - Bunns Lane	1.000	1.010	1.000

1 - Page Street - Bunns Lane 08:45 - 09:00

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	0
	B1 - Page Street S	0	0	2
	C1 - Bunns Lane	0	1	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.000
	B1 - Page Street S	1.000	1.000	1.020
	C1 - Bunns Lane	1.000	1.010	1.000

2 - Page Street - Pursley Road 08:00 - 08:15

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	2	1
	B2 - Page Street S	0	0	2
	C2 - Page Street N	1	4	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.018	1.010
	B2 - Page Street S	1.000	1.000	1.020
	C2 - Page Street N	1.009	1.038	1.000

2 - Page Street - Pursley Road 08:15 - 08:30

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	6	1
	B2 - Page Street S	4	0	0
	C2 - Page Street N	3	0	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.063	1.010
	B2 - Page Street S	1.040	1.000	1.000
	C2 - Page Street N	1.029	1.000	1.000

2 - Page Street - Pursley Road 08:30 - 08:45

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	3
	B2 - Page Street S	0	0	1
	C2 - Page Street N	1	1	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.029
	B2 - Page Street S	1.000	1.000	1.010
	C2 - Page Street N	1.010	1.010	1.000

2 - Page Street - Pursley Road 08:45 - 09:00

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	3
	B2 - Page Street S	2	0	0
	C2 - Page Street N	2	0	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.029
	B2 - Page Street S	1.020	1.000	1.000
	C2 - Page Street N	1.019	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (Veh/TS)	Demand in PCU (PCU/TS)	Pedestrian Demand (Ped/TS)
08:00-08:15	1 - Page Street - Bunns Lane	A1 - Page Street N	78.81	83.31	3.76
		B1 - Page Street S	272.57	274.74	
		C1 - Bunns Lane	207.99	209.89	3.76
	2 - Page Street - Pursley Road	A2 - Pursley Road	249.43	252.45	
		B2 - Page Street S	150.36	152.25	3.76
		C2 - Page Street N	235.17	239.56	
08:15-08:30	1 - Page Street - Bunns Lane	A1 - Page Street N	103.96	105.15	4.49
		B1 - Page Street S	251.09	253.30	
		C1 - Bunns Lane	212.43	217.42	4.49
	2 - Page Street - Pursley Road	A2 - Pursley Road	222.80	227.85	
		B2 - Page Street S	137.47	139.71	4.49
		C2 - Page Street N	261.54	266.44	
08:30-08:45	1 - Page Street - Bunns Lane	A1 - Page Street N	76.03	76.03	5.51
		B1 - Page Street S	232.84	238.73	
		C1 - Bunns Lane	241.43	243.62	5.51
	2 - Page Street - Pursley Road	A2 - Pursley Road	216.36	221.09	
		B2 - Page Street S	135.32	136.04	5.51
		C2 - Page Street N	294.83	297.71	
08:45-09:00	1 - Page Street - Bunns Lane	A1 - Page Street N	86.77	86.77	5.51
		B1 - Page Street S	221.02	225.06	
		C1 - Bunns Lane	172.69	174.20	5.51
	2 - Page Street - Pursley Road	A2 - Pursley Road	200.25	204.92	
		B2 - Page Street S	106.33	107.21	5.51
		C2 - Page Street N	202.47	204.62	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - Page Street - Bunns Lane	A1 - Page Street N	1.34	526.07	47.9	F	86.12	344.47
	B1 - Page Street S	0.93	41.71	8.0	E	177.05	708.21
	C1 - Bunns Lane	1.45	896.07	165.3	F	208.93	835.73
2 - Page Street - Pursley Road	A2 - Pursley Road	1.44	1238.26	240.7	F	222.95	891.79
	B2 - Page Street S	1.49	1298.53	139.8	F	132.23	528.91
	C2 - Page Street N	0.92	37.73	7.9	E	196.80	787.21

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	78.81	78.81	168.86	3.76	74.57	1.057	68.17	45.99	0.0	10.6	94
	B1 - Page Street S	185.57	185.57	34.37		200.02	0.928	177.64	202.66	0.0	7.9	33
	C1 - Bunns Lane	209.99	209.99	34.95	3.76	185.88	1.130	179.90	177.06	0.0	30.1	89
2 - Page Street - Pursley Road	A2 - Pursley Road	251.43	251.43	63.51		174.83	1.438	172.64	168.86	0.0	78.8	21
	B2 - Page Street S	150.36	150.36	122.26	3.76	101.12	1.487	99.18	113.88	0.0	51.2	24
	C2 - Page Street N	203.38	203.38	36.84		220.42	0.923	195.52	184.60	0.0	7.9	30

08:15 - 08:30

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	103.96	103.96	149.15	4.49	76.84	1.342	76.24	32.81	10.6	38.3	31
	B1 - Page Street S	176.81	176.81	30.48		199.03	0.888	176.81	194.90	7.9	7.9	40
	C1 - Bunns Lane	212.43	212.43	21.01	4.49	161.16	1.322	160.94	186.28	30.1	81.6	32
2 - Page Street - Pursley Road	A2 - Pursley Road	222.80	222.80	68.40		158.82	1.409	158.68	164.11	78.8	142.8	63
	B2 - Page Street S	137.47	137.47	116.64	4.49	98.01	1.406	97.99	110.44	51.2	90.7	66
	C2 - Page Street N	194.48	194.48	38.04		219.22	0.887	194.47	176.59	7.9	7.9	36

08:30 - 08:45

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	76.03	76.03	152.86	5.51	71.38	1.058	70.96	38.50	38.3	43.3	51
	B1 - Page Street S	175.42	175.42	29.38		198.03	0.886	175.42	194.43	7.9	7.9	4
	C1 - Bunns Lane	241.43	241.43	25.58	5.51	165.83	1.446	165.77	179.22	81.6	157.2	66
2 - Page Street - Pursley Road	A2 - Pursley Road	216.36	216.36	66.73		158.92	1.360	158.88	168.36	142.8	200.3	97
	B2 - Page Street S	135.32	135.32	120.59	5.51	98.18	1.364	98.13	105.02	90.7	127.9	10
	C2 - Page Street N	194.78	194.78	40.32		219.29	0.888	194.77	178.40	7.9	7.9	3

08:45 - 09:00

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	86.77	86.77	150.44	5.51	81.63	1.063	81.25	27.07	43.3	48.8	52
	B1 - Page Street S	170.39	170.39	36.48		192.02	0.887	170.38	195.21	7.9	7.9	4
	C1 - Bunns Lane	172.69	172.69	13.74	5.51	163.86	1.054	163.76	193.12	157.2	166.2	89
2 - Page Street - Pursley Road	A2 - Pursley Road	200.25	200.25	84.82		160.87	1.247	160.85	153.66	200.3	239.7	12
	B2 - Page Street S	106.33	106.33	119.60	5.51	93.88	1.136	93.80	126.06	127.9	140.4	12
	C2 - Page Street N	194.63	194.63	43.92		217.93	0.893	194.55	169.48	7.9	7.9	3

Do something - 2026 Future + New Dev without BL, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	1 - Page Street - Bunns Lane	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms B1 and C1 have 89% of the total flow for the roundabout for one or more time segments]
Last Run	Last Run	1 - Page Street - Bunns Lane - B1 - Page Street S - Capacity	Pedestrian Crossing causes blocking on previous arm due to traffic queing to leave the junction in 3 timesegment(s).

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Do something	✓	✓	D19,D20,D25,D26	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Page Street - Bunns Lane	Mini-roundabout	A1, B1, C1	329.20	F
2	Page Street - Pursley Road	Mini-roundabout	A2, B2, C2	583.55	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Junction	Arm	Name	Description
1 - Page Street - Bunns Lane	A1	Page Street N	
	B1	Page Street S	
	C1	Bunns Lane	
2 - Page Street - Pursley Road	A2	Pursley Road	
	B2	Page Street S	
	C2	Page Street N	

Mini Roundabout Geometry

Junction	Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Page Street - Bunns Lane	A1 - Page Street N	3.37	3.11	5.39	9.2	16.05	13.16	0.0	✓
	B1 - Page Street S	3.92	3.55	5.68	8.1	19.15	15.69	0.0	✓
	C1 - Bunns Lane	3.82	3.09	4.47	11.1	16.00	10.80	0.0	
2 - Page Street - Pursley Road	A2 - Pursley Road	4.58	4.30	5.76	1.9	9.56	5.53	0.0	
	B2 - Page Street S	3.58	3.26	3.97	5.8	16.78	16.76	0.0	
	C2 - Page Street N	3.42	3.02	3.70	1.0	12.98	8.81	0.0	

Zebra Crossings

Junction	Arm	Space between crossing and junction entry (Zebra) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (m)	Crossing time (s)	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
1 - Page Street - Bunns Lane	A1 - Page Street N	3.50	3.50	✓	Distance			3.13	2.24	3.77	2.69
	C1 - Bunns Lane	1.00	1.20		Distance	7.70	5.50				
2 - Page Street - Pursley Road	B2 - Page Street S	3.00	3.00	✓	Distance			3.29	2.35	3.44	2.46

Slope / Intercept / Capacity

Arm Intercept Adjustments

Junction	Arm	Type	Reason	Direct intercept adjustment (PCU/TS)
1 - Page Street - Bunns Lane	A1 - Page Street N	Direct		-59.70
	B1 - Page Street S	Direct		-21.36
	C1 - Bunns Lane	Direct		-13.89
2 - Page Street - Pursley Road	A2 - Pursley Road	Direct		15.25
	B2 - Page Street S	Direct		-26.77
	C2 - Page Street N	Direct		20.89

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/TS)
1 - Page Street - Bunns Lane	A1 - Page Street N	0.541	171.137
	B1 - Page Street S	0.579	245.305
	C1 - Bunns Lane	0.634	210.179
2 - Page Street - Pursley Road	A2 - Pursley Road	0.655	253.069
	B2 - Page Street S	0.679	227.945
	C2 - Page Street N	0.600	246.604

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	Relationship type	Relationship
D26	2026 Future + New Dev without BL	PM	DIRECT	17:00	18:00	60	15	✓	Simple	D2*G4+D14+D6+D8

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/TS)	Flow multiplier (%)	Internal storage space (PCU)
1 - Page Street - Bunns Lane	B1 - Page Street S	2	C2	Queue limited	Normal	0.00	100.00	8.00
2 - Page Street - Pursley Road	C2 - Page Street N	1	B1	Queue limited	Normal	0.00	100.00	8.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - Page Street - Bunns Lane	A1 - Page Street N		DIRECT	✓	100.000
	B1 - Page Street S	✓			
	C1 - Bunns Lane		DIRECT	✓	100.000
2 - Page Street - Pursley Road	A2 - Pursley Road		DIRECT	✓	100.000
	B2 - Page Street S		DIRECT	✓	100.000
	C2 - Page Street N	✓			

Demand overview (Pedestrians)

Junction	Arm	Profile type
1 - Page Street - Bunns Lane	A1 - Page Street N	[DIRECT]
	B1 - Page Street S	
	C1 - Bunns Lane	[DIRECT]
2 - Page Street - Pursley Road	A2 - Pursley Road	
	B2 - Page Street S	[DIRECT]
	C2 - Page Street N	

Origin-Destination Data

1 - Page Street - Bunns Lane 17:00 - 17:15

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	32.23	18.90
	B1 - Page Street S	24.46	0.00	195.53
	C1 - Bunns Lane	7.78	209.09	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.63	0.37
	B1 - Page Street S	0.11	0.00	0.89
	C1 - Bunns Lane	0.04	0.96	0.00

1 - Page Street - Bunns Lane 17:15 - 17:30

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	25.12	11.12
	B1 - Page Street S	43.35	0.00	225.54
	C1 - Bunns Lane	12.23	192.97	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.69	0.31
	B1 - Page Street S	0.16	0.00	0.84
	C1 - Bunns Lane	0.06	0.94	0.00

1 - Page Street - Bunns Lane 17:30 - 17:45

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	44.02	24.46
	B1 - Page Street S	32.24	0.00	186.64
	C1 - Bunns Lane	12.23	201.86	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.64	0.36
	B1 - Page Street S	0.15	0.00	0.85
	C1 - Bunns Lane	0.06	0.94	0.00

1 - Page Street - Bunns Lane 17:45 - 18:00

Demand (Veh/TS)

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	37.35	21.12
	B1 - Page Street S	45.58	0.00	221.10
	C1 - Bunns Lane	10.00	192.97	0.00

Proportions

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0.00	0.64	0.36
	B1 - Page Street S	0.17	0.00	0.83
	C1 - Bunns Lane	0.05	0.95	0.00

2 - Page Street - Pursley Road 17:00 - 17:15

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	52.02	153.29
	B2 - Page Street S	38.91	0.00	71.14
	C2 - Page Street N	139.83	100.49	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.25	0.75
	B2 - Page Street S	0.35	0.00	0.65
	C2 - Page Street N	0.58	0.42	0.00

2 - Page Street - Pursley Road 17:15 - 17:30

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	40.57	157.74
	B2 - Page Street S	40.02	0.00	111.16
	C2 - Page Street N	128.16	91.93	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.20	0.80
	B2 - Page Street S	0.26	0.00	0.74
	C2 - Page Street N	0.58	0.42	0.00

2 - Page Street - Pursley Road 17:30 - 17:45

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	49.46	139.95
	B2 - Page Street S	38.91	0.00	78.92
	C2 - Page Street N	144.84	103.04	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.26	0.74
	B2 - Page Street S	0.33	0.00	0.67
	C2 - Page Street N	0.58	0.42	0.00

2 - Page Street - Pursley Road 17:45 - 18:00

Demand (Veh/TS)

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	52.80	148.84
	B2 - Page Street S	43.35	0.00	117.83
	C2 - Page Street N	143.73	88.59	0.00

Proportions

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0.00	0.26	0.74
	B2 - Page Street S	0.27	0.00	0.73
	C2 - Page Street N	0.62	0.38	0.00

Vehicle Mix

1 - Page Street - Bunns Lane 17:00 - 17:15

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	6
	B1 - Page Street S	0	0	2
	C1 - Bunns Lane	0	2	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.060
	B1 - Page Street S	1.000	1.000	1.020
	C1 - Bunns Lane	1.000	1.019	1.000

1 - Page Street - Bunns Lane 17:15 - 17:30

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	10
	B1 - Page Street S	3	0	1
	C1 - Bunns Lane	0	1	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.100
	B1 - Page Street S	1.030	1.000	1.010
	C1 - Bunns Lane	1.000	1.010	1.000

1 - Page Street - Bunns Lane 17:30 - 17:45

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	0
	B1 - Page Street S	0	0	1
	C1 - Bunns Lane	0	2	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.000
	B1 - Page Street S	1.000	1.000	1.010
	C1 - Bunns Lane	1.000	1.020	1.000

1 - Page Street - Bunns Lane 17:45 - 18:00

Heavy Vehicle Percentages

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	0	0	0
	B1 - Page Street S	0	0	0
	C1 - Bunns Lane	0	1	0

Average PCU Per Veh

		To		
		A1 - Page Street N	B1 - Page Street S	C1 - Bunns Lane
From	A1 - Page Street N	1.000	1.000	1.000
	B1 - Page Street S	1.000	1.000	1.000
	C1 - Bunns Lane	1.000	1.010	1.000

2 - Page Street - Pursley Road 17:00 - 17:15

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	2
	B2 - Page Street S	3	0	0
	C2 - Page Street N	3	1	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.020
	B2 - Page Street S	1.030	1.000	1.000
	C2 - Page Street N	1.027	1.009	1.000

2 - Page Street - Pursley Road 17:15 - 17:30

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	1
	B2 - Page Street S	0	0	1
	C2 - Page Street N	2	0	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.010
	B2 - Page Street S	1.000	1.000	1.010
	C2 - Page Street N	1.019	1.000	1.000

2 - Page Street - Pursley Road 17:30 - 17:45

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	2
	B2 - Page Street S	0	0	0
	C2 - Page Street N	2	0	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.020
	B2 - Page Street S	1.000	1.000	1.000
	C2 - Page Street N	1.019	1.000	1.000

2 - Page Street - Pursley Road 17:45 - 18:00

Heavy Vehicle Percentages

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	0	0	0
	B2 - Page Street S	0	0	0
	C2 - Page Street N	1	1	0

Average PCU Per Veh

		To		
		A2 - Pursley Road	B2 - Page Street S	C2 - Page Street N
From	A2 - Pursley Road	1.000	1.000	1.000
	B2 - Page Street S	1.000	1.000	1.000
	C2 - Page Street N	1.010	1.010	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (Veh/TS)	Demand in PCU (PCU/TS)	Pedestrian Demand (Ped/TS)
17:00-17:15	1 - Page Street - Bunns Lane	A1 - Page Street N	51.13	52.26	3.76
		B1 - Page Street S	219.99	223.88	
		C1 - Bunns Lane	216.87	220.87	3.76
	2 - Page Street - Pursley Road	A2 - Pursley Road	205.31	208.35	
		B2 - Page Street S	110.05	111.22	3.76
		C2 - Page Street N	240.32	245.10	
17:15-17:30	1 - Page Street - Bunns Lane	A1 - Page Street N	36.24	37.35	4.49
		B1 - Page Street S	268.90	272.44	
		C1 - Bunns Lane	205.20	207.09	4.49
	2 - Page Street - Pursley Road	A2 - Pursley Road	198.31	199.87	
		B2 - Page Street S	151.18	152.29	4.49
		C2 - Page Street N	220.09	222.52	
17:30-17:45	1 - Page Street - Bunns Lane	A1 - Page Street N	68.47	68.47	5.51
		B1 - Page Street S	218.87	220.73	
		C1 - Bunns Lane	214.09	218.05	5.51
	2 - Page Street - Pursley Road	A2 - Pursley Road	189.41	192.19	
		B2 - Page Street S	117.83	117.83	5.51
		C2 - Page Street N	247.88	250.64	
17:45-18:00	1 - Page Street - Bunns Lane	A1 - Page Street N	58.47	58.47	5.51
		B1 - Page Street S	266.67	266.67	
		C1 - Bunns Lane	202.98	204.87	5.51
	2 - Page Street - Pursley Road	A2 - Pursley Road	201.64	201.64	
		B2 - Page Street S	161.18	161.18	5.51
		C2 - Page Street N	232.32	234.54	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - Page Street - Bunns Lane	A1 - Page Street N	1.04	174.73	10.5	F	53.79	215.17
	B1 - Page Street S	0.93	39.63	7.9	E	187.49	749.96
	C1 - Bunns Lane	1.24	625.07	132.3	F	210.60	842.42
2 - Page Street - Pursley Road	A2 - Pursley Road	1.35	909.28	173.9	F	198.64	794.54
	B2 - Page Street S	1.48	926.08	136.1	F	134.89	539.54
	C2 - Page Street N	0.92	36.09	7.9	E	201.86	807.45

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	52.13	52.13	174.41	3.76	58.23	0.895	47.63	26.65	0.0	4.5	69
	B1 - Page Street S	190.28	190.28	17.27		205.62	0.925	182.42	204.78	0.0	7.9	32
	C1 - Bunns Lane	220.87	220.87	20.28	3.76	185.29	1.192	180.78	179.41	0.0	40.1	11
2 - Page Street - Pursley Road	A2 - Pursley Road	207.31	207.31	82.31		179.42	1.155	174.17	147.98	0.0	33.1	10
	B2 - Page Street S	110.05	110.05	128.78	3.76	103.42	1.064	96.37	127.69	0.0	13.7	84
	C2 - Page Street N	204.06	204.06	34.07		221.22	0.922	196.21	191.09	0.0	7.8	30

17:15 - 17:30

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	36.24	36.24	175.42	4.49	53.23	0.681	38.28	40.06	4.5	2.4	65
	B1 - Page Street S	188.37	188.37	11.99		212.14	0.888	188.38	201.72	7.9	7.9	37
	C1 - Bunns Lane	205.20	205.20	29.99	4.49	186.07	1.101	185.50	170.38	40.1	59.8	25
2 - Page Street - Pursley Road	A2 - Pursley Road	198.31	198.31	84.20		146.85	1.348	146.67	145.68	33.1	84.8	37
	B2 - Page Street S	151.18	151.18	114.80	4.49	102.59	1.474	102.34	116.06	13.7	62.6	36
	C2 - Page Street N	201.56	201.56	28.32		226.96	0.888	201.55	188.82	7.8	7.8	35

17:30 - 17:45

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	68.47	68.47	163.27	5.51	66.02	1.036	61.27	37.27	2.4	9.6	11
	B1 - Page Street S	184.09	184.09	21.75		206.34	0.892	184.04	202.79	7.9	7.9	39
	C1 - Bunns Lane	214.09	214.09	27.22	5.51	173.45	1.238	173.31	178.57	59.8	100.6	42
2 - Page Street - Pursley Road	A2 - Pursley Road	189.41	189.41	84.45		149.68	1.270	149.60	146.18	84.8	124.6	63
	B2 - Page Street S	117.83	117.83	115.32	5.51	95.82	1.224	95.75	118.73	62.6	84.6	67
	C2 - Page Street N	203.18	203.18	27.51		227.56	0.893	203.11	183.55	7.8	7.9	36

17:45 - 18:00

Junction	Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Pedestrian demand (Ped/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	D
1 - Page Street - Bunns Lane	A1 - Page Street N	58.47	58.47	161.32	5.51	61.15	0.956	57.46	41.01	9.6	10.6	17
	B1 - Page Street S	187.29	187.29	20.72		209.81	0.892	187.25	198.07	7.9	7.9	39
	C1 - Bunns Lane	202.98	202.98	31.81	5.51	170.59	1.183	170.52	176.15	100.6	133.0	62
2 - Page Street - Pursley Road	A2 - Pursley Road	201.64	201.64	76.03		150.22	1.326	150.19	157.15	124.6	176.0	90
	B2 - Page Street S	161.18	161.18	110.95	5.51	109.04	1.478	109.02	115.27	84.6	136.8	92
	C2 - Page Street N	198.68	198.68	34.50		223.74	0.888	198.68	185.46	7.9	7.9	35

Appendix Ae

GLA COMMENTS AND RESPONSES

DOCUMENT 1
PENTAVIA, MILL HILL
GLA STAGE 1 REPORT – COMMENTS AND RESPONSES

Para	Planning Issues	Positive / Information noted	Negative / Further work	Response
Background				
8	**PTAL**	• Part of the site nearest to Bunns Lane could achieve a moderate PTAL of 3 if the proposed direct pedestrian access to Bunns Lane is provided.		• The layout and design of the site access arrangements has been completely revisited to provide a significantly more direct and coherent route between the site, the A1 and Bunns Lane.
11	**Case History**	• Broadly supportive of the previous scheme, subject to addressing concerns relating to design and impact upon townscape views.		
Principle of Development				
16, 62	**Housing**	• Supportive subject to addressing access issues and concerns about the DMR rent levels.		• This is addressed in the affordable housing, design and transport sections of this schedule in addition to separate addendum reports.
18, 62	**Retail**	• Support loss of out-of-centre retail and its replacement with small scale retail floorspace.	• Non-residents – should locate the retail around the central entrance square • Enhance access to the site to serve non-residents and residents.	• The revised scheme now locates the majority of the retail and community uses around the edge of the central square to create a vibrant, active ground floor. • The layout and design of the site access arrangements has been completely revisited to provide a significantly more direct and coherent route between the site, the A1 and Bunns Lane; in addition

				to improvements to bus stop locations of the 221 and 113.
20	**Community uses**		• Social infrastructure - should consider adding further small-scale uses to the site to enhance its community offer.	• The revised scheme now includes a second D1 unit which could possibly be utilised as a doctor's surgery.
Housing				
22, 23, 62	**Build to Rent affordable housing - LLR**		• All of the DMR units are proposed to be let at 80% of market rent; this fails to accord with the LP. • Currently, do not qualify for the Fast Track route for BTR schemes, as the rent levels do not meet the requirements set out in paragraph 4.13.6 of the draft LP	• The Affordable Housing proposals (35%) have been enhanced to ensure 30% of the Affordable Housing is provided as London Living Rent. Whilst this has a significant financial impact, and the scheme is already overproviding Affordable Housing, it has been possible to partially offset this through a series of design efficiency improvements that have added 111 extra bedrooms and 7 new units. • The remaining 70% of the Affordable Housing will be maintained as Discounted Market Rent (DMR) to be made available with rents (including all service charges) that equate to no more than 80% of Open Market Rent (OMR).
25, 26, 62	**Build to Rent affordable housing – Requirements as conditions and s106.**	• Units must be held in a covenant for a period of 15 years – secured within the s106. • A Clawback mechanism must be included in the s106. • A management plan must be secured. • An early implementation review must be secured • A near end review mechanism must also be secured.	• Require confirmation that Meadow will retain and manage all units.	• We confirm that each block will be retained for rental and kept in single ownership.

29	**Housing Mix – Key worker homes**		• Is market rent homes for key workers a suitable means of addressing local need? Should explore converting the key worker units to DMR units.	• 100% of the Affordable Housing will be prioritised for Key Workers who already live or work in the Borough but cannot afford to buy or rent good quality housing. • 15% Private Rent will be prioritised to Key Workers who already live or work in the Borough.
30	**Housing Mix – Family Housing**	• The site is not considered appropriate for family housing. • 1 and 2 beds considered acceptable.		
32	**Children's play space**	• Playspace should be secured by a condition	• Underproviding by 5 sqm. • Provide further details of the play spaces to ensure that they are 'buffered' from the internal road.	• As a result of the new scheme, the number of proposed children has increased from 63 to 78 which comprises a playspace policy compliant position of 780 sqm. • The new proposals provide 1,880 sqm of play space which is substantially over providing on this. • For the playspace calculation, we have used the GLA methodology in line with our previous ES report. • The area adjacent to the internal road is mounded and planted. This will provide a good buffer between lawn area and the road.
Urban Design				
34, 35	**Layout - buildings**	• The layout principles of positioning the blocks around the periphery of the site, with a central landscaped area, is supported. • The layout addresses the edges of the site and provides enclosure.	• Consider locating the majority of the retail and community uses around the edge of the central square to create a sense of place.	• The revised scheme now locates the majority of the retail and community uses around the edge of the central square to create a vibrant, active ground floor. • The relocation of these uses to the central square also promotes natural surveillance in respect to the new

		• The form and massing has significantly improved from the previous scheme and addresses previous concerns regarding massing and impact on views.		pedestrian entrances into the site either side of Block K.
36	**Layout – car parking areas; servicing road**	• Part-podium level for car parking is welcomed.	• Inactive servicing frontage and servicing road along the M1 edge. • Servicing road along M1 should be closed off from pedestrians/public access to ensure residents security. • Service road should be landscaped.	• New landscaping is now proposed along the servicing frontage. • The service road is proposed to be closed off via an electric gate with fob access.
38, 39, 43, 62	**Bunns Lane pedestrian access and route into the site from Block K**		• Significant concern with the pedestrian route from Bunns Lane and its entrance into the site to the rear of block K for the following reasons: - Is there sufficient space to accommodate the number of pedestrians and cyclists moving to and from the site? - the route's legibility (e.g. can easy can it be read); - the real and perceived safety as there is no passive surveillance onto this route. • Pedestrian entrance to the development from the rear of block K is hidden and is not differentiated architecturally. • Entry sequence into the site towards block K must be reconsidered to ensure clear sightlines into the main public square (risks creating a gated community) – possibly achieved by pulling back the eastern edge of	• The entry sequence from Bunns Lane now includes a more legible and welcoming route into the site via a landscape terrace which has a grand ramp and step connection through to an opening on either side of Block K into the central square. • The landscape design has utilised the level changes to its advantage along the A1 to create a suitable noise buffer for the scheme but also provide an accessible route towards a relocated bus stop. • The new terrace link from Bunns Lane will be DDA compliant and also provide a clear cycling route from Bunn's Lane along the Woodland edge and A1. The revised scheme also provides cycle link from the most northern point of the site to increase connectivity. • The landscape changes and new pedestrian routes significantly enhance access along the perimeter road on the A1 to nearby bus stops for the scheme and to Bunn's Lane.

			block K to form a legible and welcoming route. • Serious concerns that the site's limited accessibility will impact quality of life for residents.	
40	**Zone of green space between the backs of blocks and the A1**		• The zone of green is at risk of being under-utilised which could cause security issues for residents. • Introducing direct access to cores and individual front doors to ground floor would help to activate this edge.	• The revised scheme now provides direct access to residential lobbies of Blocks K, H, F, D, M from new pedestrian routes in the green zone along the A1 and from Bunns Lane which helps to activate this space and also provide passive surveillance.
41	**Entrance into the site from the A1 slip road**		• Design of entrance into the site from the A1 slip road should be revised to extend the 'Mill Hill Walk' route to meet the pedestrian access route. • Reduction in the amount of surface car parking near block A should be explored to create an 'entry square' and a more pedestrian-friendly space.	• The revised scheme now includes a smaller convenience store and a new small concierge to the southern entrance of the site from the A1. • The design of the entrance area now provides a landscaped arrival square with shared surfaces for the occasional car access and limited surface car parking. This creates a more pedestrian-friendly space and a clearer entrance sequence to Mill Hill Walk.
42	**Residential quality – cores and desire lines**	• East/west aspect of the majority of units is welcomed.	• The legibility of each block is questioned - tucked away and unlikely to be visible for pedestrians approaching the site. • Should reconsider the location of the residential entrances and ensure that they are fully aligned with the desire lines running into and across the site.	• The location of the ground floor entrances have been strengthened by the new landscape routes proposed which follow the desire lines running into and across the site.
43	**Public Realm**	• Green open spaces along Mill Hill Walk is welcomed.	• Risk that the full extent of the open space across the site will not be fully utilised.	• The landscape spaces internally are divided up into a series of pocket parks suitable to serve its neighbouring blocks for residents to enjoy and a large central

			• Should confirm the rationale behind sizing of the public realm and consider pulling blocks further into the site to enhance residential quality.	space which allows for sunlight to permeate and prevents a feeling of overlooking which often precludes the enjoyment and usability of public space. • A significant landscape buffer has also been created adjacent to Watford Way. • The landscape strategy across the scheme forms the whole focus of the development helping to define its sense of place and belonging. Its size has been established to allow for meaningful amenity in terms of physical recreation, visual and mental well-being. • The blocks remain in situ as originally submitted to ensure that adequate separation distances remain between blocks and that there is no potential daylight, sunlight and overshadowing impacts.
45, 46	**Density**		• Proposed density exceeds guidance within the LP and threshold for increased scrutiny in the draft LP. • Addressing issues of site access arrangements is critical to its success (proposed density has not been sufficiently justified). • A management plan must be provided.	• The layout and design of the site access arrangements has been completely revisited to provide a significantly more direct and coherent route between the site, the A1 and Bunns Lane; in addition to improvements to bus stop locations of the 221 and 113. • The Management Plan is currently being drafted.
48	**Inclusive design**	• Wheelchair dwellings – number, sizes and distribution is supported. • Should be secured by condition.		
49	**Fire Safety**	• LPA should secure an informative requiring the submission of a fire statement.		
Energy				

50, 62	**Energy Hierarchy**	• Broadly followed the energy hierarchy. • Provides sufficient information to assess the 'be green' part.	• 'be lean' – should provide legible BRUKL sheets; the area weighted average for actual and national cooling demands for each non-domestic building; and further overheating analysis. • 'be clean' - provide legible BRUKL sheets and a drawing showing the route of the heat network linking all buildings on the site, including confirmation that all apartments and non-domestic units will be connected.	• Chapman BDSP will be providing a separate Energy and Sustainability addendum report in the formal Barnet amendment submission and will address these comments.
51	**Carbon Emissions**	• Non-domestic elements reduce carbon emissions by 36%. This exceeds the current LP targets. Should be mindful of draft London Plan which requires non-domestic to be zero-carbon by 2019. • Any shortfall in carbon savings should be offset through financial contributions to the Council's carbon offset funds.	• Domestic elements reduce carbon emissions by 48%. Investigate whether further reductions can be achieved to meet the zero-carbon target for residential.	• Chapman BDSP will be providing a separate Energy and Sustainability addendum report in the formal Barnet amendment submission and will address these comments.
Noise				
52, 62	**Protection of residential amenity**	• A number of design mitigation measures have been included. • Must be secured by a condition.		
Air Quality				
53, 62	**Air Quality**	• Scheme layout is expected to improve air quality within the central series of courtyards. • Air quality mitigation must be secured by condition.	• Perimeter blocks – result in localised worsening of air quality on the outside of the site. • When exploring alternative pedestrian access arrangements – must also have regard to limiting exposure to poor levels of air quality.	• A significant landscape buffer has also been created adjacent to Watford Way which will help limit exposure to poor levels of air quality.
Transport				

54, 62	**Bunns Lane Access**		• Key concern – access to and from Mill Hill via Bunns Lane. • Pedestrian route is convoluted and does not benefit from passive surveillance or legibility (e.g. how easy is it to read). • Further information required on the access into the site.	• The layout and design of this area has been completely revisited to provide a significantly more direct and coherent route between the site, the A1 and Bunns Lane. • The connection will be further strengthened by improvements to bus stop locations of the 221 and 113, and supplemented by signage to be detailed as part of the application submission.
55	**Cycle Parking Provision**	• Residential cycle parking accords with LP.	• Retail and commercial cycle parking not in compliance with LP (require 7 spaces for staff and 42 spaces for visitors) • Confirm that cycle spaces are appropriately distributed throughout the development cores and must provide details on access to the long stay spaces.	• It is recognised that allocation of the retail and commercial space now proposed has changed by comparison to that which was submitted and commented upon. However, the intention of the submitted scheme was and will continue to be to provide cycle parking in accordance with the London Plan. • A check has been carried out which indicates the correct level of cycle parking was previously proposed (11 staff and 36 visitor), as such we would request that the GLA confirm their application of the standards such that a revised scheme can account for this accordingly.
56	**Car Parking Spaces**	• Ratio of 0.69 per residential unit complies with the LP.	• Should explore opportunities to reduce car parking spaces.	• Whilst the applicant would be willing to reduce residential parking quantum, it is recognised that LBB are not supportive of a lower car parking provision. As such, and at this time it is not proposed to amend the residential car parking provision.
57, 62	**Requirements to be secured by conditions**	To be secured by a condition: • Delivery and Servicing Plan;		

		• Construction Logistics Plan; • Construction Traffic Management Plan. • Full Travel Plan		
58, 62	**Financial Contribution**	• A financial contribution of £95k per annum for 5 years (a total of £475k) to add a return journey on this route would be required. • Contribution must be secured within the S106 agreement.	• Route 221 would not be able to accommodate the extra passengers as a result of the proposed development during peak hours.	• The increased frequency of Route 221 is proposed to be further supplemented by a relocation / rationalisation of bus stop location. An improved location for the northbound 113 bus stop on the A1 is also proposed.

PENTAVIA, MILL HILL

TECHNICAL NOTE: TFL SCOPING (POST CALL IN)

CLIENT: MEADOW RESIDENTIAL DATE: DECEMBER 2018

PURPOSE OF TECHNICAL NOTE

i. The purpose of this Technical Note (TN) is to inform the scope of any required amendments to the Transport Assessment (TA) submitted in June 2018 relating to Pentavia Retail Park, Mill Hill. As such this TN broadly follows the structure of the TA, and indicates proposals for revisions to its contents.

ii. This TN has been prepared following initial scoping discussions with TfL held on 5th December 2018.

iii. For reference, the submitted TA is will be attached by way of link to the e-mail issue of this note.

1. INTRODUCTION

i. With the exception of the proposed development description, and additional information relating to consultation that will be occurring post June 2018, it is not anticipated that there is any requirement to update other parts of the TA Introduction.

2. POLICY CONTEXT

i. It is proposed that the Policy Context section of the TA will be updated with reference to the following:

1. National Planning Policy Framework 2018; and
2. The draft New London Plan (August 2018).

ii. It should be noted that amendments to the proposed development are proposed to demonstrate its compliance with the draft New London Plan (for example cycle parking standards). However, it is noted that the draft New London Plan has not been adopted, and none of the policies tested, it therefore holds limited weight in decision making.

iii. The draft New London Plan must be considered by a formal Examination in Public (EiP). Copies of all representations about the London Plan were submitted to the panel on 16 July 2018 along with a summary of the main issues raised. The Panel had regard to these and consulted with the Mayor before preparing a draft list of matters and participants that was published for consultation on Wednesday 12 September, not later than 12 weeks before the opening of the EIP. The Panel considered all representations about the draft list of matters and participants made within 28 days, and consulted the Mayor, before finalising the list of matters and participants. The final list was published on Tuesday 13 November 2018. The EiP will commence on Tuesday 15 January 2019.

3. EXISTING HIGHWAY NETWORK

i. It is not proposed to update any content relating to the description of the existing highway network.

4. EXISTING HIGHWAY NETWORK CONDITIONS

Parking Assessment

i. An overnight parking beat survey was undertaken on two weekdays, Tuesday 20th and Wednesday 21st September 2016, to understand the level of existing parking demand generated by residents within the area surrounding the site. A site inventory was undertaken and single parking beat was undertaken on each night.

ii. Full details of the survey are contained within the appended TA. However, the table below summarises capacity, occupancy and residual capacity identified in the area.

	20th September 2016	21st September 2016	Average
Capacity	673		
Occupancy	188	186	187
Residual Capacity	485	487	486
% Residual Capacity	72.1%	72.4%	72.2%

iii. As discussed with TfL during the meeting held on the 5th December 2018, it is not believed that parking off-site would be of attraction to residents of the development given the sites specific context (inclusive of its own size) and access to streets where parking might reasonably be available. It is also recognised that the site will be 50% Build to Rent, and therefore a high proportion of potential residents will choose to rent elsewhere should the parking amenity not suit their needs (i.e. where parking off-site is not a realistic option).

iv. We do not propose to undertake a further parking beat survey, and or update the information relation to Parking Assessment within the TA.

PERS Assessment

v. A Pedestrian Environment Review System (PERS) audit was undertaken on Wednesday 17th August 2016 to understand pedestrian environmental conditions in the area. The following streets were included in the audit:

3. Watling Ave/ Woodcroft Ave;
4. Bunns Lane;
5. Station Road;
6. Woodland Way; and

7. Flower Lane.

vi. The PERS audit was extended on Tuesday 6th September 2016 to further understand pedestrian environmental conditions in the area. The following streets were included in the extension of the audit:

8. Bunns Lane;
9. Watford Way / Tithe Walk; and
10. Grahame Park / Pentavia Retail Park access.

vii. It is not proposed to update the PERS audit within the TA.

Personal Injury Accident Data

viii. Personal injury accident data for the three-year period ending February 2016 has been obtained from TfL for the roads in the vicinity of the site, and is assessed within the TA.

ix. It is not proposed to update the personal injury accident data within the TA.

5. EXISTING HIGHWAY NETWORK OPERATION

Existing Highway Network Observations

i. A site walk-around was undertaken on 22nd June 2016 with Mervyn Bartlett (LBB) and Lloyd Bush (Velocity Transport Planning), to observe the existing network conditions surrounding the site.

ii. It is not proposed to undertake a revised observation of activity and / or update this Section of the TA.

Traffic Surveys

iii. Traffic surveys were undertaken in the week commencing 16th June 2016. The surveys consisted of Manual Classified Counts (MCC), queue length surveys, and Automatic Traffic Counts (ATC).

iv. It should be noted that the queue length surveys were undertaken on the same date as the MCC's to facilitate validation and calibration of a baseline highway capacity assessment. The ATC's recorded data for a longer period time to allow validation that the MCC and queuing data was representative of typical conditions and therefore fit for purpose.

v. It is not proposed to update the baseline traffic flows recorded and reported within the TA, and or undertake further traffic surveys to validate the existing baseline information.

6. EXISTING HIGHWAY CAPACITY ASSESSMENT

i. It is not proposed to update either the baseline junction capacity assessment which utilised the traffic survey information described above.

ii. It is also not proposed to update the baseline footway capacity assessment (Pedestrian Comfort Level (PCL)).

iii. It is proposed to include for a baseline Healthy Streets Assessment for the section of Bunns Lane between its underpass with the A1 and its junction with Flower Lane. This will enable a comparison to be made to proposed development scenario within the impact assessment section of the TA.

7. EXISTING SITE ACCESSIBILITY

i. No updates are proposed to be undertaken to the Existing Site Accessibility Section of the TA.

8. EXISTING SITE OPERATION

Existing Site Use

i. It is not proposed to update the description of the existing site, this remains valid.

Extant Use Trip Generation

ii. In order to calculate the likely number of vehicle trips that could be generated by the site if it were fully occupied, the TRICS and TRAVL databases were interrogated for comparable sites. The sites that have been selected for the combined assessment of non-food retail (Retail Park) and restaurant use were agreed with LBB.

iii. As discussed at the meeting with TfL on the 5th December 2018, a number of the comparable sites which LBB requested be used recorded surveys some years ago. The two tables overleaf summarise the sites and resultant extant use trip rates applied in the TA.

Extant Restaurant (664sqm)					
Site No	**Site Ref**	**Survey Date**	**Location**	**PTAL**	**GFA**
1	257	04/06/1999	Merton	3	150
2	1048	28/02/2012	Richmond Upon Thames	3	120
3	BN-06-C-01	25/06/2014	Barnet	2	274
4	HD-06-C-01	07/01/2016	Ruislip	1b	850
Extant Retail Park (9,053sqm)					
Site No	**Site Ref**	**Survey Date**	**Location**	**PTAL**	**GFA**
1	266	10/12/1999	Waltham Forest	1	8990

Restaurant						
Peak Periods	**Arrivals**	**Departures**	**Total**	**Arrivals**	**Departures**	**Total**
	Trip Rate			**Trip Generation**		
Morning Peak (08:00-09:00)	0.000	0.118	0.118	0	1	1
Evening Peak (17:00-18:00)	2.400	1.089	3.489	16	7	23
Retail Park						
Peak Periods	**Arrivals**	**Departures**	**Total**	**Arrivals**	**Departures**	**Total**
	Trip Rate			**Trip Generation**		
Morning Peak (08:00-09:00)	0.534	0.133	0.667	48	12	60
Evening Peak (17:00-18:00)	0.601	0.690	1.290	54	62	116

iv. The trip rates applied to the extant use of the site were discussed at the meeting with TfL 5th December 2018, and it is understood that there will be no requirement to update or amend these or this section of the TA.

9. FUTURE HIGHWAY CAPACITY ASSESSMENT

Assessment Years

i. The most recent submission of the TA stated:

"Construction of the proposed development is estimated to complete and the full occupation of the site be available in 2022. It is noted that it was originally anticipated that occupation of the site could take place from 2021, and it has been agreed with LBB that this TA would assess two future year scenarios; the Opening Year 2021 and Future Year 2026 (five years post construction). On the basis that the assessment considers a Future Year of 2026 it has not been deemed necessary to amend the opening year assessment"

ii. On the basis of the above, it is proposed to maintain the same method of assessment; inclusive of Opening Year 2021 and Future Year 2026.

Future Base Traffic

iii. No changes are proposed to the growth rates applied within the TA for Opening and Future Years.

iv. It is proposed that any new committed development that has been permitted since the original submission of the TA will be reviewed. Where applicable the traffic flows generated by any new committed development will be summarised within this section of the TA.

Future Baseline Traffic Assignment

v. No changes are proposed to the assignment of future baseline traffic, albeit it is recognised the quantum of traffic assigned may differ should new committed development traffic flows be identified.

Future Baseline Capacity Assessment

vi. Updates to the junction capacity assessments for the future baseline scenarios will only occur should additional new committed development traffic be identified.

10. PROPOSED DEVELOPMENT

i. It is proposed to update this section of the TA with updates to the development schedule and description of residential accommodation.

ii. As discussed at the meeting held with TfL on 5th December 2018, it is proposed to increase the number of residential units from 724 to 843 (approx. the scheme is still subject to design development but has been assumed to achieve 843 for the purposes of this TN). It is proposed that some of the units will remain as Build to Rent, with others offered for sale.

iii. The revised unit types both in terms of tenure and mix will be fully described within the update to the TA. For context, the proposed unit sizes for the amended scheme at the current time are given in the table below.

Unit Type	No. Units
1 bed (2 person)	284
2 bed (3 person)	92
2 bed (4 person)	332
3 bed (5 person)	23
3 bed (6 person)	112
Total	**843**

iv. It is not proposed to amend any of the other uses proposed on-site.

11. DEVELOPMENT ACCESS STRATEGY

i. It is not proposed to update or amend the Development Access Strategy Section of the TA. No material changes to description of the strategy within this Section are proposed.

12. DEVELOPMENT PARKING STRATEGY

i. Proposed changes to parking were discussed at the meeting with TfL 5th December 2018. It is proposed to lower the provision of residential car parking from a total of 545 spaces to a total of 366 spaces.

ii. In accordance with the draft New London Plan, it will now be proposed that all 20% of all car parking spaces will have active charging facilities, with all remaining now proposed to have passive provision.

iii. In accordance with the draft New London Plan, it will now be proposed that 3% of parking spaces will initially be allocated for disabled users. A further 7% will remain as oversized parking spaces such that they can be converted to disabled parking should demand require.

iv. To support the reduction in car parking spaces proposed, a further method of management will be added to the Car Park Management Plan (CPMP) which will enable unused disabled parking to be leased to non-disabled residents should demand require / permit. However, a minimum residual capacity of three disabled parking spaces must always be maintained and non-disabled residents re-allocated standard parking spaces when they become available.

v. As discussed with TfL at the meeting 5th December 2018, it is proposed that visitor car parking will be reduced from 41 to 10 car parking spaces. The remaining spaces will be future proofed for expansion of resident parking should demand require. The potential increase would provide a total of 397 resident car parking spaces (approx.).

vi. A review will be undertaken of the information previously provided within the TA in regard of Census 2011 car ownership data. Where applicable the information may be amended, updated or omitted. It is recognised that whilst useful, the car ownership information is from 2011 and only really indicates historic ownership trends without reflecting upon current and future trends.

vii. It is proposed to revise the cycle parking provision proposed across the site in accordance with the draft New London Plan policy. Space required to facilitate the additional cycle parking will be found in the reduction of car parking.

viii. This Section of the TA will be updated to reflect the changes described above.

13. DEVELOPMENT TRIP GENERATION

Residential Use – Vehicle Trips

i. As discussed in the meeting with TfL 5th December 2018, there is a potential disconnect between the impact of the proposed reduction in car parking and the trips that could be generated based on the methodology within the TA.

ii. Trip rates extracted from the TRICS database have been applied on a per unit basis. Application the same per unit trip rate to an increased quantum of units as proposed will indicate a higher number of vehicle trips occurring despite the proposed reduction in car parking (approx. 180 spaces).

iii. In order to ensure that the proposed amendments to the scheme are reasonably reflected within the trip generation assessment and assessment of air and noise etc, some preliminary sensitivity testing has been undertaken to determine an appropriate approach. This includes a review of all previously used / agreed trip rates throughout the development of the scheme in the planning process.

iv. The table overleaf summarises historic trip rate information and resultant vehicle movements presented at those times.

v. In September 2016 trip rates based on comparable sites were agreed with LBB. In January 2017, the sites agreed with LBB were further supplemented with additional sites via agreement with TfL. In November 2017, the comparable sites and resultant trip rates were fully revised to meet TfL Guidance. The sites and trip rates agreed in November 2017 remained applicable in the June 2018 planning submission.

Date	Proposed Development				Applied Trip Rates			Predicted Movements		
	Units	Parking Spaces	Ratio	Ratio	AM	PM	Daily	AM	PM	Daily
Sep 2016	695	479	0.69	0.96	0.274	0.264	2.940	190	183	2043
Jan 2017	685	343	0.50	0.63	0.183	0.211	2.365	125	145	1620
Nov 2017	717	500	0.70	0.65	0.164	0.231	1.679	118	166	1204
Jun 2018	724	545	0.75	0.65	0.164	0.231	1.680	119	167	1216

vi. Four methods have been considered in regard of updating the TA based on the new proposal. These are described below:

1. Application of the January 2017 trip rates (on the basis these were applied to a proposal with 0.5 spaces per unit);
2. Application of new trip rates extracted from the TRICS database for flats (note these are categorised as privately owned flats) within Greater London in the past 3 years, and within PTAL 2/3. This indicated three sites:
    a. BT-03-C-01 / 01 – Park Royal (Discounted due to parking ratio of 0.8 spaces per unit);
    b. HO-03-C-04 – Hounslow (0.7 spaces per dwelling); and
    c. HV-03-C-02 / 01 – Romford (0.5 spaces per dwelling).
3. Application of trip rates from TRICS site HV-03-C-02/01 only; and
4. Application of a proportional decrease in trip rate in accordance with the proportional decrease in car parking i.e. based on the June 2018 per unit trip rates there is a per parking space trip rate inherent within the information which can be used.

vii. The table below shows the resultant trips based on each of the above scenarios.

Scenario	Proposed Development				Applied Trip Rates			Predicted Movements		
	Units	Parking Spaces	Ratio	Ratio	AM	PM	Daily	AM	PM	Daily
1	843	366	0.43	0.63	0.183	0.211	2.365	154	178	1994
2				0.60	0.128	0.195	1.734	108	164	1462
3				0.5	0.127	0.149	1.352	107	126	1140
4				0.43	0.095	0.133	0.969	80	112	817

viii. The above demonstrates that reverting to the trip rates previously used when proposing a parking ratio of 0.5 spaces per unit will indicate a higher level of vehicle trips than the current TA.

ix. The first run of a new assessment, looking for London flats with PTAL 2/3 within the past 3 years identified two sites of parking ratio 0.5 and 0.7. The daily trip rate is also greater than that within the current TA, and will therefore indicate more vehicle trips.

x. Using the single site which had a parking ratio of 0.5 spaces per unit does result in some reduction in daily vehicle trips. However, the method which demonstrates a reduction in vehicle trips which would be considered appropriate given the loss of approx. 179 parking spaces is the application of a proportional reduction to the previous trip rates in respect of the reduction in parking (i.e. (0.43/0.75)*previous trip rate).

xi. It is therefore proposed to update this Section of the TA on the basis of scenario 4 described above.

Non-Residential Use – Vehicle Trips

xii. As discussed at the meeting with TfL on the 5th December 2018, a number of the comparable sites which LBB requested be used recorded surveys some years ago.

xiii. The trip rates applied to the proposed non-residential uses were discussed at the meeting with TfL 5th December 2018, and it is understood that there will be no requirement to update or amend these or this section of the TA.

Identification of New Network Trips

xiv. It is not proposed to amend the methodology adopted within the TA to identify new vehicle trips to the network. It is anticipated that changes to the total development new vehicle trips may result from adjustments made to the residential vehicle trip generation as described within this TN.

Multi-Modal Trip Generation

xv. The multi-modal trip generation assessment is proposed to be updated by application of the trip rates within the TA to the new number of residential units.

14. DEVELOPMENT TRIP ASSIGNMENT

xvi. It is proposed that this Section of the TA will be updated based on any revision to trip numbers. The methodology of assignment will remain as presented within the TA.

15. DEVELOPMENT HIGHWAY CAPACITY

Junction Capacity Assessment

xvii. As discussed with TfL 5th December 2018, the proposed reduction in car parking will result in a reduction of vehicle trips by comparison to the junction capacity assessment undertaken within the TA. It is therefore not proposed to amend the information within the TA given that it assess a worse case than expected.

Footway Capacity Assessment

xviii. It is proposed to update the footway capacity assessment subject to changes in trip generation and assignment.

16. JUNCTION IMPACT ASSESSMENT

i. On the basis that the junction capacity assessment is not proposed to be update (given it is robust in assessing a higher number of vehicle trips than anticipated), the junction impact assessment will remain as current within the TA, with references added in regard of the assessment being robust.

17. SITE ACCESSIBILITY IMPACT ASSESSMENT

i. Where applicable it is proposed that this Section of the TA will be updated based on the revised trip generation.

ii. It is proposed to include a Healthy Streets Assessment for the section of Bunns Lane between its underpass with the A1 and its junction with Flower Lane following the implementation of the proposed development. This will enable a comparison to be made to baseline scenario.

iii. Discrete Healthy Streets Assessments will be made for various areas of the site (i.e. adjacent A1, southern entrance etc) and included within this Section of the TA.

18. PARKING IMPACT ASSESSMENT

i. Minor amendments are proposed to update this Section of the TA in regard of parking numbers. However, it is not anticipated that significant update will be required.

MITIGATION STRATEGY

i. It is not proposed to update the mitigation section within the TA.

Lloyd Bush

From: Dresner Melvyn (ST) <Melvyn.Dresner@tfl.gov.uk>
Sent: 04 January 2019 14:53
To: Lloyd Bush
Cc: 'neil.wells@quod.com'; 'lgoldberg@meadowres.com'; Andrew.Russell@london.gov.uk
Subject: RE: Pentavia - Mill Hill

Hi Lloyd,

My comments:

General observations

Will you be issuing a new TA or addendum to the existing document?

Policy Context

Also reference MTS and Action Plans.

Existing Highway Network conditions

TfL suggested a Healthy Streets Designers Check for Bunns Lane Frontage (base and future), which you accept.

For other pedestrian and cycle routes a broader check against Healthy Streets indicators would be sufficient.

Future highway capacity assessment

TfL hasn't suggested modelling needs updating. However, you need to review with local highway authority any changes related to committed development and decide if mode updates are necessary.

Development parking strategy
TfL welcomes the emerging approach to parking. You need to provide evidence to counter local concerns about lower parking.

Development trip generation
Updating trip generation taking account lower parking ratios is reasonable. The methodology is accepted by TfL.

Mitigation Strategy
As planning authority, the Mayor will need to consider local representations and objections. I would like to make sure the mitigation strategy covers any transport concerns they raise.

It would be helpful to see draft conditions/ s106 obligations related to these aspects.

Melvyn Dresner I Technical Principal Planner,
Spatial Planning (North), City Planning
Transport for London (TfL)
T: 0203 054 7034, Auto: 87034 E: melvyn.dresner@tfl.gov.uk
A: 5 Endeavour Square, E20, Westfield Avenue, E20 1JN

Appendix Af

RESIDENTIAL CYCLE PARKING LOCATION DETAILS

									Cycle Parking New LP Requirement						Cycle Parking Proposed		Net difference	
Block	Studio	1-bed (2 person)	2-bed (3 person)	2-bed (4 person)	3-bed (5 person)	3-bed (6 person)	Total Units	Studio Long stay	1 bed Long stay	2-bed Long stay	3-bed Long stay	Total per block	Total Parking by Area	Total per block	Total Parking by Area	Total per block	Total Parking by Area
A	0	30	15	4	0	26	75	0	45	38	52	**135**		**135**		**0**	
C	0	18	10	20	1	0	49	0	27	60	2	**89**	**366**	**89**	**366**	**0**	**0**
E	0	14	8	16	1	0	39	0	21	48	2	**71**		**71**		**0**	
G	0	2	22	12	0	0	36	0	3	68	0	**71**		**71**		**0**	
B	0	20	11	22	1	0	54	0	30	66	2	**98**		**98**		**0**	
D	0	25	0	27	7	11	70	0	38	54	36	**128**		**128**		**0**	
F	0	22	0	24	6	10	62	0	33	48	32	**113**		**113**		**0**	
H	0	19	0	20	6	7	52	0	29	40	26	**95**	**769**	**95**	**773**	**0**	**4**
K	2	20	8	20	0	0	50	2	30	56	0	**86**		**88**		**2**	
I	0	9	0	21	0	0	30	0	14	42	0	**56**		**56**		**0**	
J	0	7	0	23	0	12	42	0	11	46	24	**81**		**81**		**0**	
L	2	24	11	26	1	0	64	2	36	74	2	**112**		**114**		**2**	
M	0	20	0	17	0	10	47	0	30	34	20	**84**		**84**		**0**	
N	0	6	0	18	0	10	34	0	9	36	20	**65**		**65**		**0**	
O	0	9	0	20	0	0	29	0	14	40	0	**54**	**407**	**54**	**407**	**0**	**0**
P	0	10	0	13	0	3	26	0	15	26	6	**47**		**47**		**0**	
Q	0	20	11	22	1	0	54	0	30	66	2	**98**		**98**		**0**	
R	0	6	0	15	0	10	31	0	9	30	20	**59**		**59**		**0**	
Total	**4**	**281**	**96**	**340**	**24**	**99**	**844**	**4**	**424**	**872**	**246**	**1542**	**1542**	**1546**	**1546**		

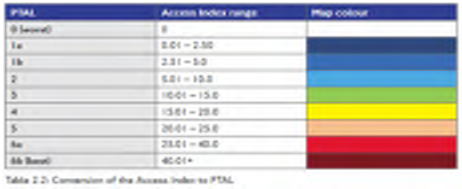
Appendix Ag

PROPOSED DEVELOPMENT PTAL CALCULATIONS

Mill Hill - PTAL Assessment

Parameters

Walk Speed	4.8kph
Bus Realiability Factor	2
LU Realiability Factor	0.75
Rail Realiability Factor	0.75



PTAL	Access Index range	Map colour
0 (worst)	0	
1a	0.01 – 2.50	
1b	2.51 – 5.00	
2	5.01 – 10.00	
3	10.01 – 15.00	
4	15.01 – 20.00	
5	20.01 – 25.00	
6a	25.01 – 40.00	
6b (best)	40.01+	

Table 2.2: Conversion of the Access Index to PTAL

	Mode	Stop	Route	Dist (m)	Freq (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI		
POI 1	Bus		221	337.00	6	4.21	7.00	11.21	2.68	0.50	1.34		
	Bus		113	112.00	7	1.40	6.29	7.69	3.90	1.00	3.90		
	Bus		303	456.00	4	5.70	9.50	15.20	1.97	0.50	0.99		
												6.23	**PTAL 2**
POI 2	Bus		221	298.00	6	3.73	7.00	10.73	2.80	0.50	1.40		
	Bus		113	120.00	7	1.50	6.29	7.79	3.85	1.00	3.85		
	Bus		303	505.00	4	6.31	9.50	15.81	1.90	0.50	0.95		
												6.20	**PTAL 2**
POI 3	Bus		221	275.00	6	3.44	7.00	10.44	2.87	0.50	1.44		
	Bus		113	151.00	7	1.89	6.29	8.17	3.67	1.00	3.67		
	Bus		303	537.00	4	6.71	9.50	16.21	1.85	0.50	0.93		
												6.03	**PTAL 2**
POI 4	Bus		221	269.00	6	3.36	7.00	10.36	2.90	0.50	1.45		
	Bus		113	143.00	7	1.79	6.29	8.07	3.72	1.00	3.72		
	Bus		303	537.00	4	6.71	9.50	16.21	1.85	0.50	0.93		
												6.09	**PTAL 2**
POI 5	Bus		221	241.00	6	3.01	7.00	10.01	3.00	0.50	1.50		
	Bus		113	136.00	7	1.70	6.29	7.99	3.76	1.00	3.76		
	Bus		303	565.00	4	7.06	9.50	16.56	1.81	0.50	0.91		
												6.16	**PTAL 2**
POI 6	Bus		221	243.00	6	3.04	7.00	10.04	2.99	0.50	1.49		
	Bus		113	103.00	7	1.29	6.29	7.57	3.96	1.00	3.96		
	Bus		303	580.00	4	7.25	9.50	16.75	1.79	0.50	0.90		
												6.35	**PTAL 2**
POI 7	Bus		221	213.00	6	2.66	7.00	9.66	3.10	0.50	1.55		
	Bus		113	122.00	7	1.53	6.29	7.81	3.84	1.00	3.84		
	Bus		303	600.00	4	7.50	9.50	17.00	1.76	0.50	0.88		
												6.28	**PTAL 2**
POI 8	Bus		221	205.00	6	2.56	7.00	9.56	3.14	0.50	1.57		
	Bus		113	74.00	7	0.93	6.29	7.21	4.16	1.00	4.16		
	Bus		303	624.00	4	7.80	9.50	17.30	1.73	0.50	0.87		
												6.60	**PTAL 2**
POI 9	Bus		221	160.00	6	2.00	7.00	9.00	3.33	0.50	1.67		
	Bus		113	56.00	7	0.70	6.29	6.99	4.29	1.00	4.29		
												5.96	**PTAL 2**

POI 10	Bus		221	166.00	6	2.08	7.00	9.08	3.31	0.50	1.65		
	Bus		113	113.00	7	1.41	6.29	7.70	3.90	1.00	3.90		
												5.55	**PTAL 2**
POI 11	Bus		221	169.00	6	2.11	7.00	9.11	3.29	0.50	1.65		
	Bus		113	120.00	7	1.50	6.29	7.79	3.85	1.00	3.85		
												5.50	**PTAL 2**
POI 12	Bus		221	155.00	6	1.94	7.00	8.94	3.36	0.50	1.68		
	Bus		113	135.00	7	1.69	6.29	7.97	3.76	1.00	3.76		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E11'	955.00	1.00	11.94	30.75	42.69	0.70	1.00	0.70		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E95'	955.00	0.33	11.94	91.66	103.60	0.29	0.50	0.14		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2O06 '	955.00	0.33	11.94	91.66	103.60	0.29	0.50	0.14		
	Rail	Mill Hill Broadway	SUTTON-LUTON 2O10 '	955.00	1.00	11.94	30.75	42.69	0.70	0.50	0.35		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2O17	955.00	0.67	11.94	45.53	57.46	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O21	955.00	0.33	11.94	91.66	103.60	0.29	0.50	0.14		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O29	955.00	0.67	11.94	45.53	57.46	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	LUTON-BCKNHMJ 2S91	955.00	0.33	11.94	91.66	103.60	0.29	0.50	0.14		
	Rail	Mill Hill Broadway	STALBCY-BROMLYS 2S93	955.00	0.33	11.94	91.66	103.60	0.29	0.50	0.14		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2V08	955.00	0.67	11.94	45.53	57.46	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	BEDFDM-SUTTON 2V15	955.00	0.33	11.94	91.66	103.60	0.29	0.50	0.14		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2V19	955.00	0.33	11.94	91.66	103.60	0.29	0.50	0.14		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2V27	955.00	0.33	11.94	91.66	103.60	0.29	0.50	0.14		
	Rail	Mill Hill Broadway	SVNOAKS-STALBCY 2E59'	955.00	0.67	11.94	45.53	57.46	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	SVNOAKS-LUTON 2E61	955.00	0.33	11.94	91.66	103.60	0.29	0.50	0.14		
	Rail	Mill Hill Broadway	BROMLYS-LUTON 2E93	955.00	0.33	11.94	91.66	103.60	0.29	0.50	0.14		
												8.99	**PTAL 2**
POI 13	Bus		221	102.00	6	1.28	7.00	8.28	3.63	0.50	1.81		
	Bus		113	120.00	7	1.50	6.29	7.79	3.85	1.00	3.85		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E11'	902.00	1.00	11.28	30.75	42.03	0.71	1.00	0.71		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E95'	902.00	0.33	11.28	91.66	102.93	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2O06 '	902.00	0.33	11.28	91.66	102.93	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-LUTON 2O10 '	902.00	1.00	11.28	30.75	42.03	0.71	0.50	0.36		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2O17	902.00	0.67	11.28	45.53	56.80	0.53	0.50	0.26		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O21	902.00	0.33	11.28	91.66	102.93	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O29	902.00	0.67	11.28	45.53	56.80	0.53	0.50	0.26		
	Rail	Mill Hill Broadway	LUTON-BCKNHMJ 2S91	902.00	0.33	11.28	91.66	102.93	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-BROMLYS 2S93	902.00	0.33	11.28	91.66	102.93	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2V08	902.00	0.67	11.28	45.53	56.80	0.53	0.50	0.26		
	Rail	Mill Hill Broadway	BEDFDM-SUTTON 2V15	902.00	0.33	11.28	91.66	102.93	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2V19	902.00	0.33	11.28	91.66	102.93	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2V27	902.00	0.33	11.28	91.66	102.93	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SVNOAKS-STALBCY 2E59'	902.00	0.67	11.28	45.53	56.80	0.53	0.50	0.26		
	Rail	Mill Hill Broadway	SVNOAKS-LUTON 2E61	902.00	0.33	11.28	91.66	102.93	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	BROMLYS-LUTON 2E93	902.00	0.33	11.28	91.66	102.93	0.29	0.50	0.15		
												9.25	**PTAL 2**
	Bus		221	130.00	6	1.63	7.00	8.63	3.48	0.50	1.74		
	Bus		113	146.00	7	1.83	6.29	8.11	3.70	1.00	3.70		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E11'	930.00	1.00	11.63	30.75	42.38	0.71	1.00	0.71		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E95'	930.00	0.33	11.63	91.66	103.28	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2O06 '	930.00	0.33	11.63	91.66	103.28	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-LUTON 2O10 '	930.00	1.00	11.63	30.75	42.38	0.71	0.50	0.35		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2O17	930.00	0.67	11.63	45.53	57.15	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O21	930.00	0.33	11.63	91.66	103.28	0.29	0.50	0.15		

POI 14	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O29	930.00	0.67	11.63	45.53	57.15	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	LUTON-BCKNHMJ 2S91	930.00	0.33	11.63	91.66	103.28	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-BROMLYS 2S93	930.00	0.33	11.63	91.66	103.28	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2V08	930.00	0.67	11.63	45.53	57.15	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	BEDFDM-SUTTON 2V15	930.00	0.33	11.63	91.66	103.28	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2V19	930.00	0.33	11.63	91.66	103.28	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2V27	930.00	0.33	11.63	91.66	103.28	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SVNOAKS-STALBCY 2E59'	930.00	0.67	11.63	45.53	57.15	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	SVNOAKS-LUTON 2E61	930.00	0.33	11.63	91.66	103.28	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	BROMLYS-LUTON 2E93	930.00	0.33	11.63	91.66	103.28	0.29	0.50	0.15		
												9.00	**PTAL 2**
POI 15	Bus		221	192.00	6	2.40	7.00	9.40	3.19	0.50	1.60		
	Bus		113	186.00	7	2.33	6.29	8.61	3.48	1.00	3.48		
												5.08	**PTAL 2**
POI 16	Bus		221	188.00	6	2.35	7.00	9.35	3.21	0.50	1.60		
	Bus		113	198.00	7	2.48	6.29	8.76	3.42	1.00	3.42		
												5.03	**PTAL 2**
POI 17	Bus		221	192.00	6	2.40	7.00	9.40	3.19	0.50	1.60		
	Bus		113	213.00	7	2.66	6.29	8.95	3.35	1.00	3.35		
												4.95	**PTAL 1b**
POI 18	Bus		221	217.00	6	2.71	7.00	9.71	3.09	0.50	1.54		
	Bus		113	71.00	7	0.89	6.29	7.17	4.18	1.00	4.18		
	Bus		303	593.00	4	7.41	9.50	16.91	1.77	0.50	0.89		
												6.61	**PTAL 2**
POI 19	Bus		221	179.00	6	2.24	7.00	9.24	3.25	0.50	1.62		
	Bus		113	40.00	7	0.50	6.29	6.79	4.42	1.00	4.42		
	Bus		303	634.00	4	7.93	9.50	17.43	1.72	0.50	0.86		
												6.91	**PTAL 2**
POI 20	Bus		221	140.00	6	1.75	7.00	8.75	3.43	0.50	1.71		
	Bus		113	23.00	7	0.29	6.29	6.57	4.56	1.00	4.56		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E11'	940.00	1.00	11.75	30.75	42.50	0.71	1.00	0.71		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E95'	940.00	0.33	11.75	91.66	103.41	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2O06 '	940.00	0.33	11.75	91.66	103.41	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-LUTON 2O10 '	940.00	1.00	11.75	30.75	42.50	0.71	0.50	0.35		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2O17	940.00	0.67	11.75	45.53	57.28	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O21	940.00	0.33	11.75	91.66	103.41	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O29	940.00	0.67	11.75	45.53	57.28	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	LUTON-BCKNHMJ 2S91	940.00	0.33	11.75	91.66	103.41	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-BROMLYS 2S93	940.00	0.33	11.75	91.66	103.41	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2V08	940.00	0.67	11.75	45.53	57.28	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	BEDFDM-SUTTON 2V15	940.00	0.33	11.75	91.66	103.41	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2V19	940.00	0.33	11.75	91.66	103.41	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2V27	940.00	0.33	11.75	91.66	103.41	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SVNOAKS-STALBCY 2E59'	940.00	0.67	11.75	45.53	57.28	0.52	0.50	0.26		
	Rail	Mill Hill Broadway	SVNOAKS-LUTON 2E61	940.00	0.33	11.75	91.66	103.41	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	BROMLYS-LUTON 2E93	940.00	0.33	11.75	91.66	103.41	0.29	0.50	0.15		
												9.84	**PTAL 2**
	Bus		221	104.00	6	1.30	7.00	8.30	3.61	0.50	1.81		

POI 21	Bus		113	60.00	7	0.75	6.29	7.04	4.26	1.00	4.26		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E11'	904.00	1	11.30	30.75	42.05	0.71	1.00	0.71		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E95'	904.00	0.33	11.30	91.66	102.96	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2O06 '	904.00	0.33	11.30	91.66	102.96	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-LUTON 2O10 '	904.00	1	11.30	30.75	42.05	0.71	0.50	0.36		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2O17	904.00	0.67	11.30	45.53	56.83	0.53	0.50	0.26		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O21	904.00	0.33	11.30	91.66	102.96	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O29	904.00	0.67	11.30	45.53	56.83	0.53	0.50	0.26		
	Rail	Mill Hill Broadway	LUTON-BCKNHMJ 2S91	904.00	0.33	11.30	91.66	102.96	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-BROMLYS 2S93	904.00	0.33	11.30	91.66	102.96	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2V08	904.00	0.67	11.30	45.53	56.83	0.53	0.50	0.26		
	Rail	Mill Hill Broadway	BEDFDM-SUTTON 2V15	904.00	0.33	11.30	91.66	102.96	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2V19	904.00	0.33	11.30	91.66	102.96	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2V27	904.00	0.33	11.30	91.66	102.96	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SVNOAKS-STALBCY 2E59'	904.00	0.67	11.30	45.53	56.83	0.53	0.50	0.26		
	Rail	Mill Hill Broadway	SVNOAKS-LUTON 2E61	904.00	0.33	11.30	91.66	102.96	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	BROMLYS-LUTON 2E93	904.00	0.33	11.30	91.66	102.96	0.29	0.50	0.15		
												9.65	**PTAL 2**
POI 22	Bus		221	85.00	6	1.06	7.00	8.06	3.72	0.50	1.86		
	Bus		113	71.00	7	0.89	6.29	7.17	4.18	1.00	4.18		
	Bus		251	635.00	5.5	7.94	7.45	15.39	1.95	0.50	0.97		
	Bus		114	635.00	6	7.94	7.00	14.94	2.01	0.50	1.00		
	Bus		303	635.00	4	7.94	9.50	17.44	1.72	0.50	0.86		
	Bus		186	635.00	5	7.94	8.00	15.94	1.88	0.50	0.94		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E11'	885.00	1	11.06	30.75	41.81	0.72	1.00	0.72		
	Rail	Mill Hill Broadway	STALBCY-SVNOAKS 2E95'	885.00	0.33	11.06	91.66	102.72	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2O06 '	885.00	0.33	11.06	91.66	102.72	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-LUTON 2O10 '	885.00	1	11.06	30.75	41.81	0.72	0.50	0.36		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2O17	885.00	0.67	11.06	45.53	56.59	0.53	0.50	0.27		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O21	885.00	0.33	11.06	91.66	102.72	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2O29	885.00	0.67	11.06	45.53	56.59	0.53	0.50	0.27		
	Rail	Mill Hill Broadway	LUTON-BCKNHMJ 2S91	885.00	0.33	11.06	91.66	102.72	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-BROMLYS 2S93	885.00	0.33	11.06	91.66	102.72	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SUTTON-STALBCY 2V08	885.00	0.67	11.06	45.53	56.59	0.53	0.50	0.27		
	Rail	Mill Hill Broadway	BEDFDM-SUTTON 2V15	885.00	0.33	11.06	91.66	102.72	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	LUTON-SUTTON 2V19	885.00	0.33	11.06	91.66	102.72	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	STALBCY-SUTTON 2V27	885.00	0.33	11.06	91.66	102.72	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	SVNOAKS-STALBCY 2E59'	885.00	0.67	11.06	45.53	56.59	0.53	0.50	0.27		
	Rail	Mill Hill Broadway	SVNOAKS-LUTON 2E61	885.00	0.33	11.06	91.66	102.72	0.29	0.50	0.15		
	Rail	Mill Hill Broadway	BROMLYS-LUTON 2E93	885.00	0.33	11.06	91.66	102.72	0.29	0.50	0.15		
												13.42	**PTAL 3**
POI 23	Bus		221	284.00	6	3.55	7.00	10.55	2.84	0.50	1.42		
	Bus		113	325.00	7	4.06	6.29	10.35	2.90	1.00	2.90		
												4.32	**PTAL 1b**
POI 24	Bus		221	454.00	6	5.68	7.00	12.68	2.37	0.50	1.18		
	Bus		113	212.00	7	2.65	6.29	8.94	3.36	1.00	3.36		
	Bus		303	556.00	4	6.95	9.50	16.45	1.82	0.50	0.91		
												5.45	**PTAL 2**
POI 25	Bus		221	369.00	6	4.61	7.00	11.61	2.58	0.50	1.29		
	Bus		113	277.00	7	3.46	6.29	9.75	3.08	1.00	3.08		
												4.37	**PTAL 1b**

Appendix Ah

HEALTHY STREETS CHECKLIST

Key scoring rules ›

	Healthy Streets Check	Scoring System 3	2	1	0	More info on each question	Enter score here: Existing layout	Proposed layout	Notes: Please supplement your answers with detailed notes where possible
1	**Total volume of two way motorised traffic**	There are fewer than 500 vehicles per hour at peak.	There are 500 to 1000 vehicles per hour at peak.	There are more than 1000 vehicles per hour at peak, where people cycling are separated from motorised traffic.	**There are more than 1000 vehicles per hour at peak, where people cycling are mixed with motorised traffic.**	ⓘ	3	3	Total volume of traffic using the route daily is very low - with 146 movements across the day for delivery and servicing and then some trips assoiated with the car club spaces.
2	**Interaction between large vehicles and people cycling**	No large vehicles are using the street, or cycle traffic is separated from motorised traffic.	The proportion of large vehicles is less than 2% of motorised traffic, 7am to 7pm.	The proportion of large vehicles is 2% to 5% of motorised traffic, 7am to 7pm. **or** The proportion of large vehicles is greater than 5% of motorised traffic, 7am to 7pm, and people are cycling either: - in a nearside general traffic lane or bus lane at least 4.5m wide, or - in a cycle lane where the combined width of the cycle lane and the next general traffic lane is at least 4.5m.	**The proportion of large vehicles is greater than 5% of motorised traffic, 7am to 7pm, and people are cycling either:** **- in a nearside general traffic lane or bus lane less than 4.5m wide, or** **- in a cycle lane where the combined width of the cycle lane and the next general traffic lane is less than 4.5m.**	ⓘ	0	0	Percentage of heavy vehicles will be higher because the road is limited to certain vehicle movements only - with the route used predominately for service vehicles to exit the site. As set out in the Delivery and Servicing Plan the expected number of delivery and servicing vehiles is 146 across the day, with deliveries managed to be outside of peak times. The number of vehicles using the route is very low and will be travelling at very low speeds, and cyclists will share the road with any vehicles that are egressing the site.
3	**Speed of motorised traffic**	85th percentile speed is less than 20mph. **or** Existing 85th percentile speed is 20 to 25 mph, but there are some proposals to reduce speed further. **or** Existing 85th percentile speed is over 25 mph but a complete redesign of the street environment should reduce this to below 20mph.	85th percentile speed is 20 to 25mph. **or** Existing 85th percentile speed is 25 to 30 mph, but there are some proposals to reduce speed further.	85th percentile speed is 25 to 30mph. **or** Existing 85th percentile speed is greater than 30 mph, but there are some proposals to reduce speed further.	**85th percentile speed is greater than 30mph.** **or** **Existing 85th percentile speed is greater than 30 mph, and there are no proposals to reduce this speed.**	ⓘ	3	3	The nature of the shared space will lend to very low speeds through the development site
4	**Traffic noise based on peak hour motorised traffic volumes**	There are fewer than 55 vehicles per hour (c. <58 DB).	There are 55 to 450 vehicles per hour (c. 58-70 DB).	There are more than 450 vehicles per hour (c. >70 DB).	–	ⓘ	3	3	Since servicing and deliveries will be outside peak hours and distributed across the day there will be less than 55 vehicles per hour
5	**Noise from large vehicles**	The proportion of large vehicles is less than 5% (c. +0 to +3DB).	The proportion of large vehicles is 5 to 10% (c. +3 to +5 DB).	The proportion of large vehicles is greater than 10% (c. +5 DB and over).	–	ⓘ	1	1	Proportion of heavy vehicles is higher as above but the total number of vehicles will be very low
6	**NO2 concentration** (from London Atmospheric Emission Inventory)	**If assessing existing:** The NO2 concentration is less than 32µg/m3. **If assessing proposal:** The existing NO2 concentration is less than 32µg/m3 **or** the existing concentration is 32 to 40µg/m3 with local traffic volume reduction measures proposed.	**If assessing existing:** The NO2 concentration is 32 to 40µg/m3. **If assessing proposal:** The existing NO2 concentration is 32 to 40µg/m3 with no proposal to reduce local traffic volume **or** the existing NO2 concentration is greater than 40µg/m3 with local traffic volume reduction measures proposed.	**If assessing existing:** The NO2 concentration is greater than 40µg/m3 (legal limit value). **If assessing proposal:** The existing NO2 concentration is greater than 40µg/m3 with no proposal to reduce local traffic volume.	–	ⓘ	2	2	Existing NO2 concentration levels range from 37 - 40 ug/m3 along the access road
7	**Reducing private car use**	There is no through-movement for motorised traffic, with access limited to local residents, deliveries and public service vehicles.	There are some time or movement restrictions for motorised traffic.	There are no access restrictions for motorised traffic.	–	ⓘ	2	2	The route is restricted to car club vehicles, delivery and service vehicles, and emergency vehicles and as such the number of motorised vehicles using the access route will be very low.
8	**Ease of crossing side roads for people walking**	Side roads are closed to motor traffic. **or** Side roads are one-way out for motor vehicles and have features to encourage drivers to turn cautiously.	Side roads are two-way or one-way in for motor vehicles, and have features to encourage drivers to turn cautiously.	Side roads have dropped kerbs only.	**Side roads have no dropped kerbs.**	ⓘ	3	3	No side roads exist along the route
9	**Mid-link crossings, to meet pedestrian desire lines**	All main pedestrian desire lines are provided for with crossings.	Only some of the main pedestrian desire lines are provided for with crossings.	No main pedestrian desire lines are provided for with pedestrian crossings.	–	ⓘ	3	3	N/A as it is a shared space with very low vehicle movements, pedestrians will be able to cross the route whereever their desire line is.
10	**Type and suitability of pedestrian crossings away from junctions**	Crossing is uncontrolled, with conflicting traffic volume less than 200 vehicles per hour. **or** A Zebra or parallel crossing is provided. **or** Crossing is signalised so that people crossing the main carriageway have priority, while traffic on the main carriageway has on-demand green.	Crossing is uncontrolled, with conflicting traffic volume between 200 and 1000 vehicles per hour. **or** Crossing is signalised and straight-across where the distance to cross is less than 15m or greater than 15m in a 20mph speed limit. **or** Crossing is signalised and staggered where the distance to cross is greater than 15m in a 30mph+ speed limit.	Crossing is uncontrolled, with conflicting traffic volume greater than 1000 vehicles per hour. **or** Crossing is signalised and straight-across where the distance to cross is greater than 15m in a 30mph+ speed limit.	–	ⓘ	3	3	Shared space so pedestrians can cross whereever their desireline is and conflicting traffic volume is less than 200 vehicles per hour.
11	**Technology to optimise efficiency of movement** (pedestrians, cyclists, buses and general motor traffic)	All appropriate detection and optimisation technology has been applied to traffic signals.	Some detection and optimisation technology has been applied to traffic signals.	No detection and optimisation technology applied to traffic signals.	–	ⓘ	3	3	This metric is not applicable as there are no signalised junctions in the assessment area.
12	**Additional features to support people using controlled crossings**	Controlled crossings have many additional features to enhance their quality (please see scoring guidance).	Controlled crossings have some additional features to enhance their quality (please see scoring guidance).	Controlled crossings have no additional features to enhance their quality (please see scoring guidance). **or** There is no step-free access at the crossing point and/or there is no physical delineation between the footway and carriageway away from crossing points.	–	ⓘ	1	1	Technically no controlled crossings, however as previously mentioned traffic is so low and the space is shared that it is not required.

13	**Width of clear continuous walking space**	There is 2m or more clear width for walking in quiet locations (flows of <600 pedestrians an hour). **or** There is 2.5m or more clear width for walking in moderately busy locations (flows of 600-1200 pedestrians an hour). **or** There is 3m or more in busy locations (flows of >1200 pedestrians an hour).	There is 2m to 2.5m clear width for walking in moderately busy locations (flows of 600-1200 pedestrians an hour). **or** There is 2.5m to 3m in busy locations (flows of >1200 pedestrians an hour).	There is 1.5m to 2m clear width for walking in quiet and moderate locations (flows of <1200 pedestrians an hour). **or** There is 2m to 2.5m clear width for walking in busy locations (flows of >1200 pedestrians an hour).	**There is less than 1.5m clear width for walking.**	ⓘ	**3**	**3**	
14	**Sharing of footway with people cycling**	No part of the footway is designated as shared use for walking and cycling.	Part or all of a footway wider than 3m with fewer than 200 pedestrians per hour is designated as shared use.	Part or all of a footway used by more than 200 pedestrians per hour is designated as shared use. **or** Part or all of a footway less than 3m wide is designated as shared use.	–	ⓘ	**2**	**2**	Space is shared with cyclists, however the space is wide at 4.0m to enable safe manouvring and reduce the chance for conflict
15	**Collision risk between people cycling and turning motor vehicles**	Side roads are closed to motorised traffic, or turning movements by motor vehicles are minimised. **and** At signal-controlled junctions, all conflicting movements between cycle traffic and turning motor traffic are separated.	Some measures are in place to reduce turning movements by motor vehicles at priority junctions. **and** At signal-controlled junctions, cycle movements are not separated and fewer than 5% of turning vehicle movements are made by larger vehicles but mitigation measures are in place.	There are no restrictions on turning movements by motor vehicles at side roads and other uncontrolled accesses. **and** At signal-controlled junctions, cycle movements are not separated and more than 5% of turning vehicle movements are made by larger vehicles but mitigation measures are in place.	**At signal-controlled junctions, cycle movements are not separated, more than 5% of turning vehicle movements are made by larger vehicles and there are no mitigation measures in place.**	ⓘ	**3**	**3**	No side roads
16	**Effective width for cycling**	**Where cycles are separated from other traffic,** the width of the lane or track is 2.2m or more (one-way) or 3.5m or more (two-way). **Otherwise:** Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is 4.5m or more.	**Where cycles are separated from other traffic,** the width of the lane or track is 1.5m to 2.2m (one-way) or 2.5m to 3.5m (two-way). **Otherwise:** Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is between 4m and 4.5m.	**Where cycles are separated from other traffic,** the width of the lane or track is less than 1.5m (one-way) or less than 2.5m (two-way). **Otherwise:** Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is less than 3.2m.	**Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is between 3.2m and 3.9m.**	ⓘ	**2**	**2**	Shared space is 4.0m wide
17	**Impact of loading kerbside activity on cycling**	There is no kerbside activity. **or** People cycling are physically separated from parking or loading facilities.	There is occasional kerbside activity, and people cycling can keep at least 1.0m clearance to vehicles parked or loading.	There is frequent or continuous kerbside activity, and people cycling can keep at least 1.0m clearance to vehicles parked or loading.	**People cycling cannot maintain at least 1.0m clearance from vehicles parked or loading.**	ⓘ	**2**	**2**	There is some kerbside activity, however loading spaces are designated away from the main route with plenty of space for cyclists to keep a large clearance
18	**Quality of carriageway surface**	The carriageway surface is even and smooth, with sufficient skid resistance. **or** There are defects but resurfacing of the whole carriageway is proposed.	There are a few minor defects in the carriageway surface (please see scoring guidance).	There are many minor defects in the carriageway surface (please see scoring guidance).	**There are major defects in the carriageway surface (please see scoring guidance).**	ⓘ	**3**	**3**	New carriageway surfacing
19	**Quality of footway surface**	There is an even and level surface for walking on footways. **or** There are defects but resurfacing of the whole footway is proposed.	There are a few minor defects in the footway surface (please see scoring guidance).	There are many minor defects in the footway surface (please see scoring guidance).	**There are major defects in the footway surface (please see scoring guidance).**	ⓘ	**3**	**3**	New surfacing as above
20	**Surveillance of public spaces**	There is constant surveillance – because mixed use buildings overlook the street or space, or because there are many people using the space or walking through.	There is intermittent surveillance – because surrounding buildings are single-use or do not completely overlook the street, or because there are few people using the space or walking through.	There is poor surveillance – because few buildings overlook the street or space, there is little activity.	–	ⓘ	**3**	**3**	The proposed development will provide passive surveilence over the space as well as lots of pedestrian activity
21	**Lighting**	Street lighting meets the British Standard 5489:2003 and the European Standard CEN/TR 13201. **and** Lighting of off-carriageway facilities for walking or cycling exceeds the same standards.	Street lighting meets the British Standard 5489:2003 and the European Standard CEN/TR 13201 but lighting of off-carriageway spaces for walking or cycling does not.	Street lighting does not meet the British Standard 5489:2003 and the European Standard CEN/TR 13201.	–	ⓘ	**3**	**3**	The proposed development will include new streetlighting and amenity lighting.
22	**Provision of cycle parking**	Cycle parking exceeds existing demand and is accessible by all.	Cycle parking meets existing demand and is accessible by all.	Cycle parking does not meet existing demand. **or** Cycle parking meets existing demand but is not accessible by all.	–	ⓘ	**3**	**3**	New development will provide plenty of cycle parking in the public realm.
23	**Street trees**	**If assessing existing:** There are multiple trees, with canopies spaced less than 15m apart on average. **If assessing proposal:** All existing trees are to be retained and the street is already tree-lined with less than 15m between tree canopies. **or** All existing trees are to be retained, with planting of new trees designed to reduce the average canopy spacing to less than 15m.	**If assessing existing:** There are multiple trees, with canopies spaced more than 15m apart on average. **If assessing proposal:** Not all existing trees are to be retained, however new planting will ensure the overall number of trees is maintained or increased. **or** All existing trees are to be retained, however the canopy spacing will remain more than 15m on average.	**If assessing existing:** There are no trees, or only one tree. **If assessing proposal:** There are no existing or proposed trees. **or** The number of trees has been reduced.	–	ⓘ	**2**	**2**	The access route will be lined with street trees with only a few sections where the canopies are less than 15m apart.

24	**Planting at footway-level** (excluding trees)	**If assessing existing:** There is substantial planting in good condition designed to create or improve social space and/or act as a connection between other green spaces (eg pocket park, rain garden, community garden area). **If assessing proposal:** Existing greenery is to be enhanced with integrated SuDS features or new planting or new areas of greenery are proposed.	**If assessing existing:** There is some planting, eg shrubs, verges, hedges, ornamental flower beds, or adaptation for some animal species. **If assessing proposal:** Existing standalone greenery is to be retained.	**If assessing existing:** There is no planting, or existing planting is in a poor condition. **If assessing proposal:** No green infrastructure is proposed, or the size of existing greenery is to be reduced.	–	ⓘ	3	3	The route will be landscaped at footway level
25	**Walking distance between resting points** (benches and other informal seating)	There is less than 50m between resting points.	There is between 50m and 150m between resting points.	There is more than 150m between resting points.	–	ⓘ	2	2	Benches and other informal seating will be supplied in the areas of public realm along the route
26	**Walking distance between sheltered areas protecting from rain.** Including fixed awning or other shelter provided by buildings/infrastructure	There is less than 50m between sheltered areas.	There is between 50m and 150m between sheltered areas.	There is more than 150m between sheltered areas.	–	ⓘ	3	3	Plenty of shelter from trees and buildings along the route
					Are there any bus services running on this street? (Y/N) If not, do not complete metrics 27-28		**N**	**N**	**An answer is required here in order to generate results**
27	**Factors influencing bus passenger journey time**	There are positive influences on bus journey time, e.g. bus lanes, and/or exemptions for buses from movement bans for general traffic.	Buses are mixed with traffic but not significantly delayed.	There are negative influences on bus journey time, e.g. unclear markings, narrow lane width, parking/loading issues, short cage length, mixing with congested traffic.	–				
28	**Bus stop accessibility**	Bus stop is wheelchair accessible, there is clear space for boarding and alighting and there is a clearway in place at the bus stop.	Bus stop is wheelchair accessible but either there is limited clear space around the bus stop for boarding and alighting or, for borough roads, there is no clearway in place.	Bus stop is not wheelchair accessible, ie the kerb height is less than 100mm.	–				
					Are there any rail/underground/bus stations accessible from this street? (Y/N) If not, do not complete metrics 29-31		**N**	**N**	**An answer is required here in order to generate results**
29	**Bus stop connectivity with other public transport services**	The bus stop is within sight of another service – less than 50m away.	The bus stop is between 50m and 150m away from another service.	The bus stop is more than 150m away from another service.	–				
30	**Street-to-station step-free access**	All entry points to the station are step-free.	The main entry point to the station is not step-free but step-free alternatives are provided.	There is no step-free access to the station.	–				
31	**Support for interchange between cycling and underground/rail**	Secure cycle parking is provided close to station access points, and exceeding existing demand.	Cycle parking is available close to station access points that meets existing demand.	There is insufficient cycle parking to meet demand, or cycle parking is poorly located for station access points.	–				
					If 'zero' scores (known road danger issues) remain, please explain why opposite:		**1**	**1**	***Only zero score is associated with cyclists interacting with a high proportion of heavy vehicles, however because the route is only going to be used by a low number of delivery and servicing vehicles anyway the proportion of heavy vehicles across all traffic is inflated***

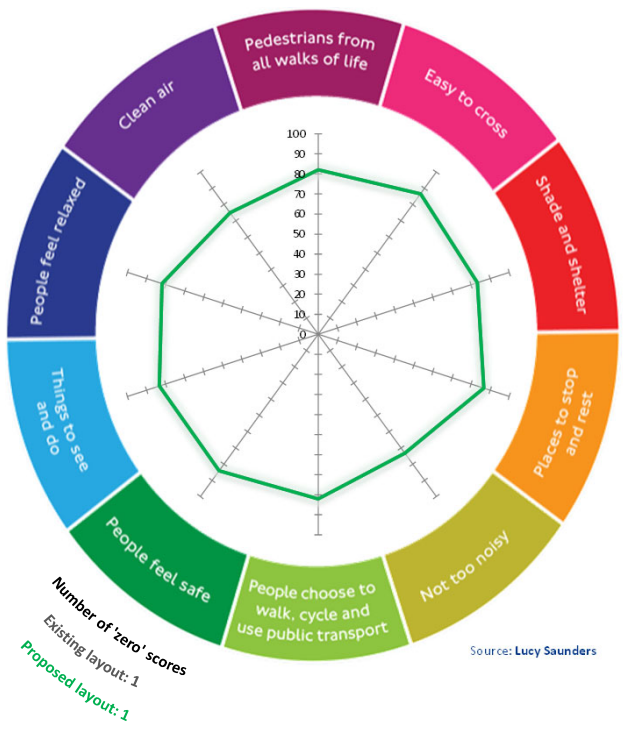
Healthy Streets Check Summary Results

Indicators explained ›

An overview of how each metric aligns with different Indicators

Interpreting results ›

A summary of how to use and improve on your results



Healthy Streets Indicator scores (%)

(Results will only display once all metrics have been scored)

	Existing layout	Proposed layout
Pedestrians from all walks of life	82	82
Easy to cross	87	87
Shade and shelter	83	83
Places to stop and rest	87	87
Not too noisy	73	73
People choose to walk, cycle and use public transport	82	82
People feel safe	84	84
Things to see and do	83	83
People feel relaxed	82	82
Clean air	75	75
Overall Healthy Streets Check score	82	82
Number of 'zero' scores	1	1

Key scoring rules ›

Healthy Streets Check

		Scoring System					Enter score here		Notes
		3	2	1	0	More info on each question	Existing layout	Proposed layout	Please supplement your answers with detailed notes where possible
1	**Total volume of two way motorised traffic**	There are fewer than 500 vehicles per hour at peak.	There are 500 to 1000 vehicles per hour at peak.	There are more than 1000 vehicles per hour at peak, where people cycling are separated from motorised traffic.	**There are more than 1000 vehicles per hour at peak, where people cycling are mixed with motorised traffic.**	ⓘ	0	0	There are more than 1,000 vph in the peak AM and PM periods, and cyclists do interact with motorised traffic with no dedicated cycle lane.
2	**Interaction between large vehicles and people cycling**	No large vehicles are using the street, or cycle traffic is separated from motorised traffic.	The proportion of large vehicles is less than 2% of motorised traffic, 7am to 7pm.	The proportion of large vehicles is 2% to 5% of motorised traffic, 7am to 7pm. **or** The proportion of large vehicles is greater than 5% of motorised traffic, 7am to 7pm, and people are cycling either: - in a nearside general traffic lane or bus lane at least 4.5m wide, or - in a cycle lane where the combined width of the cycle lane and the next general traffic lane is at least 4.5m.	**The proportion of large vehicles is greater than 5% of motorised traffic, 7am to 7pm, and people are cycling either:** **- in a nearside general traffic lane or bus lane less than 4.5m wide, or** **- in a cycle lane where the combined width of the cycle lane and the next general traffic lane is less than 4.5m.**	ⓘ	0	0	Percentage of heavy vehicles on Bunns Lane from 7am - 7pm is approximately 6% existing. No new heavy vehicle trips will be added to Bunns Lane with the Proposed Development.
3	**Speed of motorised traffic**	85th percentile speed is less than 20mph. **or** Existing 85th percentile speed is over 25 mph but a complete redesign of the street environment should reduce this to below 20mph.	85th percentile speed is 20 to 25mph. **or** Existing 85th percentile speed is 25 to 30 mph, but there are some proposals to reduce speed further.	85th percentile speed is 25 to 30mph. **or** Existing 85th percentile speed is greater than 30 mph, but there are some proposals to reduce speed further.	**85th percentile speed is greater than 30mph.** **or** **Existing 85th percentile speed is greater than 30 mph, and there are no proposals to reduce this speed.**	ⓘ	0	0	85th %ile speed on Bunns Lane is 31.8 mph eastbound and 33.1 mph westbound.
4	**Traffic noise based on peak hour motorised traffic volumes**	There are fewer than 55 vehicles per hour (c. <58 DB).	There are 55 to 450 vehicles per hour (c. 58-70 DB).	There are more than 450 vehicles per hour (c. >70 DB).	–	ⓘ	1	1	More than 450 vehicle per hour
5	**Noise from large vehicles**	The proportion of large vehicles is less than 5% (c. +0 to +3DB).	The proportion of large vehicles is 5 to 10% (c. +3 to +5 DB).	The proportion of large vehicles is greater than 10% (c. +5 DB and over).	–	ⓘ	2	2	Proportion of Heavy vehicles is approximately 6% on Bunns Lane.
6	**NO2 concentration** (from London Atmospheric Emission Inventory)	**If assessing existing:** The NO2 concentration is less than 32µg/m3. **If assessing proposal:** The existing NO2 concentration is less than 32µg/m3 **or** the existing concentration is 32 to 40µg/m3 with local traffic volume reduction measures proposed.	**If assessing existing:** The NO2 concentration is 32 to 40µg/m3. **If assessing proposal:** The existing NO2 concentration is 32 to 40µg/m3 with no proposal to reduce local traffic volume **or** the existing NO2 concentration is greater than 40µg/m3 with local traffic volume reduction measures proposed.	**If assessing existing:** The NO2 concentration is greater than 40µg/m3 (legal limit value). **If assessing proposal:** The existing NO2 concentration is greater than 40µg/m3 with no proposal to reduce local traffic volume.	–	ⓘ	1	1	Existing NO2 concentration levels range from 40 - 55 ug/m3 along Bunns Lane
7	**Reducing private car use**	There is no through-movement for motorised traffic, with access limited to local residents, deliveries and public service vehicles.	There are some time or movement restrictions for motorised traffic.	There are no access restrictions for motorised traffic.	–	ⓘ	1	1	
8	**Ease of crossing side roads for people walking**	Side roads are closed to motor traffic. **or** Side roads are one-way out for motor vehicles and have features to encourage drivers to turn cautiously.	Side roads are two-way or one-way in for motor vehicles, and have features to encourage drivers to turn cautiously.	Side roads have dropped kerbs only.	**Side roads have no dropped kerbs.**	ⓘ	3	3	No side roads in the section assessed - all driveways are flush with the footway
9	**Mid-link crossings, to meet pedestrian desire lines**	All main pedestrian desire lines are provided for with crossings.	Only some of the main pedestrian desire lines are provided for with crossings.	No main pedestrian desire lines are provided for with pedestrian crossings.	–	ⓘ	2	3	There is a current pedestrian refuge island outside the site. This crossing point will be upgraded by the entrance to the Proposed Development to the new bus stops improving the pedestrian desire line to public transport. A zebra crossing is also provided near Flower Lane, to cater for those wishing to cross further down.
10	**Type and suitability of pedestrian crossings away from junctions**	Crossing is uncontrolled, with conflicting traffic volume less than 200 vehicles per hour. **or** A Zebra or parallel crossing is provided. **or** Crossing is signalised so that people crossing the main carriageway have priority, while traffic on the main carriageway has on-demand green.	Crossing is uncontrolled, with conflicting traffic volume between 200 and 1000 vehicles per hour. **or** Crossing is signalised and straight-across where the distance to cross is less than 15m or greater than 15m in a 20mph speed limit. **or** Crossing is signalised and staggered where the distance to cross is greater than 15m in a 30mph+ speed limit.	Crossing is uncontrolled, with conflicting traffic volume greater than 1000 vehicles per hour. **or** Crossing is signalised and straight-across where the distance to cross is greater than 15m in a 30mph+ speed limit.	–	ⓘ	2	2	Even though there is zebra crossing near Flower Lane, the crossing adjacent to the site is uncontrolled. Pedestrians can wait in the central refuge island and cross in two stages, but they must cross approximately 800vph in either direction in the peak periods.
11	**Technology to optimise efficiency of movement** (pedestrians, cyclists, buses and general motor traffic)	All appropriate detection and optimisation technology has been applied to traffic signals.	Some detection and optimisation technology has been applied to traffic signals.	No detection and optimisation technology applied to traffic signals.	–	ⓘ	3	3	This metric is not applicable as there are no signalised junctions in the assessment area.
12	**Additional features to support people using controlled crossings**	Controlled crossings have many additional features to enhance their quality (please see scoring guidance).	Controlled crossings have some additional features to enhance their quality (please see scoring guidance).	Controlled crossings have no additional features to enhance their quality (please see scoring guidance). **or** There is no step-free access at the crossing point and/or there is no physical delineation between the footway and carriageway away from crossing points.	–	ⓘ	1	1	Worst crossing point along the link is uncontrolled so therefore scores a 1.

13	**Width of clear continuous walking space**	There is 2m or more clear width for walking in quiet locations (flows of <600 pedestrians an hour). **or** There is 2.5m or more clear width for walking in moderately busy locations (flows of 600-1200 pedestrians an hour). **or** There is 3m or more in busy locations (flows of >1200 pedestrians an hour).	There is 2m to 2.5m clear width for walking in moderately busy locations (flows of 600-1200 pedestrians an hour). **or** There is 2.5m to 3m in busy locations (flows of >1200 pedestrians an hour).	There is 1.5m to 2m clear width for walking in quiet and moderate locations (flows of <1200 pedestrians an hour). **or** There is 2m to 2.5m clear width for walking in busy locations (flows of >1200 pedestrians an hour).	**There is less than 1.5m clear width for walking.**	ⓘ	**1**	**1**	Along the northern side of Bunns Lane, parked vehicles reduces the clear width for walking to 1.6m.
14	**Sharing of footway with people cycling**	No part of the footway is designated as shared use for walking and cycling.	Part or all of a footway wider than 3m with fewer than 200 pedestrians per hour is designated as shared use.	Part or all of a footway used by more than 200 pedestrians per hour is designated as shared use. **or** Part or all of a footway less than 3m wide is designated as shared use.	–	ⓘ	**3**	**3**	No part of the footway is shared with cyclists
15	**Collision risk between people cycling and turning motor vehicles**	Side roads are closed to motorised traffic, or turning movements by motor vehicles are minimised. **and** At signal-controlled junctions, all conflicting movements between cycle traffic and turning motor traffic are separated.	Some measures are in place to reduce turning movements by motor vehicles at priority junctions. **and** At signal-controlled junctions, cycle movements are not separated and fewer than 5% of turning vehicle movements are made by larger vehicles but mitigation measures are in place.	There are no restrictions on turning movements by motor vehicles at side roads and other uncontrolled accesses. **and** At signal-controlled junctions, cycle movements are not separated and more than 5% of turning vehicle movements are made by larger vehicles but mitigation measures are in place.	**At signal-controlled junctions, cycle movements are not separated, more than 5% of turning vehicle movements are made by larger vehicles and there are no mitigation measures in place.**	ⓘ	**1**	**1**	No side roads in the section assessed - some residential driveways exist as well as an access to the nursery (Dove Close). All turning movements are allowed at the access.
16	**Effective width for cycling**	**Where cycles are separated from other traffic,** the width of the lane or track is 2.2m or more (one-way) or 3.5m or more (two-way). **Otherwise:** Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is 4.5m or more.	**Where cycles are separated from other traffic,** the width of the lane or track is 1.5m to 2.2m (one-way) or 2.5m to 3.5m (two-way). **Otherwise:** Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is between 4m and 4.5m.	**Where cycles are separated from other traffic,** the width of the lane or track is less than 1.5m (one-way) or less than 2.5m (two-way). **Otherwise:** Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is less than 3.2m.	**Width of the nearside general traffic lane (where there is no cycle lane) or width of the cycle lane plus adjacent general traffic lane is between 3.2m and 3.9m.**	ⓘ	**0**	**0**	Nearside traffic lanes are between 3.2 - 3.9m in both direction.
17	**Impact of loading kerbside activity on cycling**	There is no kerbside activity. **or** People cycling are physically separated from parking or loading facilities.	There is occasional kerbside activity, and people cycling can keep at least 1.0m clearance to vehicles parked or loading.	There is frequent or continuous kerbside activity, and people cycling can keep at least 1.0m clearance to vehicles parked or loading.	**People cycling cannot maintain at least 1.0m clearance from vehicles parked or loading.**	ⓘ	**2**	**2**	Very minimal kerbside activity, stopping is also restricted outside the nursery. Parked vehicles on the northern side of Bunns Lane are off the carraigeway meaning that cyclists can keep 1.0m clearance.
18	**Quality of carriageway surface**	The carriageway surface is even and smooth, with sufficient skid resistance. **or** There are defects but resurfacing of the whole carriageway is proposed.	There are a few minor defects in the carriageway surface (please see scoring guidance).	There are many minor defects in the carriageway surface (please see scoring guidance).	**There are major defects in the carriageway surface (please see scoring guidance).**	ⓘ	**2**	**2**	A few minor ruts in the pavement and a couple of stormwater grates.
19	**Quality of footway surface**	There is an even and level surface for walking on footways. **or** There are defects but resurfacing of the whole footway is proposed.	There are a few minor defects in the footway surface (please see scoring guidance).	There are many minor defects in the footway surface (please see scoring guidance).	**There are major defects in the footway surface (please see scoring guidance).**	ⓘ	**2**	**3**	Footway is in generally good condition with no trip hazards, and only minor patched sections of footway adjacent to the Proposed Development on the southern side. New footway on the southern side of Bunns Lane as part of the development will improve the quality of the overall pedestrian environment.
20	**Surveillance of public spaces**	There is constant surveillance – because mixed use buildings overlook the street or space, or because there are many people using the space or walking through.	There is intermittent surveillance – because surrounding buildings are single-use or do not completely overlook the street, or because there are few people using the space or walking through.	There is poor surveillance – because few buildings overlook the street or space, there is little activity.	–	ⓘ	**1**	**3**	The proposed development will provide increased passive surveilence over the footways due to the new mixed use buildings as well as remove the large trees along the southern side of the development, opening this area up and making it feel less secluded. The development will also increase the amount of activity in the area.
21	**Lighting**	Street lighting meets the British Standard 5489:2003 and the European Standard CEN/TR 13201. **and** Lighting of off-carriageway facilities for walking or cycling exceeds the same standards.	Street lighting meets the British Standard 5489:2003 and the European Standard CEN/TR 13201 but lighting of off-carriageway spaces for walking or cycling does not.	Street lighting does not meet the British Standard 5489:2003 and the European Standard CEN/TR 13201.	–	ⓘ	**2**	**3**	Bunns lane has good lighting provision, but no amenity or decorative lighting. The proposed development will increase amenity lighting.
22	**Provision of cycle parking**	Cycle parking exceeds existing demand and is accessible by all.	Cycle parking meets existing demand and is accessible by all.	Cycle parking does not meet existing demand. **or** Cycle parking meets existing demand but is not accessible by all.	–	ⓘ	**1**	**1**	No cycle parking along Bunns Lane. New development will provide cycle parking in the public realm.
23	**Street trees**	**If assessing existing:** There are multiple trees, with canopies spaced less than 15m apart on average. **If assessing proposal:** All existing trees are to be retained and the street is already tree-lined with less than 15m between tree canopies. **or** All existing trees are to be retained, with planting of new trees designed to reduce the average canopy spacing to less than 15m.	**If assessing existing:** There are multiple trees, with canopies spaced more than 15m apart on average. **If assessing proposal:** Not all existing trees are to be retained, however new planting will ensure the overall number of trees is maintained or increased. **or** All existing trees are to be retained, however the canopy spacing will remain more than 15m on average.	**If assessing existing:** There are no trees, or only one tree. **If assessing proposal:** There are no existing or proposed trees. **or** The number of trees has been reduced.	–	ⓘ	**2**	**2**	Some trees on private land (rather than street trees) will be removed on the southern side of Bunns lane (which is currently overgrown and doesn't provide an aesthetically pleasing environment currently). However, they will be replaced with new, and more attractive, planting. Street trees are well spaced on the northern side of Bunns Lane, but canopies are more than 15m apart closer to Flower Lane.

24	**Planting at footway-level** (excluding trees)	**If assessing existing:** There is substantial planting in good condition designed to create or improve social space and/or act as a connection between other green spaces (eg pocket park, rain garden, community garden area). **If assessing proposal:** Existing greenery is to be enhanced with integrated SuDS features or new planting or new areas of greenery are proposed.	**If assessing existing:** There is some planting, eg shrubs, verges, hedges, ornamental flower beds, or adaptation for some animal species. **If assessing proposal:** Existing standalone greenery is to be retained.	**If assessing existing:** There is no planting, or existing planting is in a poor condition. **If assessing proposal:** No green infrastructure is proposed, or the size of existing greenery is to be reduced.	–	ⓘ	2	3	Currently there is some planting but as described above it is in poor condtion. The proposal will include more attractive levels of planting across the site.
25	**Walking distance between resting points** (benches and other informal seating)	There is less than 50m between resting points.	There is between 50m and 150m between resting points.	There is more than 150m between resting points.	–	ⓘ	1	1	Proposed bus stops will provide more seating but there will still be more than 150m between resting point.
26	**Walking distance between sheltered areas protecting from rain.** Including fixed awning or other shelter provided by buildings/infrastructure	There is less than 50m between sheltered areas.	There is between 50m and 150m between sheltered areas.	There is more than 150m between sheltered areas.	–	ⓘ	1	1	Little shelter on Bunns Lane near Flower Lane. Trees provide more shelter closer to the development site.
					Are there any bus services running on this street? (Y/N) If not, do not complete metrics 27-28		**Y**	**Y**	**An answer is required here in order to generate results**
27	**Factors influencing bus passenger journey time**	There are positive influences on bus journey time, e.g. bus lanes, and/or exemptions for buses from movement bans for general traffic.	Buses are mixed with traffic but not significantly delayed.	There are negative influences on bus journey time, e.g. unclear markings, narrow lane width, parking/loading issues, short cage length, mixing with congested traffic.	–		2	2	
28	**Bus stop accessibility**	Bus stop is wheelchair accessible, there is clear space for boarding and alighting and there is a clearway in place at the bus stop.	Bus stop is wheelchair accessible but either there is limited clear space around the bus stop for boarding and alighting or, for borough roads, there is no clearway in place.	Bus stop is not wheelchair accessible, ie the kerb height is less than 100mm.	–		1	2	No bus stops in the section assessed currently, but with the development bus stops will be constructed adjacent to the site, which will be designed to be wheelchair accessible, however no clearway is in place.
					Are there any rail/underground/bus stations accessible from this street? (Y/N) If not, do not complete metrics 29-31		**N**	**N**	**An answer is required here in order to generate results**
29	**Bus stop connectivity with other public transport services**	The bus stop is within sight of another service – less than 50m away.	The bus stop is between 50m and 150m away from another service.	The bus stop is more than 150m away from another service.	–				
30	**Street-to-station step-free access**	All entry points to the station are step-free.	The main entry point to the station is not step-free but step-free alternatives are provided.	There is no step-free access to the station.	–				
31	**Support for interchange between cycling and underground/rail**	Secure cycle parking is provided close to station access points, and exceeding existing demand.	Cycle parking is available close to station access points that meets existing demand.	There is insufficient cycle parking to meet demand, or cycle parking is poorly located for station access points.	–				
					If 'zero' scores (known road danger issues) remain, please explain why opposite:		**4**	**4**	***Three zero scores are associated with the nature of Bunns Lane being a main traffic route, with larger volumes of traffic, proportion of heavy vehicles, and vehicle speeds. The width of effective lane width for cycling also results in a zero score as lane widths are between 3.2-3.9m wide and won't change with the proposed development.***

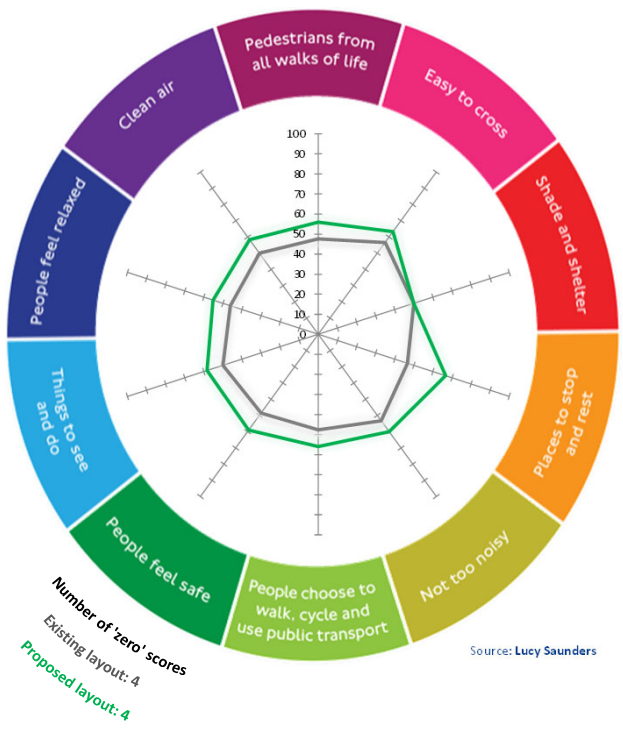
Healthy Streets Check Summary Results

Indicators explained ›

An overview of how each metric aligns with different Indicators

Interpreting results ›

A summary of how to use and improve on your results



Healthy Streets Indicator scores (%)

(Results will only display once all metrics have been scored)

	Existing layout	Proposed layout
Pedestrians from all walks of life	48	56
Easy to cross	57	63
Shade and shelter	50	50
Places to stop and rest	47	67
Not too noisy	53	60
People choose to walk, cycle and use public transport	48	56
People feel safe	48	59
Things to see and do	50	58
People feel relaxed	46	55
Clean air	50	58
Overall Healthy Streets Check score	49	57
Number of 'zero' scores	4	4