

# APPENDIX B

Transport for London – Pre-Application Response

# **Transport for London**



Our ref: 18/3586

Karen Smith Sanderson Associates (Consulting Engineers) Ltd Sanderson House Jubilee Way Grange Moor Wakefield WF4 4TD **Transport for London** City Planning

5 Endeavour Square Westfield Avenue Stratford London E20 IJN

Phone 020 7222 5600 www.tfl.gov.uk

21<sup>st</sup> November 2018

Dear Karen

# Manor Road Homebase, LB Richmond – TfL's pre-application advice

Thank you for participating in Transport for London's (TfL) pre-planning application process, the aim of which is to ensure that development is successful in transport terms and in accordance with relevant London Plan policies. This letter concerns the recent meeting regarding the proposed redevelopment of the Homebase site on Manor Road in the London Borough of Richmond upon Thames (LBRuT).

The following comments are made by Transport for London officers on a 'without prejudice' basis only and are intended to ensure that this development is successful in transport terms and in line with relevant London Plan policies. You should not interpret them as indicating any subsequent Mayoral decision on any planning application based on the proposed scheme. Furthermore, these comments also do not necessarily represent the views of the Greater London Authority.

Based on the information provided in the Transport Scoping Study (TSS) and meeting, it is understood that the proposal consists of:

- 414 residential units; and
- Two commercial units (482sqm floorspace).

A pre-planning application meeting was held with TfL on the 7<sup>th</sup> November 2018 regarding the development proposals. The meeting was attended by the following:

Karen Smith Omer Weinburger Sanderson Associates Avanton



**MAYOR OF LONDON** 

Chris Cobham	Avanton
Tom Bennett	ICG Longbow
Lucy Simpson	TfL Spatial Planning
Claire Bartle	TfL Network Sponsorship
Mark Parker	TfL Bus Operations
Fergus McGhee	TfL Bus Network Development

This pre-application response is based on the information provided to date including the TSS and summarises the key points discussed at our meeting.

### Site context

The site is bound by railway lines to the south and west, Manor Road to the east and the North Sheen Bus Terminus is located to the north. The site is located immediately south of the A316 Manor Circus which forms part of the Transport for London Road Network (TLRN). A level crossing is located on Manor Road immediately south of the site's southern boundary.

The entrance to North Sheen rail station is located on the opposite side of Manor Road near the sites southern boundary; there are also 10 bus routes within an acceptable walk distance. Based on TfL's Webcat toolkit the application site has a public transport accessibility level (PTAL) of 5, on a scale of 1 to 6b where 6b is the most accessible.

## **Transport Assessment**

TfL are due to release new Transport Assessment Guidance at the beginning of December. The Transport Assessment (TA) should be undertaken in accordance with this new guidance which should be available from: <u>https://tfl.gov.uk/info-for/urban-planning-and-construction/guidance-for-applicants</u>, further details on the specific requirements are set out below.

The draft London Plan was published on 29 November 2017 and sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years. We will be expecting all new planning applications to give material consideration to the policies set out within this document, noting that the decision-maker is to determine the balance of weight to be given to adopted and draft policies.

## Trip generation and mode split

Surveys of the existing uses on site have been undertaken and will be used to establish the existing vehicle trip generation for the site.

The TRICS database will be used to determine total person trips for the proposed uses. TfL would recommend that only TRICS surveys from the Greater London area are used in this assessment. Census data should be

used to establish mode share, and adjusted to account for the car-free nature of the development.

Trip generation figures should be presented in the TA by mode, time, and directional flow, with the peak hour number of trips indicated separately.

### Site access

There will be no direct vehicular access to the site from the TLRN.

It is proposed to maintain the existing site vehicular access which is shared with the bus terminus. The TA will need to demonstrate that the proposed development will not impact on the operation of the existing bus terminus.

## Car parking

The development will be car free with the exception of 12 spaces reserved for disabled users, which accords with the draft London Plan and is welcomed by TfL.

A Parking Design and Management Plan should be submitted alongside the application which indicates how the car parking will be designed and managed, with reference to Transport for London guidance on car parking management and car park design. It will also need to demonstrate where the additional 7% of disabled car parking spaces will be provided on site should demand arise. Furthermore, parking spaces should be leased rather than sold to ensure the land they take up is used as efficiently as possible over the life of the development.

Electric Vehicle Charging Points (EVCP) including passive provision should also be provided in accordance with London Plan standards.

The applicant has indicated that they are currently discussing the viability of providing a car club space on site. TfL would recommend that three years free car club membership is secured for all new residents without a car parking space.

### Highway impact

The extent of the highway modelling proposed is acceptable, assuming a net reduction in peak hour vehicle trips.

The models should be validated against on street data i.e. queue length surveys.

### Buses

As stated above, there are currently 10 bus routes (65, 371, 493, 190, 419, H37, R68, R70, 391 and H22) within an acceptable walking distance of the site with stops on Manor Road and Lower Mortlake Road. As stated previously, the

TA will need to provide bus trip generation figures by time and by direction, with the peak hour indicated separately. The trip generation figures by direction should consider the existing bus network. TfL will use this information to assess the impact of development, considering the cumulative impact of the development and will be able to confirm if any bus capacity enhancements are required.

A bus stop assessment should be undertaken for the closest two stops to the application site. Should the assessment identify any necessary improvements, these will need to be funded by the applicant.

TfL are currently consulting on changes to bus services within the Richmond area. This would result in a slight reduction in the frequency of services between Manor Circus and Richmond.

## North Sheen Bus Terminus

The feasibility of building over the existing North Sheen Bus Terminus was discussed. Any over station development would need to be designed in accordance with TfL guidance, which will be provided separately to this letter. The layout would also need to maintain standing for up to 5 buses including a bus driver facility. TfL suggest that the applicant produces a feasibility design for an over station development which could be used to inform more detailed discussions.

## North Sheen Rail Station

North Sheen Station and the trains which serve it are operated by South Western Railway. TfL has no involvement with the operation of this station or the level crossing. TfL would suggest contacting South Western Railway directly to gain information on the capacity of the trains and the existing loads at North Sheen station, and Network Rail concerning the level crossing.

## **Cycle Parking**

760 cycle parking spaces proposed within a secure cycle store with two tier racks located in the basement, which would be in accordance with both the London Plan and draft London Plan.

Cycle stores should be broken up into smaller areas for added security. Shortstay cycle parking should be located in close proximity to building entrances of all buildings to provide convenience and choice for all users. Cycle Parking should be designed and laid out in accordance with the guidance contained in the London Cycling Design Standards. The TA should also take into consideration how cycle parking facilities will cater for larger cycles, including adapted cycles for disabled people.

TfL would also advise that shower and locker facilities are provided for members of staff of the commercial units wishing to cycle to work. All cycle

parking spaces should also be easily accessible from cycle routes and appropriate signage, should be provided.

## Pedestrian and Cycle Access

The redevelopment will see an increase in pedestrian and cycle trips to / from the site and the local area, and it is noted that additional pedestrian and cycle access points are proposed along Manor Road. The applicant should ensure that the Healthy Streets approach is considered both throughout the site and within the local area, including routes to all transport nodes. In terms of Healthy Streets the development proposals should:

- Demonstrate how they will deliver improvements that support the ten Healthy Streets Indicators in line with Transport for London guidance http://content.tfl.gov.uk/healthy-streets-for-london.pdf
- Reduce the dominance of vehicles on London's streets whether stationary or moving.
- Be permeable by foot and cycle and connect to local walking and cycling networks as well as public transport.

Any necessary improvements identified by this assessment will need to be funded by the applicant.

It is noted that the Quietway previously proposed along the A316 is no longer being progressed.

### Manor Circus

TfL have a highway improvement scheme at Manor Circus which aims to improve pedestrian road safety and to improve the cycling and pedestrian environment. Given that the proposed development will increase pedestrian and cycle movements at Manor Circus TfL will request a contribution towards this scheme.

## **Travel planning**

A residential travel plan will be submitted as part of the planning application. When preparing travel plans, reference should be made to TfL's travel plan guidance.

The Travel Plan should then be secured, delivered, monitored and funded through the Section 106 agreement.

### **Delivery and construction**

In order to minimise the impacts of construction and delivery vehicles, a Construction Logistics Plan (CLP) and Delivery and Servicing Plan (DSP) should be delivered in line with TfL's guidance. An indicative programme of construction should be included in the CLP.

# Community Infrastructure Levy

In accordance with London Plan policy 8.3, Community Infrastructure Levy, the Mayor commenced CIL charging for developments on 1st April 2012. It is noted that the proposed development is within the London Borough of Richmond upon Thames, where the Mayoral charge is £50 per square metre Gross Internal Area (GIA). Further details can be found at:

http://www.london.gov.uk/publication/mayoral-community-infrastructure-levy.

## Summary

As discussed at our meeting and recorded herein there are a number of issues which require further discussions and action. TfL will welcome further involvement and discussion with the applicant and Richmond Council in order to ensure agreement on as many issues as possible prior to the planning application being submitted.

I hope this provides a useful basis upon which to progress the preparation of the planning application and supporting TA and look forward to hearing from you shortly.

Should you wish to discuss any part of this letter, please contact myself or Lucy Simpson (<u>lucysimpson@tfl.gov.uk</u> - 020 3054 7039).

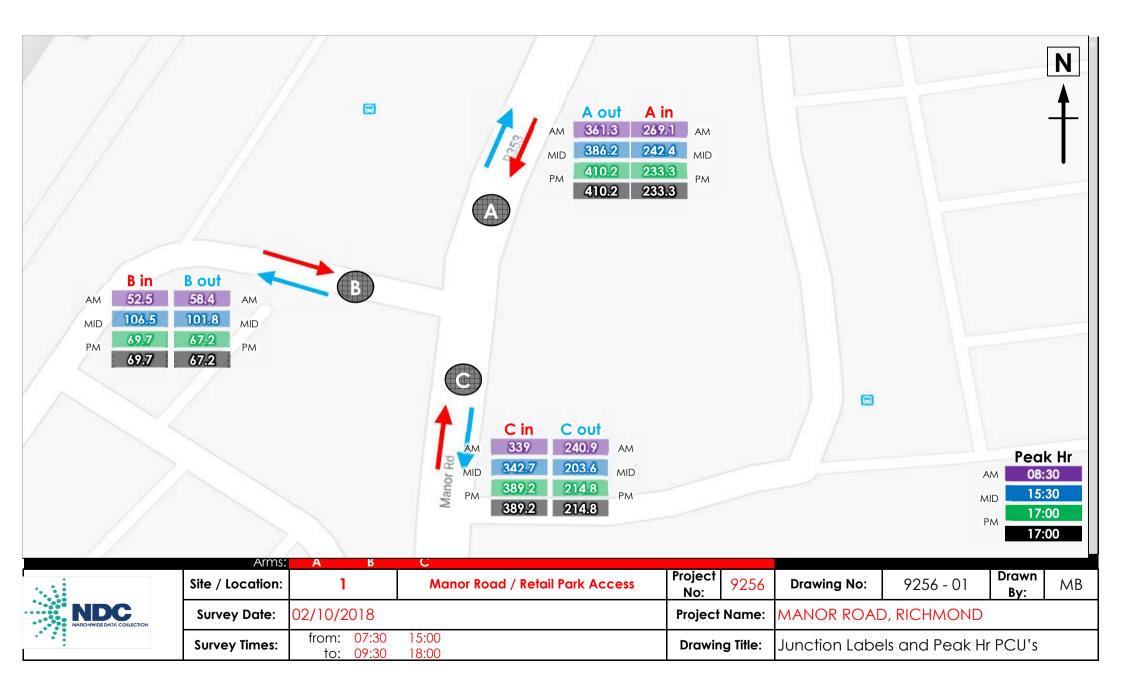
Yours sincerely

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Lucinda Turner **Director of spatial Planning** Email: <u>lucindaturner@tfl.gov.uk</u> Direct line: 020 3054 7133



APPENDIX C Traffic Count Data



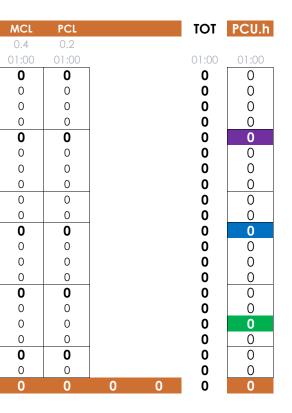


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Classified	Tur

	from arm to arm				period I : 07:30 : 09:30 <b>per h</b>	period II 15:00 18:00							DATE: 02/1 DAY: Tues	-		SITE: CATION: _ ARMS:	Mano	r Road , B	' Retail C	Park Ac	cess				-	m arm: o arm:
PCL	τοτ	PCU	from	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		TO	PCU.	from	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL			τοτ
0.2			-	CU factor		1	1.5	2.3	2	0.4	0.2					CU factor	1	1	1.5	2.3	2	0.4	0.2			
00:15	00:15	00:15		INTERVAL		01:00	01:00	01:00	01:00	01:00	01:00		01:0	0 01:00		INTERVAL	00:15	00:15	00:15	00:15	00:15	00:15	00:15			00:15
2	56	59.9	07:30	08:30	147	44	14	1	12	3	10		23	241.5	07:30	07:45	79	13	4	0	7	4	2			109
1	62	67	07:45	08:45	176	37	12	1	11	4	11		252			08:00	48	8	1	0	8	1	2			68
3	49	51	08:00	09:00	197	34	11	0	9	5	11		267		08:00	08:15	63	11	1	1	3	5	5			89
4	64	63.6	08:15	09:15	199	34	12	0	8	4	11		268		08:15	08:30	63	13	2	1	4	1	4			88
3	77	77.5	08:30	09:30	195	36	13	0	8	2	9		26	269.1	08:30	08:45	64	11	1	0	3	4	3			86
1	77	77.6	08:45	09:45	135	28	10	0	6	1	6		180	<b>i</b> 191.6	08:45	09:00	80	13	1	1	1	1	3			100
3	50	52.1	09:00	10:00	73	18	8	0	5	0	5		109	114	09:00	09:15	65	6	2	0	2	1	1			77
2	59	61.9	09:15	10:15	40	11	3	0	3	0	2		59	61.9	09:15	09:30	74	12	1	1	4	1	0			93
2	74	74.1	15:00	16:00	191	31	6	0	13	7	9		257	261.6	15:00	15:15	64	8	3	0	3	1	4			83
1	54	58.1	15:15	16:15	183	27	6	0	12	5	8		24	246.6	15:15	15:30	47	13	5	1	6	1	1			74
4	74	73	15:30	16:30	180	28	4	0	12	7	8		239			15:45	87	11	1	2	4	3	2			110
2	55	56.4	15:45	16:45	170	28	4	0	13	5	4		224			16:00	53	12	3	0	5	1	0			74
1	58	59.1	16:00	17:00	170	27	4	0	10	5	3		219			16:15	70	12	3	1	4	1	1			92
1	52	53.9	16:15	17:15	170	27	5	0	12	6	3		223			16:30	70	13	1	1	4	0	2			91
0	59	63.4	16:30	17:30	179	26	5	0	10	6	6		232			16:45	69	10	3	0	5	1	4			92
1	50	49.2	16:45	17:45	181	22	3	0	7	6	10		229			17:00	61	14	1	0	3	1	1			81
1	62	65	17:00	18:00	185	20	3	0	9	8	13		238			17:15	62	19	0	0	6	1	3			91
4	61	58.5	17:15	18:15	137	15	1	0	5	6	12		170			17:30	88	16	1	0	3	1	4			113
4	56	53.2	17:30		92	9	0	0	3	3	8		11				81	9	5	0	3	4	2			104
4	59	56.6	17:45	18:45	46	5	0	0	2	2	4	-	59			18:00	81	12	0	0	2	2	1			98
44 0	0 1208	1231		P/TOT	888	158	40	1	52	25	44	0	0 120	8 1231		P/TOT	1369	236	39	9	80	35	45	0	0	1813
19 0	0 494	510.6													Porio	od I Total:	536	87	13	4	32	18	20	0	0	710
25 0	0 714	720.5														d II Total:		149	26	5	48	17	25	0	0	1103
20 0	0 714	/ 20.0															000	177	20	0	U	17	20	U	U	

9256 / MANOR ROAD, RICHMOND October 2018 Classified Turning Count

													•									
all A			period I 07:30 09:30	period II 15:00 18:00						DATE: ( DAY: 1				SITE: CATION: AL ARMS:	Manor				cess			
																<u>uarter</u>						
PCU	from	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		TOT	PCU.h		to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
		CU factor	1	1	1.5	2.3	2	0.4	0.2					CU factor	1	1	1.5	2.3	2	0.4	0.2	
00:15		NTERVAL		01:00	01:00	01:00	01:00	01:00	01:00	ī	01:00	01:00		NTERVAL	00:15	00:15	00:15	00:15	00:15	00:15	00:15	
114	07:30		253	45	8	2	22	11	13		354	365.6	07:30	07:45	2	0		0	2	0	0	
74.3	07:45	08:45	238	43	5	2	18	11	14		331	336.3	07:45	08:00		0	0	0	3	0	0	
86.8	08:00	09:00	270	48	5	3	11	11	15		363	361.8	08:00	08:15	2		0	0	2	0	0	
90.5	08:15	09:15	272	43	6	2	10	7	11	-	351	353.6	08:15	08:30	5	3	0	0	2	0	0	
84.7	08:30	09:30	283	42	5	2	10	7	7		356	361.3	08:30	08:45	3	0	0	0	3	0	0	
99.8	08:45	09:45	219	31	4	2	7	3	4		270	276.6	08:45	09:00	2	0	0	0		0	0	
78.6	09:00	10:00	139	18	3	1	6	2	1		170	176.8	09:00	09:15	4	2	0	0	2	0	0	
98.2	09:15	10:15	74	12	1	1	4	1	0	-	93	98.2	09:15	09:30	11	2	0	1	2	0	0	
83.7	15:00	16:00	251	44	12	3	18	6	7		341	359.7	15:00	15:15	9	0	0	0	2	0	0	
82.4	15:15	16:15	257	48	12	4	19	6	4	-	350	373.4	15:15	15:30	8	2	0	0	3	0	0	
113.7	15:30	16:30	280	48	8	4	17	5	5		367	386.2	15:30	15:45	15	0	0	0	3	2	1	
79.9	15:45	16:45	262	47	10	2	18	3	7		349	367.2	15:45	16:00	7	1	0	0	2	0	0	
97.4	16:00	17:00	270	49	8	2	16	3	8		356	370.4	16:00	16:15	17	1	1	0	3	0	0	
95.2	16:15	17:15	262	56	5	1	18	3	10	-	355	367	16:15	16:30	13	1	0	0	2	0	0	
94.7	16:30	17:30	280	59	5	0	17	4	12		377	384.5	16:30	16:45	16	0	0	0	4	0	1	
83.1	16:45	17:45	292	58	7	0	15	7	10		389	395.3	16:45	17:00	7	1	0	0	1	0	0	
94	17:00	18:00	312	56	6	0	14	8	10		406	410.2	17:00	17:15	6	1	0	0	3	0	1	
112.7	17:15	18:15	250	37	6	0	8	7	7	_	315	316.2	17:15	17:30	8	1	0	0	2	0	0	
105.5	17:30	18:30	162	21	5	0	5	6	3		202	203.5	17:30	17:45	6	1	0	0	2	0	0	
98	17:45	18:45	81	12	0	0	2	2	1		98	98	17:45	18:00	8	0	0	0	0	0	0	
1867		P/TOT	1369	236	39	9	80	35	45	0 0	1813	1867		P/TOT	150	17	2	1	44	2	3	0
70/ 0													Daris		20	0	1	1	17	0	0	0
726.9														d I Total:		8	1		17	0	0 3	0 0
1140													rerio	d II Total:	120	9	I	0	27	2	3	0

		m arm: o arm:	B A
		τοτ	PCU
		00:15 5 4 5 10 6 3 8 16 11 13 21 10 22 16 21 9 11 11 9 8	$\begin{array}{c} 00:15\\ \hline 7.5\\ 7\\ 7\\ 12\\ 9\\ 4\\ 10\\ 19.3\\ 13\\ 16\\ 22\\ 12\\ 25.5\\ 18\\ 24.2\\ 10\\ 13.2\\ 13\\ 11\\ 8\end{array}$
0	0	219	261.7
0 0	0 0	57 162	75.8 185.9

from	to
PC	CU factor
I	NTERVAL
07:30	08:30
07:45	08:45
08:00	09:00
08:15	09:15
08:30	09:30
08:45	09:45
09:00	10:00
09:15	10:15
15:00	16:00
15:15	16:15
15:30	16:30
15:45	16:45
16:00	17:00
16:15	17:15
16:30	17:30
16:45	17:45
17:00	18:00
17:15	18:15
17:30	18:30
17:45	18:45
	P/TOT

from: to:



period I 07:30	period II 15:00						DATE: 02/1	0/2018		SITE:	1								fro	m arm:	В
09:30	18:00						DAY: Tues	day	LO	CATION:	Manor	r Road ,	/ Retail	Park Ac	cess					to arm:	В
									TOTAL	ARMS:		В	С	_							
per h										_			<u>of an</u>								
CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TO	PCU.h	-	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL			TOT	PCU
1	1	1.5	2.3	2	0.4	0.2				CU factor		1	1.5	2.3	2	0.4	0.2				
01:00	01:00	01:00	01:00	01:00	01:00	01:00	01:0		-		00:15	00:15	00:15	00:15	00:15	00:15	00:15	ו		00:15	00:15
10	4	I	0	9	0	0	24		07:30	07:45	0	0	0	0	0	0	0			0	0
11	4	0 0	0 0	10 8	0	0 0	25 24		07:45 08:00	08:00 08:15	0	0	0	0	0 0	0	0			0	0
12	4 5	0	0	8	0	0	24		08:00	08:30	0	0	0	0	0	0	0			0	0
20	4	0	1	8	0	0	33		08:30	<b>08:45</b>	0	0	0	0	0	0	0	-		0	0
17	4	0	1	5	0	0	27		08:45	09:00	Ő	0	0	0	0	0	Ő			ŏ	0
15	4	0	1	4	0	0	24		09:00	09:15	Ő	0	0	0	Ő	Ő	Ő			ŏ	Ő
11	2	0	1	2	0	0	16		09:15	09:30	0	0	0	0	0	0	0			Ō	0
39	3	0	0	10	2	1	55		15:00	15:15	0	0	0	0	0	0	0	-		Ō	0
47	4	1	0	11	2	1	66		15:15	15:30	0	0	0	0	0	0	0			0	0
52	3	1	0	10	2	1	69	77.5	15:30	15:45	0	0	0	0	0	0	0			0	0
53	3	1	0	11	0	1	69	79.7	15:45	16:00	0	0	0	0	0	0	0			0	0
53	3	1	0	10	0	1	86	77.7	16:00	16:15	0	0	0	0	0	0	0			0	0
42	3	0	0	10	0	2	57		16:15	16:30	0	0	0	0	0	0	0			0	0
37	3	0	0	10	0	2	52		16:30	16:45	0	0	0	0	0	0	0			0	0
27	4	0	0	8	0	1	40		16:45	17:00	0	0	0	0	0	0	0			0	0
28	3	0	0	7	0	1	39		17:00	17:15	0	0	0	0	0	0	0			0	0
22	2	0	0	4	0	0	28		17:15	17:30	0	0	0	0	0	0	0	-		0	0
14	1	0	0	2	0	0	17		17:30	17:45	0	0	0	0	0	0	0			0	0
8	0	0	0	0	0	0	8	8	17:45	18:00	0	0	0	0	0	0	0			0	0
150	17	2	1	44	2	3	0 0 21	261.7		P/TOT	0	0	0	0	0	0	0	0	0	0	0
									Davida		0	0	0	0	0	0	0	0	0	•	0
										d I Total:	0	0	0	0 0	0	0	0	0	0	0	0
									rerio	d II Total:	0	0	0	U	0	0	0	0	0	0	0

		period I	period II		
	from:	07:30	15:00		
	to:	09:30	18:00		
		per ho	our		
from	to	CAR	LGV	OGV1	OGV2
PC	:U factor	1	1	1.5	2.3
II	NTERVAL	01:00	01:00	01:00	01:00
07:30	08:30	0	0	0	0
07:45	08:45	0	0	0	0
08:00	09:00	0	0	0	0
08:15	09:15	0	0	0	0
08:30	09:30	0	0	0	0
08:45	09:45	0	0	0	0
09:00	10:00	0	0	0	0
09:15	10:15	0	0	0	0
15:00	16:00	0	0	0	0
15:15	16:15	0	0	0	0
15:30	16:30	0	0	0	0
15:45	16:45	0	0	0	0
16:00	17:00	0	0	0	0
16:15	17:15	0	0	0	0
16:30	17:30	0	0	0	0
16:45	17:45	0	0	0	0
17:00	18:00	0	0	0	0
17:15	18:15	0	0	0	0
17:30	18:30	0	0	0	0
17:45	18:45	0	0	0	0
	P/TOT	0	0	0	0



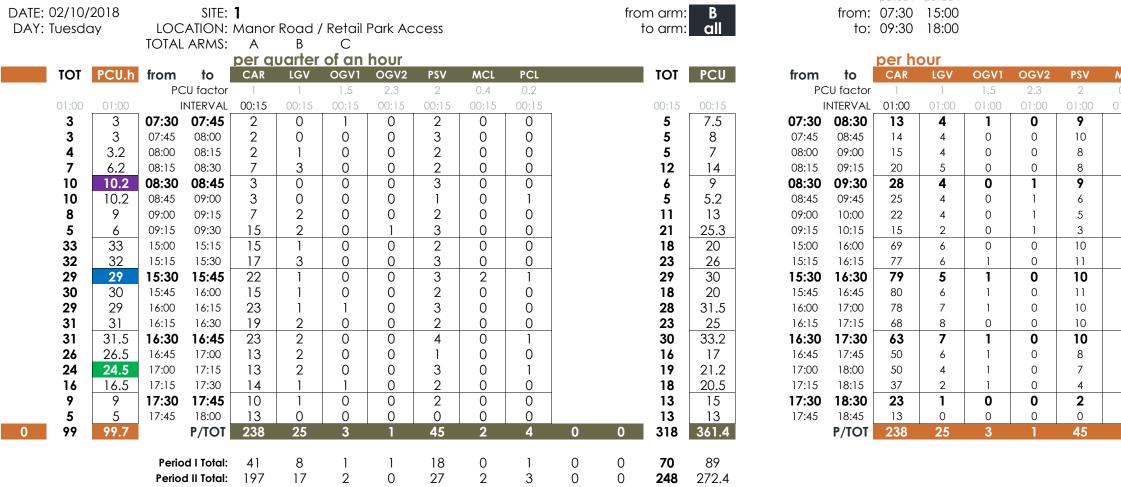
9256 / MANOR ROAD, RICHMOND October 2018 Classified Turning Count

				D	ATE: (	02/10/	2018		SITE:	1								fror	n arm:	В		from:	period I 07:30							
				[	DAY: 1	luesdo	ау		CATION:		Road ,	′ Retail	Park Ac	cess				t	o arm:	C		to:	09:30	18:00						
								TOTAL	_ ARMS:		В	С																		
											<u>uarter</u>										_		per ho						_	
PS	/	MCL	PCL			TOT	PCU.h		to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL			TOT	PCU	from	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
2		0.4	0.2						CU factor	1	1	1.5	2.3	2	0.4	0.2						U factor		1	1.5	2.3	2	0.4	0.2	
01:0		01:00	01:00	1		01:00	01:00	-	INTERVAL		00:15	00:15	00:15	00:15	00:15	00:15			00:15	00:15				01:00	01:00	01:00	01:00	01:00	01:00	I
0		0	0			0	0		07:45	0	0	0	0	0	0	0			0	0	07:30		3	0	0	0	0	0	0	I
0		0	0			0	0	07:45	08:00		0	0	0	0	0	0			I		07:45	08:45	3	0	0	0	0	0	0	I
0		0	0			0	0	08:00	08:15	0	0	0	0	0	0	0			0	0	08:00	09:00	3	0	0	0	0	0	1	I
0		0 <b>0</b>	0			0	0	08:15 <b>08:30</b>	08:30 <b>08:45</b>	2	0	0	0	0	0	0			2	0	08:15 <b>08:30</b>	09:15 <b>09:30</b>	6 8	0	0	0	0	0	1	I
0		0	0			0	0	08:45	09:00	1	0	0	0	0	0	1			2	1.2	08:45	09:45	<b>0</b> 8	0	0	0	1	0		I
0		0	0			0	0	08.43	07:00	3	0	0	0	0	0	0			2	3	08.45	10:00	7	0	0	0	1	0	0	I
0		0	0			0	0	07:00	07:10	4	0	0	0	1	0	0			5	6	07:00	10:15	4	0	0	0	1	0	0	I
0		0	0			ñ	0	15:00	15:15	6	1	0	0	0	0	0			7	7	15:00	16:00	30	3	0	0	0	0	0	I
0		0	0			õ	0	15:15	15:30	9	1	0	Ő	0	0	0			10	10	15:15	16:15	30	2	0	0	0	0	0	I
0		Ô	Û			õ	0	15:30		7	1	0	0	0	0	0			8	8	15:30	16:30	27	2	0	0	Ő	0	0	I
0		0	0			Õ	0	15:45	16:00	8	0	0	0	Õ	0	0			8	8	15:45	16:45	27	3	0	0	0	0	0	I
0		0	0			Ō	0	16:00	16:15	6	0	0	0	0	0	0			6	6	16:00	17:00	25	4	0	0	0	0	0	I
0		0	0			0	0	16:15	16:30	6	1	0	0	0	0	0			7	7	16:15	17:15	26	5	0	0	0	0	0	I
0		0	0			0	0	16:30	16:45	7	2	0	0	0	0	0			9	9	16:30	17:30	26	4	1	0	0	0	0	I
0		0	0			0	0	16:45	17:00	6	1	0	0	0	0	0			7	7	16:45	17:45	23	2	1	0	0	0	0	I
0		0	0			0	0	17:00	17:15	7	1	0	0	0	0	0			8	8	17:00	18:00	22	1	1	0	0	0	0	I
0		0	0			0	0	17:15	17:30	6	0	1	0	0	0	0			7	7.5	17:15	18:15	15	0	1	0	0	0	0	1
0		0	0			0	0	17:30		4	0	0	0	0	0	0			4	4	17:30	18:30	9	0	0	0	0	0	0	I
0		0	0			0	0	17:45	18:00	5	0	0	0	0	0	0			5	5	17:45	18:45	5	0	0	0	0	0	0	
0		0	0	0	0	0	0		P/TOT	88	8	1	0	1	0	1	0	0	99	99.7		P/TOT	88	8	1	0	1	0	1	0
											<u>^</u>	0	•	-	•		•	•		10.0										
									od I Total:		0	0	0		0	I	0	0	13	13.2										
								Perio	d II Total:	77	8	I	0	0	0	0	0	0	86	86.5										

## 9256 / MANC

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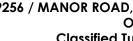
### DATE: 02/10/2018 DAY: Tuesday

LOC TOTAL

MCL	PCL			TOT	PCU.h	from
0.4	0.2					PC
01:00	01:00			01:00	01:00	11
0	0			27	36.5	07:30
0	0			28	38	07:45
0	1			28	35.2	08:00
0	1			34	41.2	08:15
0	1			43	52.5	08:30
0	1			37	43.5	08:45
0	0			32	38.3	09:00
0	0			21	25.3	09:15
2	1			88	96	15:00
2	1			98	107.5	15:15
2	1			98	106.5	15:30
0	1			99	109.7	15:45
0	1			97	106.7	16:00
0	2			88	96.4	16:15
0	2			83	91.9	16:30
0	1			66	73.7	16:45
0	1			63	69.7	17:00
0	0			44	48.5	17:15
0	0			26	28	17:30
0	0			13	13	17:45
2	4	0	0	318	361.4	

Perio Perioc

NATIONWIDE DAT	A COLLECTION																				Classified		g Count		NATIONWIDE DA	TA COLLECTION		
SITE: ATION: ARMS:	Manor	Road / B	' Retail C	Park Ac	cess					n arm: o arm:	_			07:30	period II 15:00 18:00							02/10, Tuesd			SITE: CATION: L ARMS:	Manor	Road /	/ Retail I
to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL			τοτ	PCU	from	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		тот	PCU.h	from	to	<mark>per q</mark> Car	uarter LGV	of an OGV1
:U factor	00:15	00.15	1.5	2.3	2	0.4	0.2			00.15	00.15		CU factor	01.00	01.00	1.5	2.3	2	0.4	0.2		01.00	01.00		U factor		00.15	1.5
NTERVAL 07:45	00:15	00:15	00:15	00:15 0	00:15	00:15	00:15	Ţ		00:15	00:15	07:30	NTERVAL 08:30		01:00	01:00	01:00	01:00 9	01:00	01:00		01:00	01:00 38.5	07:30	NTERVAL 07:45	77	00:15	00:15
07.45	1	0	0	0	3	0	0 0			3 8	4.5	07:45	08:45	<b>16</b> 20	<b>3</b>	0	<b>0</b> 0	10	<b>0</b>	<b>0</b> 0		29 33	43	07:45	07.45	47	13 8	3
08:15	2	1	0	0	2	0	0			5	7	08:00	09:00	20	4	0	0	7	0	1		36	42.2	08:00	08:15	61	10	1
08:30	9	1	Ő	Ő	3	0	Ő			13	16	08:15	09:15	35	3	0	0	7	0	1		46	52.2	08:15	08:30	58	10	2
08:45	5	0	0	0	2	0	0	-		7	9	08:30	09:30	37	7	0	0	7	0	2		53	58.4	08:30	08:45	61	11	1
09:00	8	2	0	0	0	0	1			11	10.2	08:45	09:45	32	7	0	0	5	0	2		46	49.4	08:45	09:00	78	13	1
09:15	13	0	0	0	2	0	0			15	17	09:00	10:00	24	5	0	0	5	0	1		35	39.2	09:00	09:15	61	4	2
09:30	11	5	0	0	3	0	1			20	22.2	09:15	10:15	11	5	0	0	3	0	1		20	22.2	09:15	09:30	63	10	1
15:15	19	0	0	0	2	0	0			21	23	15:00	16:00	70	3	0	0	11	2	2		88	96.2	15:00	15:15	55	8	3
15:30	18	1	0	0	3	1	0	_		23	25.4	15:15	16:15	80	4	0	0	10	2	2		98	105.2	15:15	15:30	39	11	5
15:45	17	2	0	0	3	1	1			24	25.6	15:30	16:30	73	6	0	0	11	1	2		93	101.8	15:30	15:45	72	11	1
16:00	16	0	0	0	3	0	1			20	22.2	15:45	16:45	71	6	1	0	11	0	2		91	100.9	15:45	16:00	46	11	3
16:15	29		0	0		0	0			31	32	16:00	17:00	68	8	1	0	8	0			86	93.7	16:00	16:15	53	11	2
16:30	16	3	0	0	4	0	0			18	22	16:15	17:15	50 E 4	/	1	0	10	0	1		69	78.7	16:15	16:30	57	12	
<b>16:45</b> 17:00	15	2 2	0	0	3	0	0			22 15	24.7	<b>16:30</b> 16:45	<b>17:30</b> 17:45	<b>54</b> 51	<b>5</b> 3	0	<b>0</b> 0	8	0	0		69	76.7	<b>16:30</b> 16:45	<b>16:45</b> 17:00	53	10	3
17:00	13 11	0	0	0	3	0	0			14	15 17	17:00	17.43	50	1	0	0	6	0	1		60 60	66 67.2	17:00	17:15	54 56	13 18	0
17:30	15	1	0	0	2	0	0			18	20	17:00	18:15	39	1	0	0	5	0	1		46	50.2	17:15	17:30	80	15	1
17:45	12	0	0	0	1	0	0	-		13	14	17:30	18:30	24	0	0	0	3	0	1		28	30.2	17:30	17:45	75	8	5
18:00	12	0	Ő	0	2	0	1			15	16.2	17:45	18:45	12	0	0	0	2	0			15	16.2	17:45	18:00	73	12	0
P/TOT	241	22	2	0	43	2	6	0	0	316	354		P/TOT	241	22	2	0	43	2	6	0 0	316	354		P/TOT	1219	219	37
d I Total: 1 II Total:	53 188	10 12	1 1	0	16 27	0 2	2 4	0	0	82 234	96.9 257.1														d I Total: 1 II Total:		79 140	12 25



NDC



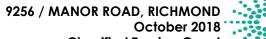
9256 / MANOR ROAD, RICHMOND October 2018 Classified Turning Count



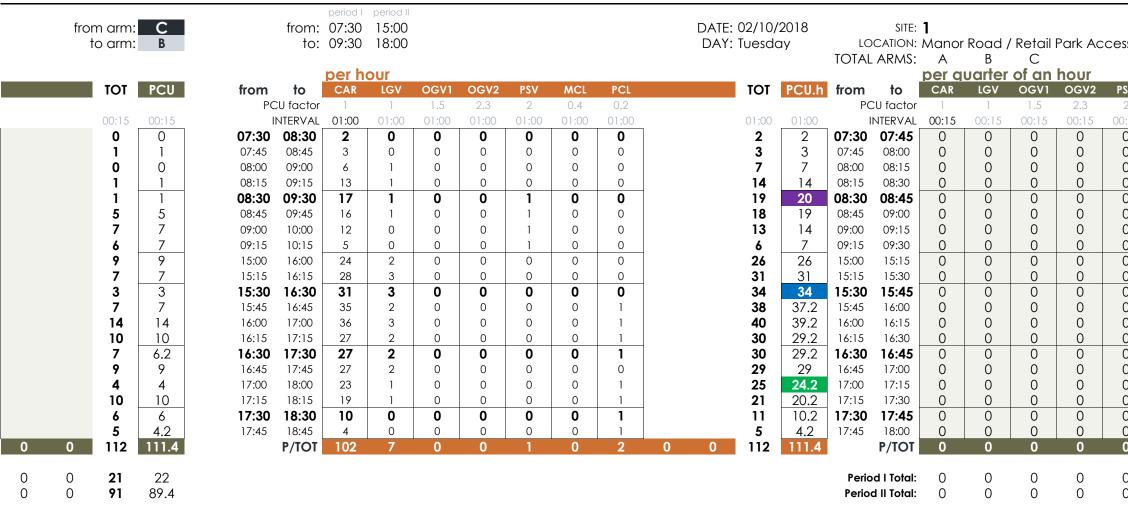
<sup>2</sup> ark Ac	cess				fr	om arm to arm			from to		period II 15:00 18:00						DATE: DAY:	02/10/ Tuesdo			SITE: DCATION: ARMS:	Manor	Road , B	/ Retail C	Park Ac	cess		
hour										per h	our												uarter	of an	hour			
OGV2	PSV	MCL	PCL			TOT	PCU	from	to to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		TOT	PCU.h	from	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL
2.3	2	0.4	0.2						PCU facto	<b>r</b> 1	1	1.5	2.3	2	0.4	0.2				PC	CU factor	1	1	1.5	2.3	2	0.4	0.2
00:15	00:15	00:15	00:15	1		00:15			INTERVA		01:00	01:00	01:00	01:00	01:00	01:00		01:00	01:00		INTERVAL	00:15	00:15	00:15	00:15	00:15	00:15	00:15
0	5	4	2			104	106.5	07:3	08:30	243	41	7	2	13	11	13		330	332.1	07:30	07:45	0	0	0	0	0	0	0
0	5	1	2			64	67.3	07:45	08:45	227	39	5	2	8	11	14		306	301.3	07:45	08:00	1	0	0	0	0	0	0
1	1	5	5			84	79.8	08:00		258	44	5	3	3	11	15		339	329.8	08:00	08:15	0	0	0	0	0	0	0
1	2	1	4			78	78.5	08:15		258	38	6	2	2	7	11		324	318.6	08:15	08:30	1	0	0	0	0	0	0
0	0	4	3			80	75.7	08:3			38	5	1	2	7	7		323	319	08:30		1	0	0	0	0	0	0
1	0	1	3			97	95.8	08:45		202	27	4	1	2	3	4		243	243.3	08:45	09:00	4	1	0	0	0	0	0
0	0	1	1			69	68.6	09:00		124	14	3	0	2	2	1		146	147.5	09:00	09:15	7	0	0	0	0	0	0
0	2	1	0	-		77	78.9	09:15		63	10	1	0	2	1	0		77	78.9	09:15	09:30	5	0	0	0	1	0	0
0	1	1	4			72	70.7	15:00		212	41	12	3	8	4	6		286	296.7	15:00	15:15	9	0	0	0	0	0	0
1	3	1	1			61	66.4	15:15		210	44	11	4	8	4	3		284	297.9	15:15	15:30	6	1	0	0	0	0	0
2	1	1	1			89	91.7	15:3			45	7	4	7	3	4		298	308.7	15:30	15:45	2	1	0	0	0	0	0
0	3	1	0			64	67.9	15:45		209	44	9	2	7	3	6		280	287.5	15:45	16:00	7	0	0	0	0	0	0
1	1	1	1			70	71.9	16:00		217	46	7	2	6	3	7		288	292.7	16:00	16:15	13	1	0	0	0	0	0
1	2	0	2			75	77.2	16:15		220	53	5	1	8	3	8		298	301.6	16:15	16:30	9	1	0	0	0	0	0
0			3			71	70.5	16:3			56	5	0	7	4	10		325	324.1	16:30		6	0	0	0	0	0	
0	2					72	73.1	16:45		265	54	7	0	7	7	9		349	348.1	16:45	17:00	8		0	0	0	0	0
0	3		Z			80	80.8	17:00		284	53	6	0	7	8	9		367	365	17:00	17:15	4	0	0	0	0	0	0
0			4	-		102	99.7	17:15		228	35	6	0	4	7	7		287	284.2	17:15	17:30	9		0	0	0	0	0
0		4	2			95	94.5	17:3			20	5	0	3	6	3		185	184.5	17:30	17:45	6	0	0	0	0	0	0
0	2	2	10		0	90	90	17:45		73	12	0	0	2	2		0	90	90	17:45	18:00	4	0	0	0	0	0	
8	36	33	42	0	0	1594	1606		P/TO1	1219	219	37	8	36	33	42	0 0	1594	1606		P/TOT	102		0	0		0	2
З	15	18	20	0	0	653	651.1													Poria	od I Total:	19	1	0	0	1	0	0
5	15 21	15	20 22	0	0	655 941	954.4														d II Total:		1 6	0	0	0	0	2
5	Z I	15		0	0	741	754.4													reno		05	0	0	0	0	0	2



ID 18 nt



Classified Turning Count



ess					m arm: o arm:	C C
PSV	MCL	PCL			τοτ	PCU
2	0.4	0.2				
0:15	00:15	00:15			00:15	00:15
0	0	0			0	0
0 0	0	0 0			0	0
0	0	0			0	0
0 0 0 0	0	0			0	0
0	0	0			0 0	0
0	0 0	0 0			0	0
0	0	0			Ő	0
0	0	0			Õ	0
0	0	0			0	0
	0	0			0	0
0 0 0	0	0 0 0			0	0
0	0				0	0
0	0	0			0	0
0 0 0	0	0			0	0
0	0 0	0 0			0 0	0 0
0	0	0			0	0
0	0	0			0	0
0	0	0			Ő	0
0	0	0	0	0	Õ	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

9256 / MANOR ROAD, RICHMOND October 2018 Classified Turning Count

NDC

		period I 07:30 09:30	period II 15:00 18:00						DATE: 02/1 DAY: Tues			SITE: ATION: ARMS:		Road , B	' Retail C	Park Ac	cess			
		per h	our								_		per q	uarter	of an	hour				
from	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TO	PCU.h	from	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
PC	CU factor	1	1	1.5	2.3	2	0.4	0.2			PC	CU factor	1	1	1.5	2.3	2	0.4	0.2	
	NTERVAL	01:00	01:00	01:00	01:00	01:00	01:00	01:00	01:0	00:10	-	NTERVAL		00:15	00:15	00:15	00:15	00:15	00:15	
07:30	08:30	0	0	0	0	0	0	0	0	0	07:30	07:45	77	13	3	0	5	4	2	
07:45	08:45	0	0	0	0	0	0	0	0	0	07:45	08:00	48	8	1	0	5	1	2	
08:00	09:00	0	0	0	0	0	0	0	0	0	08:00	08:15	61	10	1	1	1	5	5	
08:15	09:15	0	0	0	0	0	0	0	0	0	08:15	08:30	59	10	2	1	2	1	4	
08:30	09:30	0	0	0	0	0	0	0	0	0	08:30	08:45	62	11	1	0	0	4	3	
08:45	09:45	0	0	0	0	0	0	0	0	0	08:45	09:00	82	14	1	1	0	1	3	
09:00	10:00	0	0	0	0	0	0	0	0	0	09:00	09:15	68	4	2	0	0	1	1	
09:15	10:15	0	0	0	0	0	0	0	0	0	09:15	09:30	68	10	1	0	3	1	0	
15:00	16:00	0	0	0	0	0	0	0	0	0	15:00	15:15	64	8	3	0	1	1	4	
15:15	16:15	0	0	0	0	0	0	0	0	0	15:15	15:30	45	12	5	1	3	1	1	
15:30	16:30	0	0	0	0	0	0	0	0	0	15:30	15:45	74	12	1	2	1	1	1	
15:45	16:45	0	0	0	0	0	0	0	0	0	15:45	16:00	53	11	3	0	3	1	0	
16:00	17:00	0	0	0	0	0	0	0	0	0	16:00	16:15	66	12	2	1	1	1	1	
16:15	17:15	0	0	0	0	0	0	0	0	0	16:15	16:30	66	13	1	1	2	0	2	
16:30	17:30	0	0	0	0	0	0	0	0	0	16:30	16:45	59	10	3	0	1	1	4	
16:45	17:45	0	0	0	0	0	0	0	0	0	16:45	17:00	62	14	1	0	2	1	1	
17:00	18:00	0	0	0	0	0	0	0	0	0	17:00	17:15	60	18	0	0	3	1	2	
17:15	18:15	0	0	0	0	0	0	0	0	0	17:15	17:30	89	16	1	0	1	1	4	
17:30	18:30	0	0	0	0	0	0	0	0	0	17:30	17:45	81	8	5	0	1	4	2	
17:45	18:45	0	0	0	0	0	0	0	0	0	17:45	18:00	77	12	0	0	2	2	2	
	P/TOT	0	0	0	0	0	0	0	0 0 0	0		P/TOT	1321	226	37	8	37	33	44	0
												od I Total: d II Total:	525 796	80 146	12 25	3 5	16 21	18 15	20 24	0 0

9256 Manor Road CTCSite1

from arr to arr			from: to:	period I 07:30 09:30
TO	PCU	from PC	<b>to</b> CU factor	per ho CAR
00:1	5 00:15		NTERVAL	01:00
104		07:30	08:30	<b>245</b>
65		07:45	08:45	230
84		08:00	09:00	264
79		08:15	09:15	271
81	76.7	08:30	09:30	280
102		08:45	09:45	218
76		09:00	10:00	136
83		09:15	10:15	68
81	79.7	15:00	16:00	236
68		15:15	16:15	238
92	94.7	15:30	16:30	259
71	74.9	15:45	16:45	244
84	85.9	16:00	17:00	253
85	87.2	16:15	17:15	247
78	76.7	16:30	17:30	270
81	82.1	16:45	17:45	292
84	84.8	17:00	18:00	307
112	2 109.7	17:15	18:15	247
101		17:30	18:30	158
95	94.2	17:45	18:45	77
0 170	6 1717		P/TOT	1321
0 674 0 103				

NDC for Client

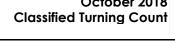


period II 15:00 18:00								02/10, Tuesd			SITE: ATION: ARMS:		Road / B	<sup>r</sup> Retail C	Park Ac	cess					n arm o arm	
DUr LGV	OGV1	OGV2	PSV	MCL	PCL			τοτ	PCU.h		to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL			τοτ	PCU
1	1.5	2.3	2	0.4	0.2			01.00	01.00		CU factor	1	1	1.5	2.3	2	0.4	0.2			00.15	00.15
01:00	01:00	01:00	01:00	01:00	01:00	1		01:00	01:00			00:15	00:15	00:15	00:15	00:15	00:15	00:15			00:15	00:15
<b>41</b>	7	2	13	11	13			332	334.1	07:30	07:45	30	15	4	0	2	0	2			53	55.4
39 45	5 5	2 3	8 3	11	14 15			309 346	304.3 336.8	07:45 08:00	08:00 08:15	39 29	12	3 4		0	0	3			56 44	58 44
43 39	6	2	2	7	11			338	332.6	08:15	08:13	27 38	6 8	4	0	0	2	4			44 54	50.6
39	5	1	3	7	7			342	339	08:30	08:45	56	8	3	0	0	1	3			71	69.5
28	4	1	3	3	4			261	262.3	08:45	09:00	59	9	2	0	1	1	1			73	73.6
14	3	0	3	2	1			159	161.5	09:00	09:15	30	7	5	Õ	0	0	3			45	45.1
10	1	0	3	1	0			83	85.9	09:15	09:30	38	6	3	0	2	0	1			50	52.7
43	12	3	8	4	6			312	322.7	15:00	15:15	52	10	1	0	1	3	2			69	67.1
47	11	4	8	4	3			315	328.9	15:15	15:30	36	7	3	0	1	0	1			48	49.7
48	7	4	7	3	4			332	342.7	15:30	15:45	46	8	2	0	0	2	3			61	58.4
46	9	2	7	3	7			318	324.7	15:45	16:00	41	8	0	0	0	0	1			50	49.2
49	7	2	6	3	8			328	331.9	16:00	16:15	38	5	1	0	1	1	1			47	47.1
55	5	1	8	3	9	-		328	330.8	16:15	16:30	40	6	1	0	0	3	1			51	48.9
58	5	0	7	4	11			355	353.3	16:30	16:45	42	8	1	0	1	1	0			53	53.9
56	7	0	7	7	9			378	377.1	16:45	17:00	43	7	0	0	0	0	1			51	50.2
54	6	0	7	8	10			392	389.2	17:00	17:15	48	6	2	0	1	2	1			60	60
36	6	0	4	7	8	=		308	304.4	17:15	17:30	45	6	2	0	0	3	4			60	56
<b>20</b>	5	0	3	6	4			196	194.7	17:30	17:45	44	4	0	0	0		4			53	49.2
12 <b>226</b>	0 37	0	2 <b>37</b>	2 33	2 <b>44</b>	0	0	95 1706	94.2	17:45	18:00 <b>P/TOT</b>	43 837	5 151	0 39	0	0	2 23	4 41	0	0	54 1103	49.6 1088
220	3/	0	3/	33	44	0	0	1706	1717		r/IUI	o3/	131	37	1	TI	ZJ	41	U	0	1103	1000
										Perio	d I Total:	319	71	26	1	6	5	18	0	0	446	448.9
											d II Total:	518	80	13	Ō	5	18	23	Õ	Õ	657	639.3

	period I	period II
from:	07:30	15:00
to:	09:30	18:00

from	to	CAR	LGV	OGV1	OGV2	PSV
PC	CU factor	1	1	1.5	2.3	2
I	NTERVAL	01:00	01:00	01:00	01:00	01:00
07:30	08:30	136	41	13	1	3
07:45	08:45	162	34	12	1	1
08:00	09:00	182	31	11	0	2
08:15	09:15	183	32	12	0	1
08:30	09:30	183	30	13	0	3
08:45	09:45	127	22	10	0	3
09:00	10:00	68	13	8	0	2
09:15	10:15	38	6	3	0	2
15:00	16:00	175	33	6	0	2
15:15	16:15	161	28	6	0	2
15:30	16:30	165	27	4	0	1
15:45	16:45	161	27	3	0	2
16:00	17:00	163	26	3	0	2
16:15	17:15	173	27	4	0	2
16:30	17:30	178	27	5	0	2
16:45	17:45	180	23	4	0	1
17:00	18:00	180	21	4	0	1
17:15	18:15	132	15	2	0	0
17:30	18:30	87	9	0	0	0
17:45	18:45	43	5	0	0	0
	P/TOT	837	151	39	1	11





			02/10/ Tuesdo			SITE: ATION: ARMS:		Road , B	/ Retail C	Park Ac	cess					om arm: to arm:					period I 07:30 09:30	period II 15:00 18:00						DATE: DAY:
MCL	PCL		TOT	PCU.h	from	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL			τοτ	PCU		from	to	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
0.4	0.2					CU factor	1	1	1.5	2.3	2	0.4	0.2							CU factor	1	1	1.5	2.3	2	0.4	0.2	
01:00	01:00	1	01:00	01:00		NTERVAL	00:15	00:15	00:15	00:15	00:15	00:15	00:15			00:15	00:15			NTERVAL	01:00	01:00	01:00	01:00	01:00	01:00	01:00	
3	10		207	208		07:45	110	28	9	0	10	4	4			165	173.9	AM	07:30	08:30	405	89	22	3	34	14	23	
4	11		225	222.1	07:45	08:00	91	21	4	1	11	1	3			132	143.3	AM	07:45	08:45	420	80	17	3	29	15	25	
5	11		242	237.7	08:00	08:15	94	18	5	1	6	6	8			138	137.8	AM	08:00	09:00	476	83	16	3	20	16	27	
4	11		243	238.8	08:15	08:30	110	22	4	1	7	3	8			155	157.1	AM	08:15	09:15	490	78	18	2	18	11	23	
2	8		239		08:30	08:45	125	19	4	0	5	5	6			164	163.2	AM	08:30	09:30	503	79	18	2	20	9	17	
	5		168	171.4	08:45	09:00	147	24	3		2	2	5			184	183.6	AM	08:45	09:45	378	60	14	2	15	4	11	
0	4		95	97.8	09:00	09:15	108	13	7	0	4	1	4			137	140.7	AM	09:00	10:00	231	36	11		13	2	6	
0	7		50	52.7	09:15	09:30	123	23	4		9	<u> </u>	2			163	173.1	AM	09:15	10:15	123	23	4	1	9	10	2	
5	,		228	224.4	15:00	15:15	135	18	4 8	0	6	4	6 2			173	173.8	MID	15:00	16:00	496	80	18	3	31	13	16	
3	6 6		206 209	204.4 203.6	15:15 <b>15:30</b>	15:30 <b>15:45</b>	<u>101</u> 150	<u>21</u> 21	3	2	10	2				145 195	157.5 197.7	MID MID	15:15 <b>15:30</b>	16:15 <b>16:30</b>	498 <b>518</b>	80	18 12	4	31 <b>29</b>	11 12	12 13	
6	<b>0</b> 3		207	199.1	15:45	1 <b>5:45</b> 16:00	110	20	3	0	8	6	6 2			144	151.3	MID	15:45	16:45	<b>510</b> 494	<b>81</b> 80	14	<b>4</b> 2	<b>27</b> 31	8	13	
5	3		201	200.1	16:00	16:15	137	18	4	1	6	2	2			170	176.5	PM	16:00	17:00	474 501	83	14	2	26	8	12	
6	3		215	213	16:15	16:30	121	22	2	1	8	3	3			160	166.1	PM	16:15	17:15	485	90	10	1	30	9	14	
6	6		224	220.1	16:30	16:45	126	20	5	0	9	2	5			167	173.3	PM	16:30	17:30	512	91	11	0	27	10	19	
6	10		224	215.4	16:45	17:00	117	23	1	0 0	3	1	2			147	148.3	PM	16:45	17:45	523	84	11	0	22	13	20	
8	13		227	214.8	17:00	17:15	121	25	2	Õ	10	3	4			165	171	PM	17:00	18:00	542	78	10	0	23	16	24	
6	12		167	154.8	17:15	17:30	148	23	3	Ő	5	4	8			191	188.7	PM	17:15	18:15	421	53	8	0	13	13	20	
3	8		107	98.8	17:30	17:45	137	13	5	0	4	5	6			170	168.7	PM	17:30	18:30	273	30	5	0	8	9	12	
2	4		54	49.6	17:45	18:00	136	17	0	0	4	4	6			167	163.8	PM	17:45	18:45	136	17	0	0	4	4	6	
23	41	0 0	1103	1088		P/TOT	2447	409	80	10	134	60	92	0	0	3232	3309			P/TOT	2447	409	80	10	134	60	92	0 0
																										from:	to:	
						d I Total:	908	168	40	5	54	23	40	0	0	1238	1273		08:30			ak Houi			AM		10:00	AM Pec
					Perio	d II Total:	1539	241	40	5	80	37	52	0	0	1994	2037		15:30			eak Hou			MID	10:00	16:00	MID Pec
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																			17:00	18:00	TOT Pe	ak Hou	r					TOT Pec

# 9256 / MANOR ROA

# Classified

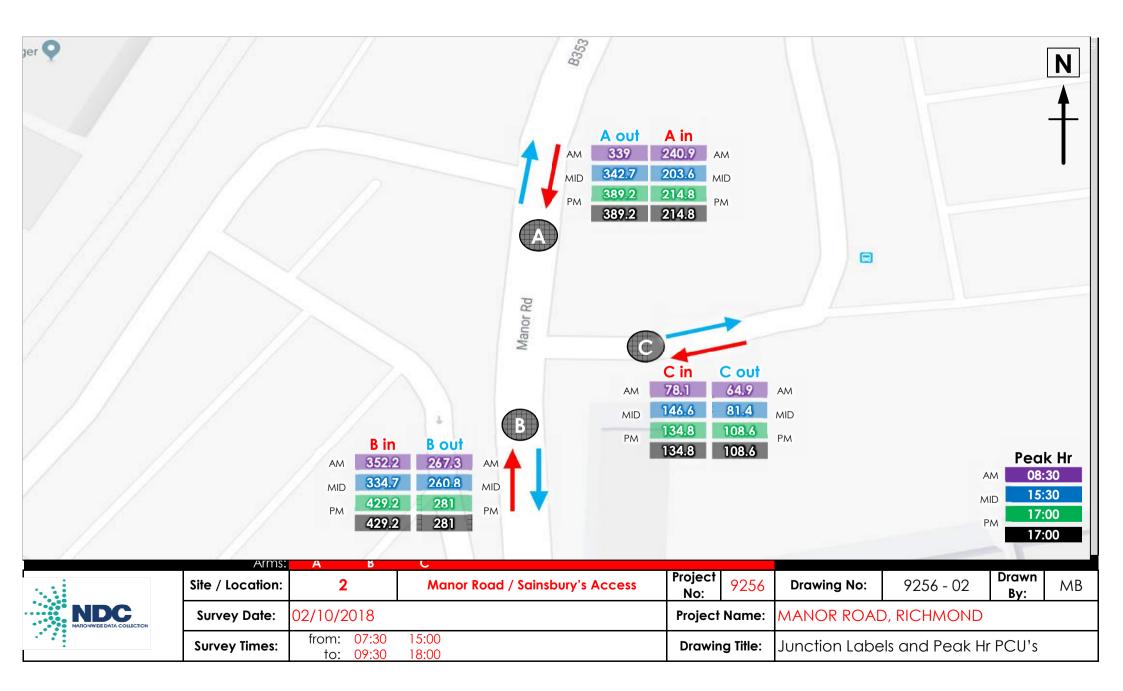
### D, RICHMOND October 2018 Turning Count

02/10/2018 Tuesday

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τοτ	PCU.h
01:00	01:00
<b>590</b>	612.1
<b>589</b>	601.4
641	641.7
640	644.6
648	<b>660.6</b>
484	497.4
300	313.8
163	173.1
657	680.3
654	683
669	<b>691.6</b>
641	667.2
644	664.2
639	658.7
670	681.3
673	676.7
693	<b>692.2</b>
528	521.2
337	332.5
337 167 3232	163.8 3309
ck PCU ck PCU ck PCU ck PCU ck PCU	660.6 691.6 692.2 692.2

NDC for Client





APPENDIX D Parking Stress Survey Report

# יווטווטו אטטט, Richmond רטואוווץ אוופא Survey Report

# רחגאוווע גיאנפאג SURVEY אכרטRT

vevelopment: Inunoi Roua, Richmond

LUCUTION. LUNUUL DUPOUGH OF RICHINOND

cient: nvaricon kichinona pevelopments Limited

רוטובנו ווםהמספר. הטעפר וווטונוֹשפר

veision No: vol

DULE: 20111/2018

# πμμι υvals:

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Avanton Richmond Developments Limitedhas commissioned Alpha Parking Ltd to undertake a parking stress survey around the development site known as Manor Road in Richmond.

The purpose of the survey is to examine the roads within 500 metres' walking distance of the site and establish the existing levels of "parking stress", meaning the percentage of the kerbside parking space occupied at peak periods. This information can be used to assess whether there would be sufficient spare capacity on the streets for any additional parking generated by the development or whether special measures would be needed to manage the pressure for parking space.

Further details of the survey project are given in the inception document shown in Appendix A and a plan of the development site and survey area is shown in Figure 1.

The idea of parking stress surveys arose following changes in government policy in the 1990s to address concerns about growth in car use. In order to limit the available parking spaces the previous requirements to provide parking within housing developments were dropped and, instead, planning authorities were given new powers to cap the number of spaces that developers might choose to provide. However, reducing the levels of parking space did not necessarily stop the new residents from wanting cars. This tended to put pressure on the parking facilities in surrounding roads and, in some cases, for parking demand to exceed the available capacity.

In response to this a number of local authorities, such as the The London Borough of Lambeth, realised the need to assess such problems at the planning stage and the concept of "planning/parking stress surveys" came into being. These allowed early identification of likely problems and meant that protective measures (often in the form of parking restrictions on the streets) could be brought in with, and funded by, the development. The London Borough of Lambeth produced what are recognised as the standard guidelines on how to approach these surveys the "Lambeth Methodology". This approach is used as the basis for this survey.

# 2 PROJECT APPROACH

Alpha Parking Ltd recognises that the parking stress survey method developed by Lambeth Council has become an unofficial standard for this type of work and we use this as a basis for our surveys. This standard approach has an added benefit in allowing the results to be readily understood by anyone familiar with previous surveys.

However, we recommend that survey times and technical standards (such as the nominal length of road occupied by a parked vehicle) are tailored to reflect the preferences of the particular local authority involved and we plan the surveys to reflect these requirements.

Every Planning Department will decide on the parking situation on a case by case basis. This means that it is not possible to predict the planning decision, therefore the surveys are providing an independent and professional set of results to facilitate the decision rather than a conclusion. As an indication of the message from the results we would suggest that 85% is an indicative level at which parking stress becomes a cause for concern after allowance has been made for parking generated by the development. At this point, residents will begin to have difficulty parking close to their homes. Anything over 95% represents a situation where full capacity has effectively been reached. The use of a 500 metre walking distance to define the roads affected by the development is accepted as standard practice.

# 3 METHODOLOGY

# **Background Assessment**

An initial assessment was made taking into account the following factors:-

- The size and nature of the development
- Setting of development residential/industrial etc, proximity to shopping centres, schools, railway stations etc
- Parking provisions within the development
- Other transport improvements linked to the development.

# Surveys

The survey area and the times and days of the surveys were defined taking into account the results of the background assessment. Within each road, the lengths of each section of restricted or unrestricted parking were measured and recorded, together with the number of vehicles parked upon that section and the lengths of any dropped kerbs. The position of skips was also noted, as well as any other unexpected items on the roads.

# Analysis

The lengths of restricted and unrestricted parking recorded on site were converted into equivalent numbers of parking spaces, assuming a 5 metre length for each space. Any sections with dropped kerbs were excluded from the calculation, as were any lengths of less than 5 metres.

# 4 RESULTS

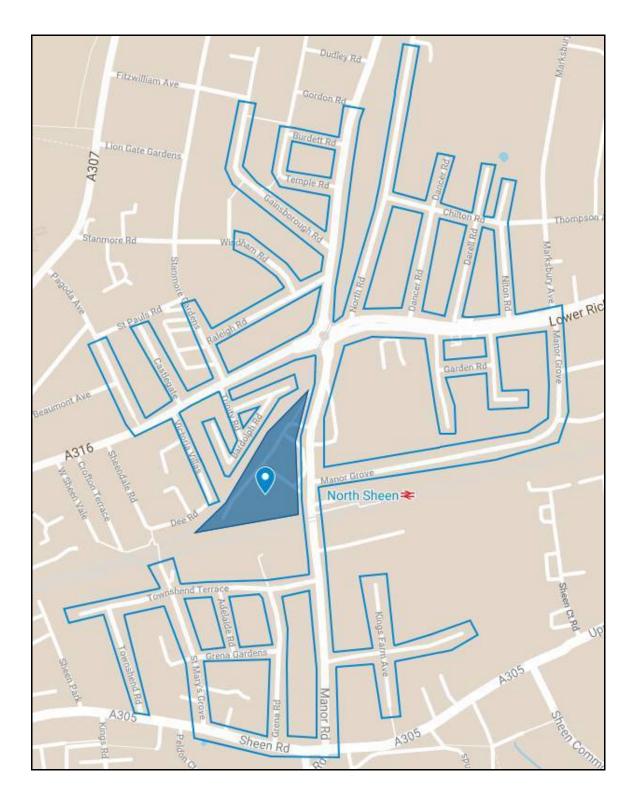
## **Surveys**

The area surveyed is shown on the plan in Figure 1 and the roads surveyed together with any additional comments are listed underneath each table.

The surveys took place between 01:00 - 05:30, 09:00 - 10:00 and 13:00 - 14:00 on Monday  $12^{th}$  and Tuesday  $13^{th}$  November 2018.

The tables show a detailed breakdown of the results for both days and beats and what restrictions are in place on the streets within the survey area.

# Figure 1 – Survey Area



• The shaded area/pin drop shows the site location

Adelaide Road			Day 1								Da	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	1	1	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%	ڈ 1	100.00%
Resident Permit Holder	11	11	8	72.73%	9	81.82%	8	72.73%	8	72.73%	8	72.73%	6 8	72.73%
Resident Permit Holder & Limited Waiting	5	5	3	60.00%	3	60.00%	4	80.00%	4	80.00%	4	80.00%	4	80.00%
Single Yellow/Red Lines	0	17	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	6 0	0.00%
Total	17	34	12	70.59%	13	76.47%	13	38.24%	13	76.47%	13	76.47%	6 13	38.24%
Bardolph Road					Day	1					Day	<i>y</i> 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400 S	tress %	Overnight S	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight S	Stress %
Pay & Display	3	3	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Resident Permit Holders	17	17	10	58.82%	10	58.82%	12	70.59%	10	58.82%	10	58.82%	12	70.59%
Single Yellow/Red Lines	0	3	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	20	23	10	50.00%	10	50.00%	12	52.17%	10	50.00%	10	50.00%	12	52.17%
Burdett Road					Day	1					Day	2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400 S		Overnight S	Stress %	0900-1000	Stress %	1300-1400		Overnight S	Stress %
Disabled	1	1	1	100.00%	0	0.00%	1	100.00%	1	100.00%	0	0.00%	1	100.00%
Limited Waiting	2	2	2	100.00%	1	50.00%	0	0.00%	2	100.00%	2	100.00%	0	0.00%
Resident Permit Holder	21	21	13	61.90%	14	66.67%	17	80.95%	12	57.14%	14	66.67%	17	80.95%
Total	24	24	16	66.67%	15	62.50%	18	75.00%	15	62.50%	16	66.67%	18	75.00%
Carrington Road					Day	1					Day	/ 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400 S		Overnight S	Stress %	0900-1000	Stress %	1300-1400		Overnight S	Stress %
Disabled	2	2	1	50.00%	1	50.00%	2	100.00%	2	100.00%	2	100.00%		100.00%
Unrestricted	53	53	32	60.38%	30	56.60%	40	75.47%	28	52.83%	28	52.83%	41	77.36%
Total	55	55	33	60.00%	31	56.36%	42	76.36%	30	54.55%	30	54.55%		78.18%
Castlegate					Day	1					Day	/ 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400 S	I	Overnight S	Stress %	0900-1000	Stress %	1300-1400	-	Overnight S	Stress %
Disabled	1	1	0	0.00%	1	100.00%	0	0.00%		0.00%	0	0.00%		0.00%
Resident Permit Holder	29	29	23	79.31%	22	75.86%	26	89.66%	20	68.97%	21	72.41%		82.76%
Resident Permit Holder & Limited Waiting	4	4	4	100.00%	4	100.00%	3	75.00%	4	100.00%	4	100.00%		75.00%
Single Yellow/Red Lines	0	13	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	34	47	27	79.41%	27	79.41%	29	61.70%	24	70.59%	25	73.53%	27	57.45%
Chilton Road					Day	1					Day	/ 2	·	
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400 S		Overnight S	Stress %	0900-1000	Stress %	1300-1400	-	Overnight S	Stress %
Resident Permit Holder	21	21	14	66.67%	14	66.67%	17	80.95%	14	66.67%	13	61.90%		80.95%
Unrestricted	27	27	20	74.07%	19	70.37%	22	81.48%	20	74.07%	20	74.07%		77.78%
Total	48	48	34	70.83%	33	68.75%	39	81.25%	34	70.83%	33	68.75%		79.17%
					l.	I								
Dancer Road					Day						Day	-		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400 S		Overnight S		0900-1000		1300-1400	Stress %	Overnight S	Stress %
Disabled	1	1	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%		100.00%
Resident Permit Holder	86	86	53	61.63%	51	59.30%	67	77.91%	50	58.14%	51	59.30%	67	77.91%
	87		54					_	7					



Darrel Road											Day	2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000 Stress % 1		1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	1	1	0	0.00%	0	0.00%	1	100.00%	0	0.00%	0	0.00%	1	100.00%
School Keep Clear	6	6	1	16.67%	0	0.00%	0	0.00%	2	33.33%	0	0.00%	0	0.00%
Unrestricted	74	74	47	63.51%	49	66.22%	52	70.27%	48	64.86%	48	64.86%	53	71.62%
Total	81	81	48	59.26%	49	60.49%	53	65.43%	50	61.73%	48	59.26%	54	66.67%

\* School Keep Clear restriction applies Monday - Friday between 08.00 to 09.30 and 14.30-16.30

Gainsborough Road		Day 1									Da	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Car Club	1	1	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%
Limited Waiting	2	2	1	50.00%	1	50.00%	0	0.00%	0	0.00%	0	0.00%	1	50.00%
Resident Permit Holder	93	93	55	59.14%	59	63.44%	76	81.72%	51	54.84%	56	60.22%	76	81.72%
Single Yellow/Red Lines	0	5	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	96	101	57	59.38%	61	63.54%	77	76.24%	52	54.17%	57	59.38%	78	77.23%

Garden Road						y 1					Da	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	900-1000 Stress % 1		Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Unrestricted	20	20	17	85.00%	17	85.00%	14	70.00%	18	90.00%	17	85.00%	14	70.00%
Total	20	20	17	85.00%	17	85.00%	14	70.00%	18	90.00%	17	85.00%	14	70.00%

Grena Gardens					Day	/1					Dav	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	2	2	1	50.00%	1	50.00%	2	100.00%	2	100.00%	5 1	50.00%	2	100.00%
Resident Permit Holder	17	17	12	70.59%	12	70.59%	13	76.47%	11	64.71%	12	70.59%	13	76.47%
Resident Permit Holder & Limited Waiting	2	2	2	100.00%	2	100.00%	2	100.00%	2	100.00%	2	100.00%	2	100.00%
Single Yellow/Red Line	0	15	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	21	36	15	71.43%	15	71.43%	17	47.22%	15	71.43%	5 15	71.43%	17	47.22%

Grena Road					Day	y 1					Day	2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	000-1000 Stress % 1		Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400 S	tress %	Overnight	Stress %
Resident Permit Holder	26	26	23	88.46%	22	84.62%	24	92.31%	22	84.62%	21	80.77%	24	92.31%
Resident Permit Holder & Limited Waiting	5	5	2	40.00%	2	40.00%	4	80.00%	3	60.00%	3	60.00%	4	80.00%
Total	31	31	25	80.65%	24	77.42%	28	90.32%	25	80.65%	24	77.42%	28	90.32%

Kings Farm Avenue		Day 1 Day 2												
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	4	4	4	100.00%	3	75.00%	4	100.00%	3	75.00%	3	75.00%	4	100.00%
Unrestricted	64	64	38	59.38%	37	57.81%	44	68.75%	38	59.38%	37	57.81%	45	70.31%
Total	68	68	42	61.76%	40	58.82%	48	70.59%	41	60.29%	40	58.82%	49	72.06%



Lower Mortlake Road				Day	/ 1					Day	2			
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000 Stress % 1		1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400 S	tress %	Overnight	Stress %
Loading & Disabled	5	5	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	5 C	0.00%
Resident Permit Holder	7	7	5	71.43%	5	71.43%	5	71.43%	5	71.43%	5	71.43%	i 5	5 71.43%
Resident Permit Holder & Limited Waiting	6	6	4	66.67%	4	66.67%	4	66.67%	4	66.67%	4	66.67%	<u>م</u>	66.67%
Total	18	18	9	50.00%	9	50.00%	9	50.00%	9	50.00%	9	50.00%	5 9	50.00%

Lower Richmond Road		Day 1 Day 2												
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Loading	2	2	0	0.00%	0	0.00%	0	0.00%	1	50.00%	0	0.00%	, C	0.00%
Limited Waiting	4	4	2	50.00%	1	25.00%	0	0.00%	0	0.00%	1	25.00%	, C	0.00%
Single Yellow/Red Lines	0	47	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	, C	0.00%
Total	6	53	2	33.33%	1	16.67%	0	0.00%	1	16.67%	1	16.67%	i C	0.00%

Manor Gardnes					Da	y 1					Da	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	12	12	8	66.67%	8	66.67%	8	66.67%	8	66.67%	8	66.67%	8	66.67%
Resident Permit Holder & Limited Waiting	11	11	9	81.82%	9	81.82%	9	81.82%	8	72.73%	9	81.82%	8	3 72.73%
Total	23	23	17	73.91%	17	73.91%	17	73.91%	16	69.57%	17	73.91%	16	69.57%

Manor Grove					Da	y 1					Da	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	2	2	2	100.00%	2	100.00%	2	100.00%	1	50.00%	1	50.00%	2	100.00%
Unrestricted	210	210	116	55.24%	112	53.33%	127	60.48%	113	53.81%	107	50.95%	130	61.90%
Total	212	212	118	55.66%	114	53.77%	129	60.85%	114	53.77%	108	50.94%	132	62.26%

Manor Park			nt) 0900-1000 Stress % 130			y 1					Da	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	2	2	1	50.00%	1	50.00%	2	100.00%	2	100.00%	2	100.00%	2	100.00%
Unrestricted	24	24	20	83.33%	19	79.17%	21	87.50%	20	83.33%	20	83.33%	21	87.50%
Total	26	26	21	80.77%	20	76.92%	23	88.46%	22	84.62%	22	84.62%	23	88.46%

Manor Road			. Spaces (night) 0900-1000 Stress % 1300			y 1					Da	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Single Yellow/Red Lines	0	17	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	C	0.00%
Unrestricted	42	42	30	71.43%	29	69.05%	34	80.95%	27	64.29%	27	64.29%	34	80.95%
Total	42	59	30	71.43%	29	69.05%	34	57.63%	27	64.29%	27	64.29%	34	57.63%

Market Road			0000 1000 Stross % 1		Day	y 1					Da	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Loading & Disabled	2	2	1	50.00%	1	50.00%	0	0.00%	1	50.00%	1	50.00%	, (	0.00%
Single Yellow/Red Lines	0	2	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	, <b>(</b>	0.00%
Unrestricted	10	10	6	60.00%	6	60.00%	3	30.00%	8	80.00%	7	70.00%	, E	3 30.00%
Total	12	14	7	58.33%	7	58.33%	3	21.43%	9	0.00%	8	66.67%	, 3	3 21.43%



					Da	y 1					Da	y 2		
Restriction Type No. Sp	Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000 S	tress %	1300-1400	Stress %	Overnight	Stress %
School Keep Clear	5	5	0	0.00%	0	0.00%	1	20.00%	0	0.00%	0	0.00%	1	20.00%
Unrestricted	36	36	21	58.33%	21	58.33%	22	61.11%	21	58.33%	19	52.78%	25	69.44%
Total	41	41	21	51.22%	21	51.22%	23	56.10%	21	51.22%	19	46.34%	26	63.41%

\* School Keep Clear restriction applies Monday - Friday between 08.00 to 09.30 and 14.30-16.30

North Road			coc (night) 0000 1000 Stroce % 1200								Day	2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Limited Waiting	4	4	2	50.00%	2	50.00%	3	75.00%	1	25.00%	3	75.00%	2	50.00%
Resident Permit Holder	121	121	67	55.37%	74	61.16%	95	78.51%	66	54.55%	71	58.68%	89	73.55%
Single Yellow/Red Lines	0	3	1	33.33%	0	0.00%	0	0.00%	0	0.00%	1	33.33%	0	0.00%
Total	125	128	70	56.00%	76	60.80%	98	76.56%	67	53.60%	75	60.00%	91	71.09%

Orchard Road			paces (night) 0900-1000 Stress % 1300-			y 1					Da	iy 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Limited Waiting & Disabled	5	5	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Unrestricted	28	28	23	82.14%	23	82.14%	9	32.14%	25	89.29%	23	82.14%	8	8 28.57%
Total	33	33	23	69.70%	23	69.70%	9	27.27%	25	75.76%	23	69.70%	8	3 24.24%

Pagoda Avenue					Dav	y 1					Da	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	33	33	24	72.73%	23	69.70%	25	75.76%	22	66.67%	22	66.67%	26	78.79%
Resident Permit Holder & Limited Waiting	5	5	5	100.00%	5	100.00%	7	140.00%	5	100.00%	6	120.00%	7	140.00%
Total	38	38	29	76.32%	28	73.68%	32	84.21%	27	71.05%	28	73.68%	33	86.84%

Raleigh Road					Day	/1					Dav	2		
Restriction Type	No. Spaces	No. Spaces	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000 9	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	71	71	63	88.73%	60	84.51%	68	95.77%	61	85.92%	61	85.92%	68	95.77%
Total	71	71	63	88.73%	60	84.51%	68	95.77%	61	85.92%	61	85.92%	68	95.77%

Sandycombe Road					Da	y 1					Da	iy 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Single Yellow/Red Lines	0	15	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Unrestricted	44	44	36	81.82%	33	75.00%	39	88.64%	36	81.82%	36	81.82%	39	88.64%
Total	44	59	36	81.82%	33	75.00%	39	66.10%	36	81.82%	36	81.82%	39	66.10%

Sheen Road					Day	y 1					Day	<i>j</i> 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	21	21	15	71.43%	14	66.67%	15	71.43%	15	71.43%	14	66.67%	15	71.43%
Resident Permit Holder & Limited Waiting	11	11	7	63.64%	7	63.64%	7	63.64%	8	72.73%	6	54.55%	7	63.64%
Single Yellow/Red Lines	0	14	0	0.00%	1	>100.00%	0	0.00%	0	0.00%	2	>100.00%	0	0.00%
Total	32	46	22	68.75%	22	68.75%	22	47.83%	23	71.88%	22	68.75%	22	47.83%



St George's Road					Da	iy 1					Da	iy 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	30	30	15	50.00%	14	46.67%	14	46.67%	16	53.33%	14	46.67%	14	46.67%
Total	30	30	15	50.00%	14	46.67%	14	46.67%	16	53.33%	14	46.67%	14	46.67%

St Mary's Grove				Da	y 1					Da	y 2			
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	27	27	17	62.96%	17	62.96%	19	70.37%	17	62.96%	16	59.26%	18	66.67%
Resident Permit Holder & Limited Waiting	10	10	5	50.00%	4	40.00%	6	60.00%	6	60.00%	5	50.00%	5	50.00%
Total	37	37	22	59.46%	21	56.76%	25	67.57%	23	62.16%	21	56.76%	23	62.16%

Stanmore Grove			Day 1						Day 2								
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %			
Resident Permit Holder	17	17	12	70.59%	13	76.47%	16	94.12%	12	70.59%	12	70.59%	15	88.24%			
Resident Permit Holder & Pay at Machine	14	14	11	78.57%	11	78.57%	11	78.57%	10	71.43%	10	71.43%	11	78.57%			
Single Yellow/Red Lines	0	1	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%			
Total	31	32	23	74.19%	24	77.42%	27	84.38%	22	0.00%	22	70.97%	26	81.25%			

Temple Road					Day	y 1		Day 2							
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	
Disabled	1	1	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%	
Limited Waiting	3	3	2	66.67%	2	66.67%	1	33.33%	0	0.00%	0	0.00%	1	33.33%	
Resident Permit Holder	39	39	19	48.72%	19	48.72%	32	82.05%	21	53.85%	22	56.41%	31	79.49%	
Total	43	43	22	51.16%	22	51.16%	34	79.07%	22	51.16%	23	53.49%	33	76.74%	

Townshed Road			Day 1						Day 2							
Restriction Type	No. Spaces (day)	No. Spaces (night])	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %		
Resident Permit Holder	36	36	23	63.89%	23	63.89%	29	80.56%	25	69.44%	26	72.22%	28	77.78%		
Single Yellow/Red Lines	0	16	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%		
Total	36	52	23	63.89%	23	63.89%	29	55.77%	25	69.44%	26	72.22%	28	53.85%		

Townshed Terrace			Day 1						Day 2						
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	
Disabled	1	1	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%	
Resident Permit Holder	44	44	30	68.18%	29	65.91%	28	63.64%	30	68.18%	28	63.64%	31	70.45%	
Single Yellow/Red Lines	0	46	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	2.17%	
Total	45	91	31	68.89%	30	66.67%	29	31.87%	31	0.00%	29	64.44%	33	36.26%	

Trinity Cottages			Day 1							Da	iy 2			
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	1	1	0	0.00%	0	0.00%	1	100.00%	1	100.00%	1	100.00%	1	l 100.00%
Total	1	1	0	0.00%	0	0.00%	1	100.00%	1	100.00%	1	100.00%	1	L 100.00%



Trinity Road			Day 1								Da	y 2		
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	21	21	8	38.10%	9	42.86%	14	66.67%	9	42.86%	7	33.33%	15	71.43%
Total	21	21	8	38.10%	9	42.86%	14	66.67%	9	42.86%	7	33.33%	15	71.43%

Victoria Villas					Da	y 1			Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Loading & Disabled	3	3	1	33.33%	1	33.33%	0	0.00%	0	0.00%	1	33.33%	0	0.00%
Resident Permit Holder	12	12	3	25.00%	3	25.00%	2	16.67%	3	25.00%	4	33.33%	2	16.67%
Resident Permit Holder & Pay at Machine	14	14	5	35.71%	4	28.57%	2	14.29%	3	21.43%	3	21.43%	2	14.29%
Single Yellow/Red Lines	0	3	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	29	32	9	31.03%	8	27.59%	4	12.50%	6	20.69%	8	27.59%	4	12.50%

Windham Road	ham Road					y 1			Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	11	11	7	63.64%	9	81.82%	9	81.82%	10	90.91%	9	81.82%	9	81.82%
Resident Permit Holder & Limited Waiting	15	15	10	66.67%	10	66.67%	11	73.33%	9	60.00%	11	73.33%	10	66.67%
School Keep Clear	4	4	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Single Yellow/Red Lines	0	4	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	30	34	17	56.67%	19	63.33%	20	58.82%	19	63.33%	20	66.67%	19	55.88%

\* School Keep Clear restriction applies Monday - Friday between 08.00 to 09.30 and 14.30-16.30

### **Overall Results**

Overall Results	Spaces	Usage	Average Stress	Average Stress per beat/day	Overall Average Stress			
Day 1 - 0900-1000	1628	1028	63.14%	62 50%				
Day 2 - 0900-1000	1628	1010	62.04%	62.59%				
Day 1 - 1300-1400	1620	1017	62.47%	(2.02%				
Day 2 - 1300-1400	1628	1032	63.39%	62.93%	62.75%			
Day 1 - overnight	1840	1161	62.79%	(2.749/				
Day 2 - overnight	1849	1159	62.68%	62.74%				





# CONCLUSION

The overall stress percentage covering the survey area is 62.75%. While the parking decisions for developments remains with the Council the results here are moderate for a busy London Borough.



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# Appendix A

# A. CONTACT DETAILS

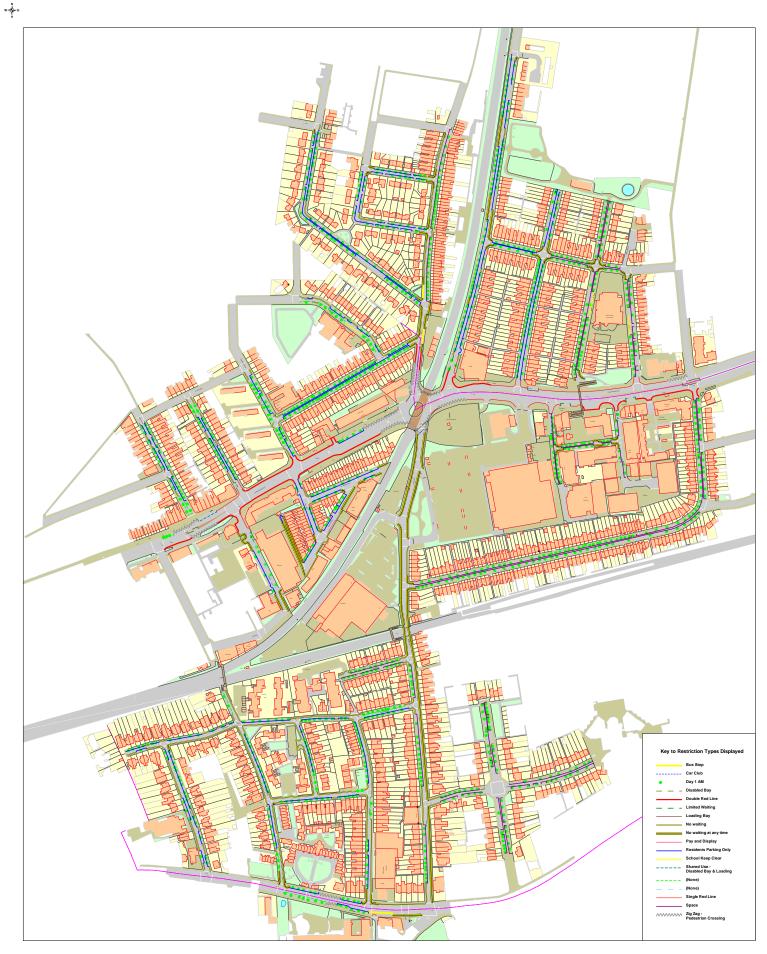
1. Client Contact Name	Avanton Richmond Developments Limited
2. Client Contact Email address	chris@avanton.co.uk

# **B. DEVELOPMENT DETAILS**

3. Development Name	Manor Road, Richmond
<ol> <li>Development address (please include post code)</li> </ol>	84 Manor Road, Richmond, TW9 1YB
5. Can development plans be provided?	n/a

# PLANNING REQUIREMENTS

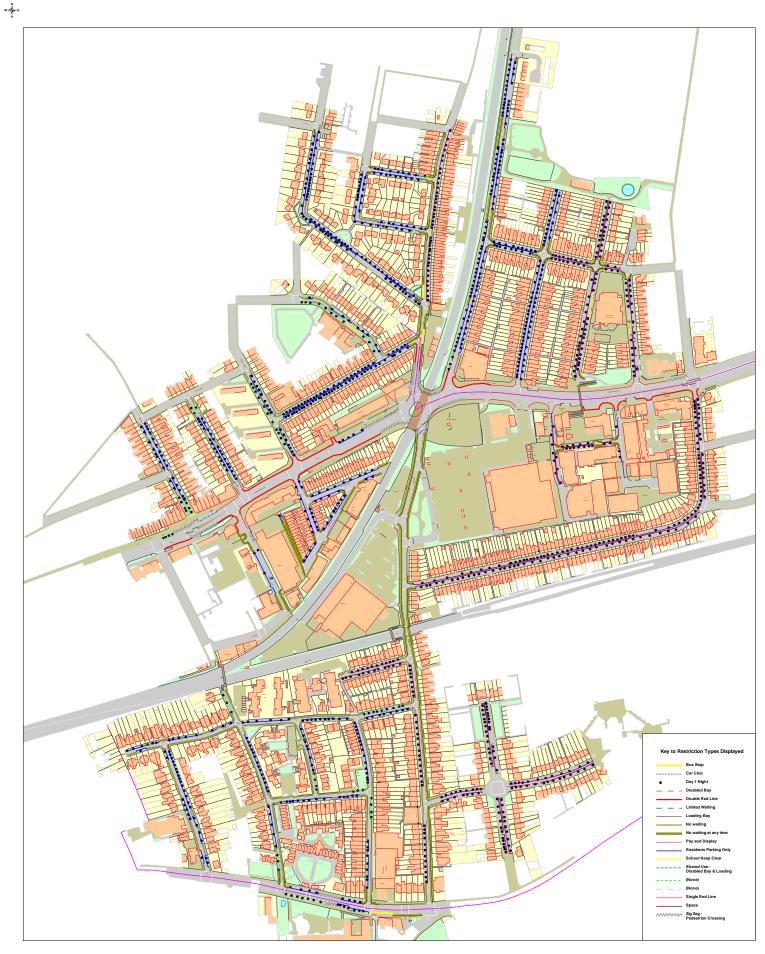
6. Which Local Authority is requiring the Parking Stress Survey?	London Borough of Richmond
7. Local Authority Planning contact:	n/a



	The step is expendent for Observ The step is expendent for Observ The Step is a step is a Construction of the Step is a step is a Construction of the Step is a step is a Construction of the Step is a s	tica (c) SCALE	1 : 1250 @ A0 size
ALPHA	pundig international Gaussian Statistics Gaussian Statistics	DATE	26/11/2018
	Manor Road, Richmond: PSS Day 1 AM	DRAWING No.	
PARKING	Marier Road, Rommond. F CC Day 17.W	DRAWN BY	



		This map is neproduced from Ordenice Survey material with the permission of Ordenice Survey on behalf of the Controller of Net Majesty's Stationery Office (c) Draw n Copyright Landstrate merproduction hirringes Onew n copyright and may lead to prosecution or civil proceedings.	SCALE	1 : 1250 @ A0 size
ALPHA PARKING Manor Road, Richmond: PSS Day 1 PM	Ápha Parking Lut. Licence No: 2018	DATE	26/11/2018	
		DRAWING No.		
			DRAWN BY	



	The Bill is addressed for the Distribution of the Bill is a distri	SCALE	1 : 1250 at A0 size
ALPHA PARKING Manor Road, Richmond: PSS Day 1 Nig	Agan Aning GA Likawa Nie 2010	DATE	26/11/2018
	Manor Road, Richmond: PSS Day 1 Night	DRAWING No.	
		DRAWN BY	



	Manor Road, Richmond: PSS Day 2 AM	The graph comparison of two to Deprove the second s	SCALE	1 : 1250 @ A0 size
AIPHA			DATE	26/11/2018
			DRAWING No.	
PARKING			DRAWN BY	