



Cambourne to Cambridge Better Public Transport

Adams Road Survey

9 January 2020

Mott MacDonald
22 Station Road
Cambridge CB1 2JD
United Kingdom

T +44 (0)1223 463500
mottmac.com

Cambourne to Cambridge Better Public Transport

Adams Road Survey

9 January 2020

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
1	09/01/2020	AN	CS	JB	

Document reference: 392438-MMD-HWA-XX-RP-CV-0054 | 01 | A

Information class: Standard

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.

Contents

1	Road Traffic Surveys	1
1.1	Automatic Traffic Counts – User Class Splits	1
1.2	Manual Classified Counts (MCC's)	2
1.3	Summary	5

Tables

No table of figures entries found.

Figures

Figure 1.1: Average Weekday Flow Profile (percentage of daily flow per quarter hour)	1
Figure 1.2: Average Weekly Flow Profile (percentage of daily flow per quarter hour)	2
Figure 1.3: MCC Site 1 Junction Layout	3
Figure 1.4: MCC Site 2 Junction Layout	3
Figure 1.5: MCC Site 1 Average Total Turning Movements per User Class between 07:00 to 19:00	4
Figure 1.6: MCC Site 2 Average Total Turning Movements per User Class between 07:00 to 19:00	5

1 Road Traffic Surveys

To better understand traffic conditions along Adams Road and to inform the design process, a series of traffic surveys were conducted in October / November 2019 to supplement the regular collection of cycle flow data and older traffic data.

All vehicles including cycles were surveyed. No pedestrian surveys were undertaken as is conventional in a location such as Adams Road where pedestrian volumes are low.

1.1 Automatic Traffic Counts – User Class Splits

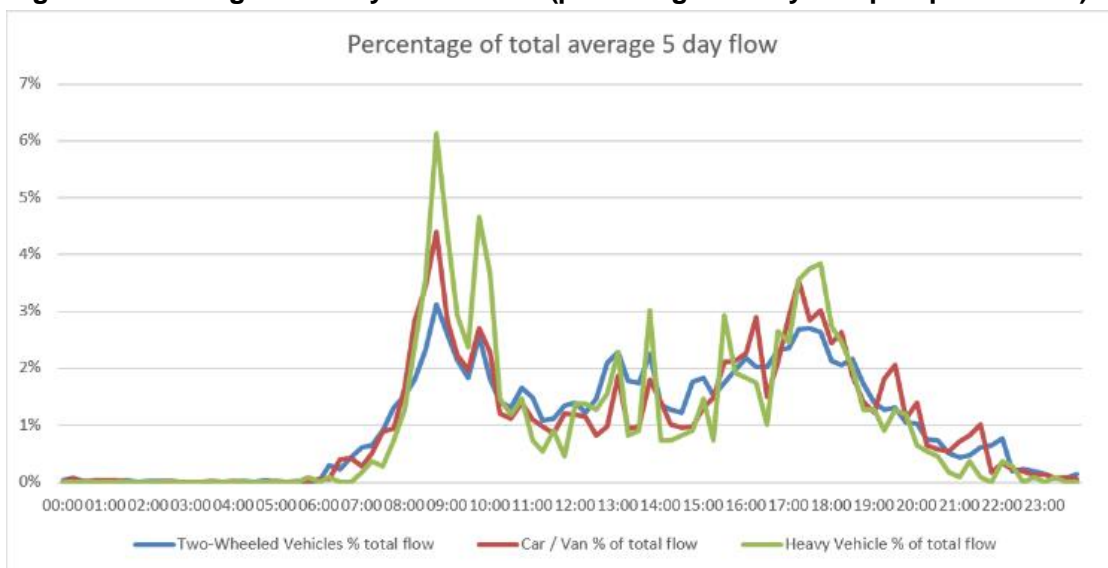
An Automatic Traffic Count (ATC) was undertaken on Adams Road, to the west of the junction with Sylvester Road over a three-week period, from 28 October until 14 November 2019 by Intelligent Data. The ATC recorded vehicle type based on the number of wheels/ axles, traffic volumes and speeds of vehicles for 24 hours per day during the survey period. This data has been used to provide profiles of average flows by vehicle type for a 5-day weekday and 7-day weekend day period, between Tuesday 5 November to Monday 11 November.

The user class was split into three categories:

- Two-wheeled vehicles
- Car or van
- Heavy vehicles

The five-day average analysis used the standard days of the working week to show the proportion of vehicle types using the road across an average weekday. The two-way flow results are shown below in Figure 1.1 below. The line for each vehicle type shows the percentage of daily traffic in any one 15 minute period. The peaks for heavy vehicles and cars are most steep because the total flows are so low and a small number of vehicles constitutes a significant percentage. The highest percentage of daily two-wheeled vehicle movements in a 15 minute period is around 3% just before 0900.

Figure 1.1: Average Weekday Flow Profile (percentage of daily flow per quarter hour)

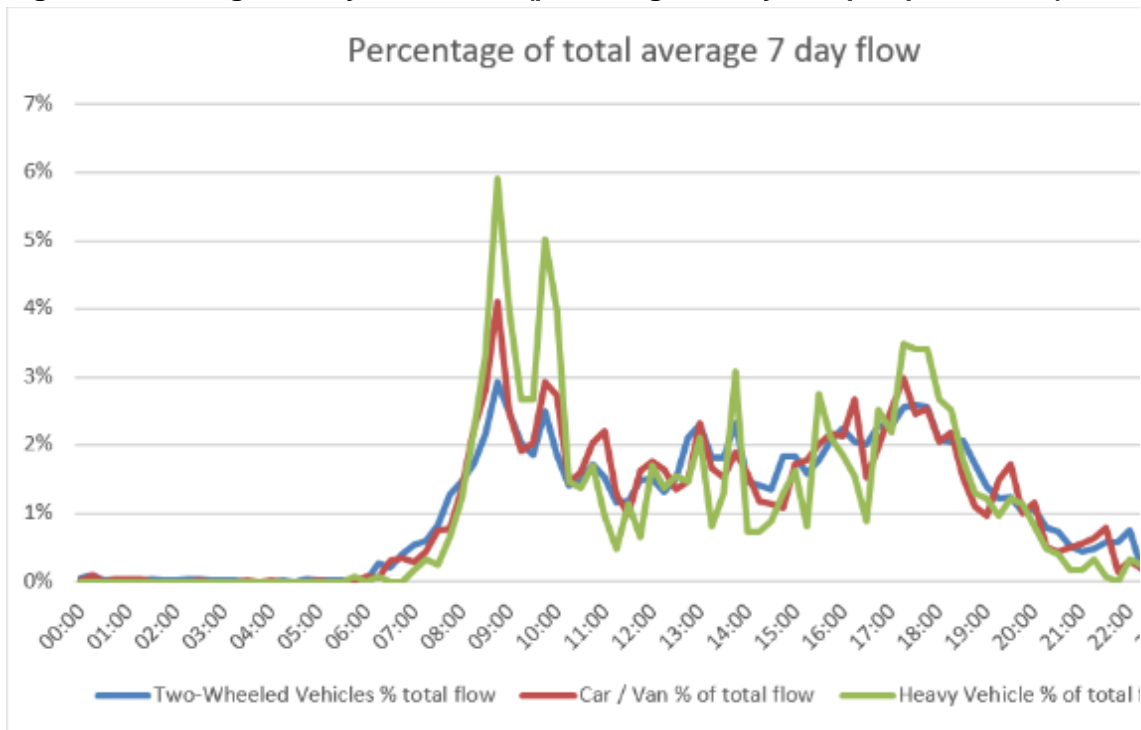


Source: Mott MacDonald

Throughout the day all modes show two distinct peaks between 08:30 to 09:30, and 17:00 to 18:00 for the AM and PM peaks respectively. A third lower peak is apparent for two-wheeled vehicles also around lunchtime.

The seven-day average analysis demonstrates very similar results as shown below in Figure 1.2.

Figure 1.2: Average Weekly Flow Profile (percentage of daily flow per quarter hour)



Source: <Insert Notes or Source>

The ATC data also provides a comparison of 12 hour data (as collected by Manual surveys) and 24 hour data. This enables us to expand the 12 hour junction turning count data to estimated 24 hour data.

	Two-Wheeled Vehicles 12 hour as % of total flow	Car / Van 12 hour as % of total flow	Heavy Vehicle 12 hour as % of total flow
5 day	86.63%	85.43%	91.95%
7 day	86.73%	87.96%	92.05%

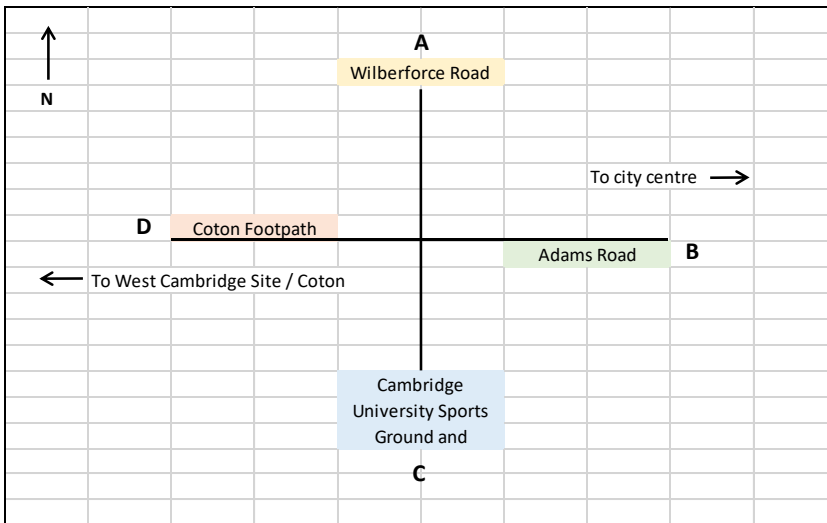
1.2 Manual Classified Counts (MCC's)

Manual classified counts (MCC's) were undertaken over a two-day period on the 29th October and 30th October by Intelligent Data at the two key junctions located at either end of Adams Road.

Site 1 was located to the west of Adams Road where it meets Wilberforce Road to the north, the athletics track entrance to the south and the Coton footpath to the west. See Figure 1.3

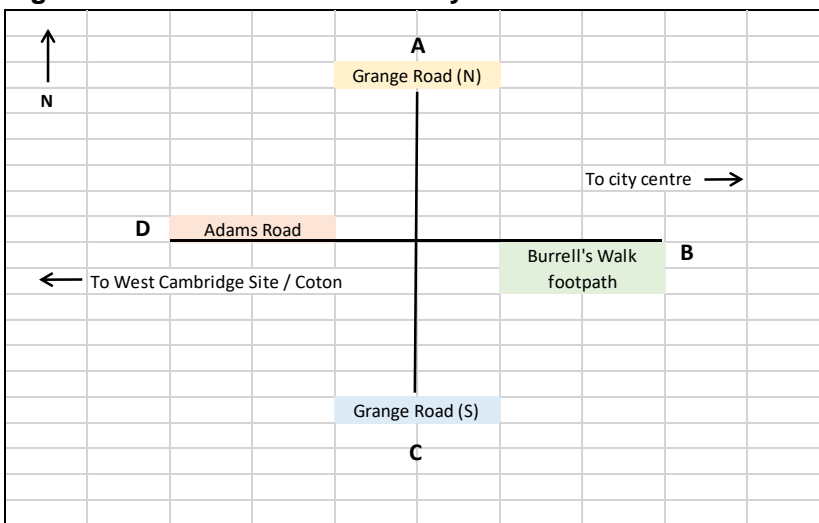
Site 2 was located to the east of Adams Road at its junction with Burrell's Walk footpath to the east and Grange Road to the north and south. This junction is signalised and has controlled pedestrian crossings at all four arms of the junction. See Figure 1.4.

Figure 1.3: MCC Site 1 Junction Layout



Source: Mott MacDonald

Figure 1.4: MCC Site 2 Junction Layout



Source: Mott MacDonald

The MCC's recorded the volume and turning movements of each vehicle type during the 12-hour survey period from 07:00 to 19:00 on the two survey days.

The user classes were split into four categories:

- Car or van
- Heavy vehicles/ public service vehicles
- Motorcycles
- Cycles

The results of the turning count analysis for each user class are shown below for MCC Site 1 (Figure 1.5) and MCC Site 2 (Figure 1.6).

The MCCs for Site 1 indicate that there are very few heavy goods, public service vehicles and motorcycles that travelled through the Adams Road/ Wilberforce Road junction on the days surveyed. The surveys show on average a total of 441 cars and vans travelled through the junction daily during the survey period. The highest flows were experienced by cycles. The dominant movement for cycles at this junction was travelling between the Coton footpath and Adams Road, with approximately 2350 cycle trips travelling in each direction across an average 12 hour day

Figure 1.5: MCC Site 1 Average Total Turning Movements per User Class between 07:00 to 19:00

Cars/LGV	A	B	C	D	Total	HGV/PSV	A	B	C	D	Total
A	0	151	24	0	175	A	0	2	0	0	2
B	166	0	58	0	224	B	2	0	1	0	3
C	13	31	0	0	44	C	0	1	0	0	1
D	0	0	0	0	0	D	0	0	0	0	0
Total	179	182	82	0	443	Total	2	3	1	0	6

M/C	A	B	C	D	Total	Cycle	A	B	C	D	Total
A	0	4	0	0	4	A	0	76	18	144	238
B	3	0	1	1	5	B	92	0	85	2487	2664
C	0	0	0	0	0	C	10	38	0	8	56
D	0	0	0	0	0	D	144	2345	16	0	2505
Total	3	4	1	1	9	Total	246	2459	119	2639	5463

Source: Mott MacDonald

The Site 2 surveys show that as might be expected the principal flows are on Grange Road itself. Heavy goods and public service vehicle movements to and from Adams Road are shown to be at similar levels to those captured for Adams Road in the Site 1 survey results – around 6 vehicles each way daily.

The Site 2 survey (Figure 1.6) shows approximately 650 two-way car and van movements travelling on Adams Road during the day. When compared to the Site 1 surveys, (Figure 1.5) this indicates that approximately 100 vehicles are travelling to destinations on Adams Road, Sylvester Road, or parking on-street, as these vehicles do not travel through the Site 1 MCC surveys.

The highest level of flow at this junction, as expected, is cycles. The dominant movement for cyclists through the junction is between Adams Road and Burrell's Walk, with 1500 cycles travelling in each direction daily. Around 600 cycles each day turn from Adams Road to Grange Road (south). Across the day Adams Road and Burrell's walk experience similar levels of flow with approximately 2000 cycles travelling in each direction, while Grange Road also shows high levels of cycle use with an average of approximately 1450 cycles travel in each direction daily. See Figure 1.6.

Figure 1.6: MCC Site 2 Average Total Turning Movements per User Class between 07:00 to 19:00

Cars/LGV	A	B	C	D	Total		HGV/PSV	A	B	C	D	Total
A	0	0	1255	154	1409		A	0	0	71	4	75
B	0	0	0	0	0		B	0	0	0	0	0
C	1301	0	0	164	1465		C	71	0	0	3	74
D	172	0	185	0	357		D	3	0	3	0	6
Total	1473	0	1440	318	3231		Total	74	0	74	7	155
M/C	A	B	C	D	Total		Cycle	A	B	C	D	Total
A	0	0	6	1	7		A	0	516	861	72	1449
B	1	0	0	1	2		B	472	0	4	1418	1894
C	11	0	0	0	11		C	797	14	0	641	1452
D	1	0	3	0	4		D	64	1481	619	0	2164
Total	13	0	9	2	24		Total	1333	2011	1484	2131	6959

Source: <Insert Notes or Source>

1.3 Summary

Automatic Traffic Count and Manual Classified Counts surveys were undertaken on Adams Road in October / November 2019 to establish the volume and modes of traffic travelling on Adams Road currently. The survey results confirm the data already held by the Project team and as anticipated show the following:

Cycle flows are the dominant flows on Adams Road compared to other modes across the surveyed days.

Around 2500 cycles each way travel to/from Adams Road from West Cambridge. Of these, less than 10% turn into Wilberforce Road or the University Sports ground, around 10-15% turn off on Adams Road, presumably via Sylvester Road, and around 25% turn south onto Grange Road with the remainder proceeding down Burrell's walk.

The surveyed 12 hour flows are around 87% of daily cycle flow so we anticipate that daily two-way cycle movements on Adams Road are approximately 5,900.

Motorised traffic remains low in line with existing survey data with around 300-350 car movements each way daily, and less than 10 HGV or bus/coach movements each way daily.

