John Lusty

Data Presentation

Section 3 Word count: 0 words

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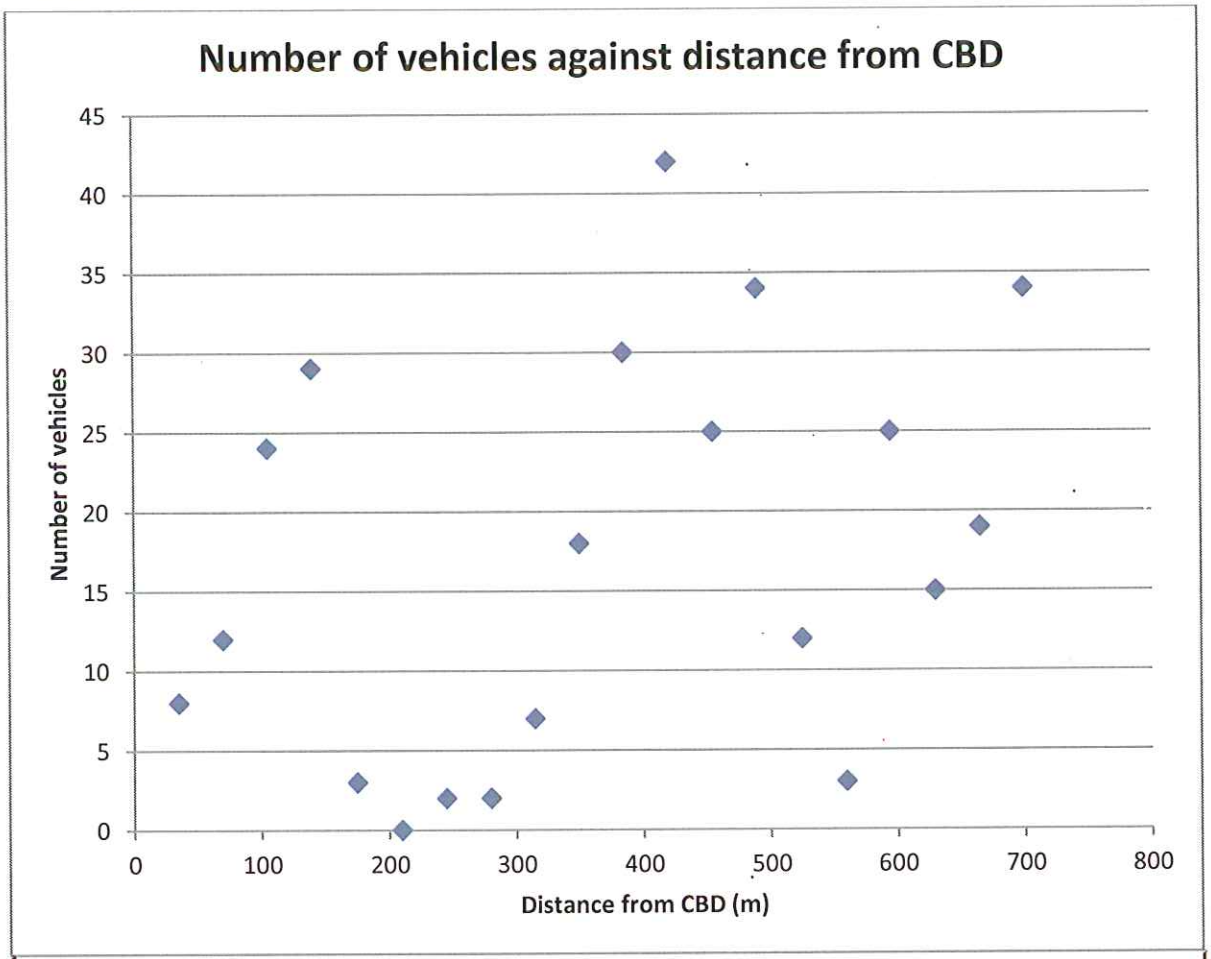
Figure 3a.1 Table of results for traffic count taken in Stratford-upon-Avon

Location	Distance from CBD (m)	Car	Bus	Coach	Bicycle	Lorry	Van	Motor-cycle	Other	Weather
Union Street	35	8	0	0	0	0	0	0	0	Slightly Overcast
High Street	70	9	0	0	1	0	1	1	0	Sun
Bridge Street	105	23	1	0	0	0	0	0	0	Sun
Guild Street	140	23	1	1	1	1	2	0	0	Sun
Waterside	175	1	0	0	0	0	2	0	0	Sun
Henley Street	210	0	0	0	0	0	0	0	0	Sun
Sheep Street	245	1	0	0	0	0	1	0	0	Sun
Chapel Lane	280	2	0	0	0	0	0	0	0	Sun
Windsor Street	315	7	0	0	0	0	0	0	0	Sun
Rother Street	350	11	2	0	2	0	2	1	0	Cloudy
Birmingham Road	385	28	0	0	0	1	0	1	0	Sun
Gyratory	420	37	0	2	0	1	2	0	0	Sun
Grove Road	455	23	0	0	0	0	1	1	1**	Sun
Warwick Road	490	23	0	1	0	2	7	1	0	Sun
Chestnut Walk	525	12	0	0	0	0	0	0	1*	Sun
Bull Street	560	3	0	0	0	0	0	0	0	Sun
Alcester Road	595	23	0	0	0	0	1	1	0	Sun
Tiddington Road	630	12	1	0	1	0	1	0	0	Sun
Banbury Road	665	18	0	0	0	0	1	0	0	Sun
Birmingham Road (nr. Maybird Centre)	700	27	1	0	1	1	4	0	0	Sun

* Mobility Scooter
**Motor-home

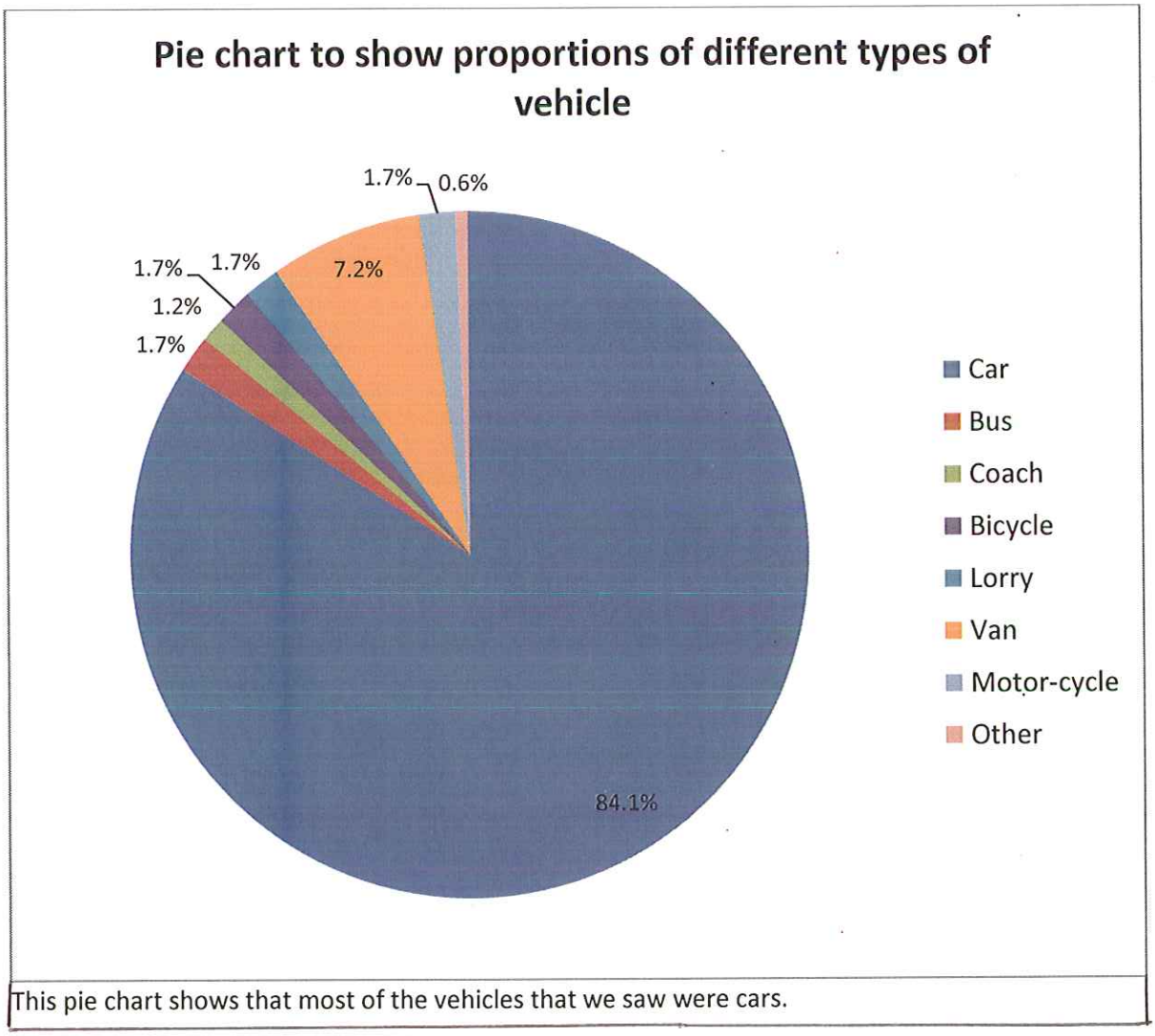
Traffic flows against distance from CBD

Figure 3a.2 Scatter graph to show relationship between number of vehicles and distance from CBD



This is a scatter graph to show distance from CBD against number of vehicles. As can be seen from the scatter graph there is no correlation between distance from CBD and number of vehicles.

Figure 3a.3 Pie chart to show proportions of different types of vehicle in Stratford-upon-Avon



This pie chart shows that most of the vehicles that we saw were cars.

Figure 3a.4 Spearman's rank correlation coefficient to show relationship between distance from CBD and number of vehicles

Distance from CBD (m)	Rank A	Number of Vehicles	Rank B	Difference Between Ranks	Difference Squared
35	1	8	7	-6	36
70	2	12	8.5	-6.5	42.25
105	3	24	13	-10	100
140	4	29	16	-12	144
175	5	3	4.5	0.5	0.25
210	6	0	1	5	25
245	7	2	2.5	4.5	20.25
280	8	2	2.5	5.5	30.25
315	9	7	6	3	9
350	10	18	11	-1	1
385	11	30	17	-6	36
420	12	42	20	-8	64
455	13	25	14.5	-1.5	2.25
490	14	34	18.5	-4.5	20.25
525	15	12	8.5	6.5	42.25
560	16	3	4.5	11.5	132.25
595	17	25	14.5	2.5	6.25
630	18	15	10	8	64
665	19	19	12	7	49
700	20	34	18.5	1.5	2.25

Sum of 'Difference Squared': 826.5

$$(R) = 1 - \frac{6\sum d^2}{n^3 - n} \qquad (R) = 1 - \frac{6 \times 826.5}{20^3 - 20}$$

R = 0.378571429

This shows a weak positive correlation between distance from CBD and number of vehicles – as distance from CBD increases, number of vehicles increases. This is not what we predicted.

Figure 3a.5 Annotated photograph to show the location of and explain our seventh traffic count

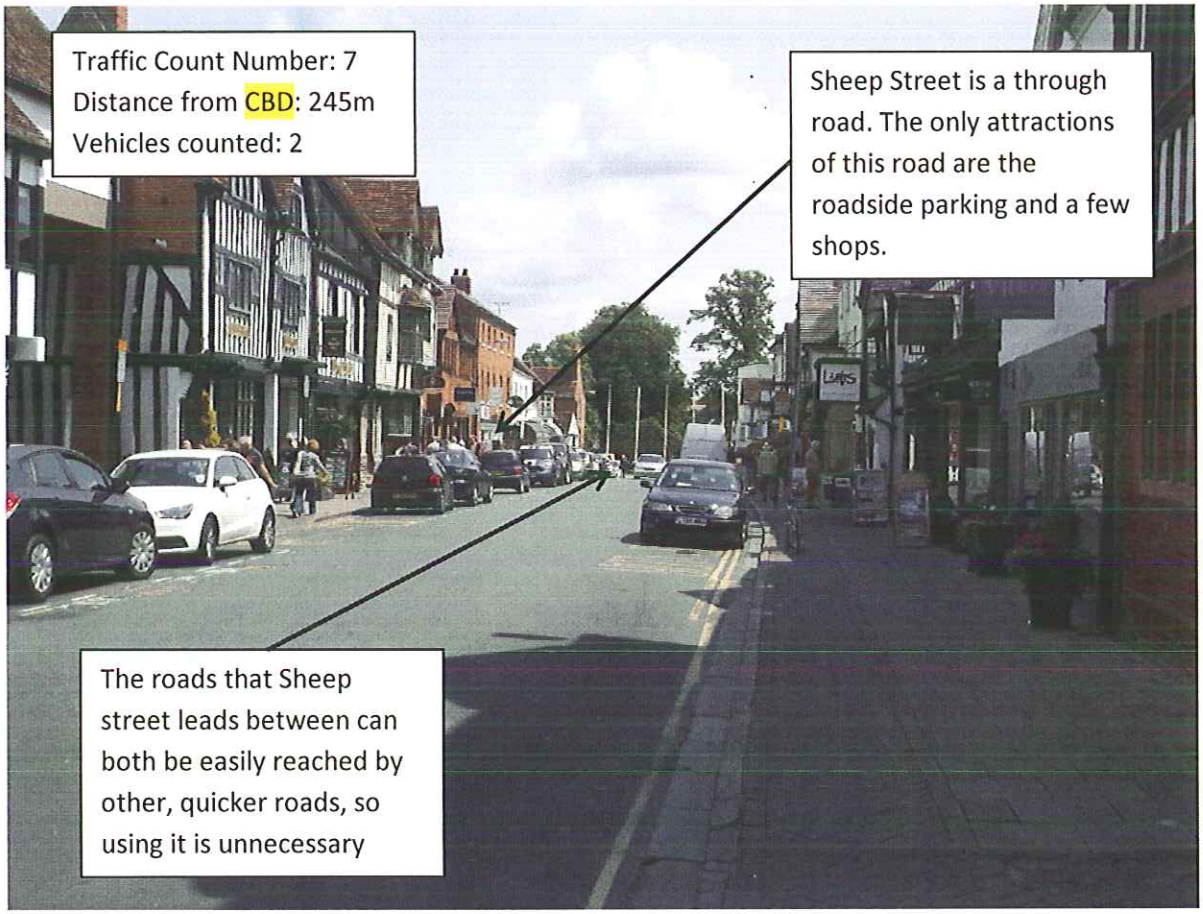
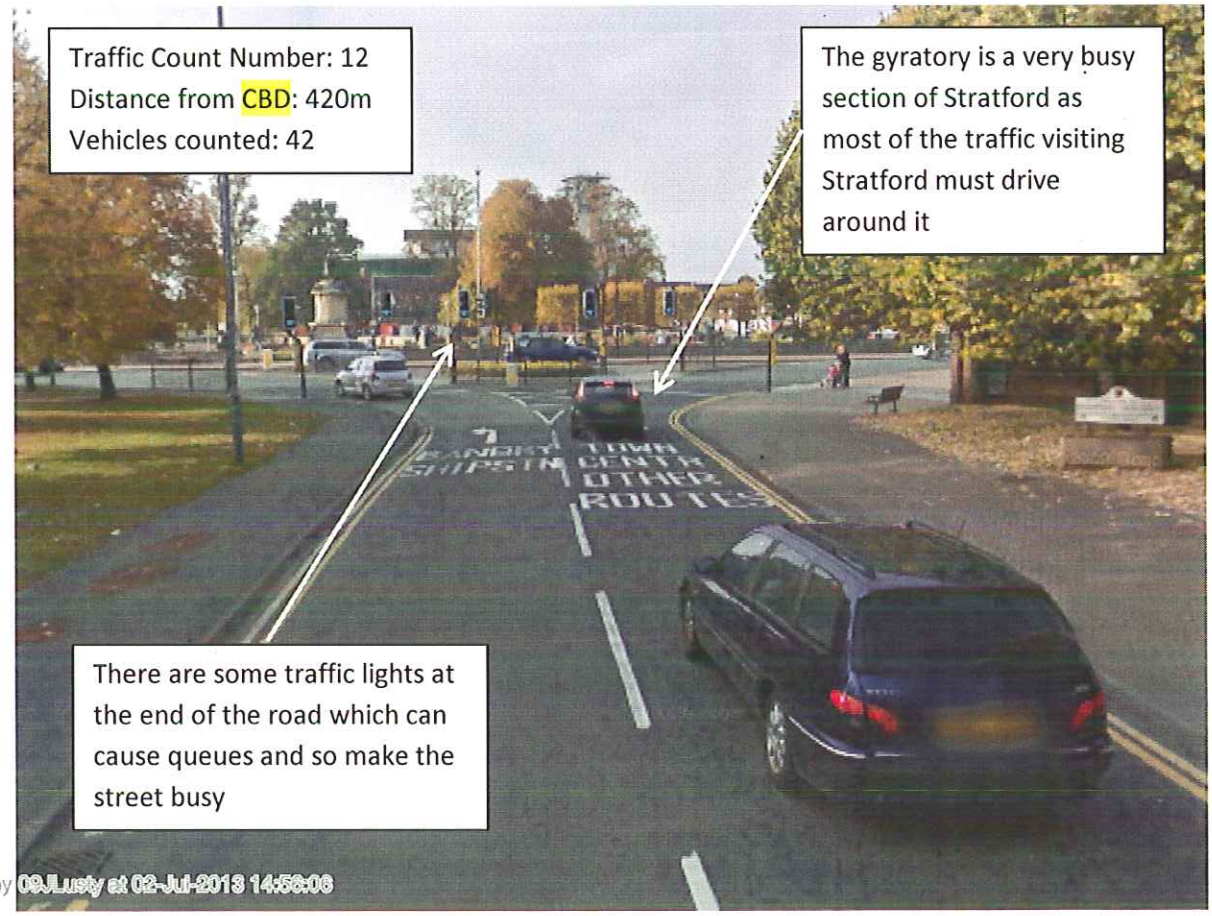


Figure 3a.6 Annotated photograph to show the location of and explain our twelfth traffic count

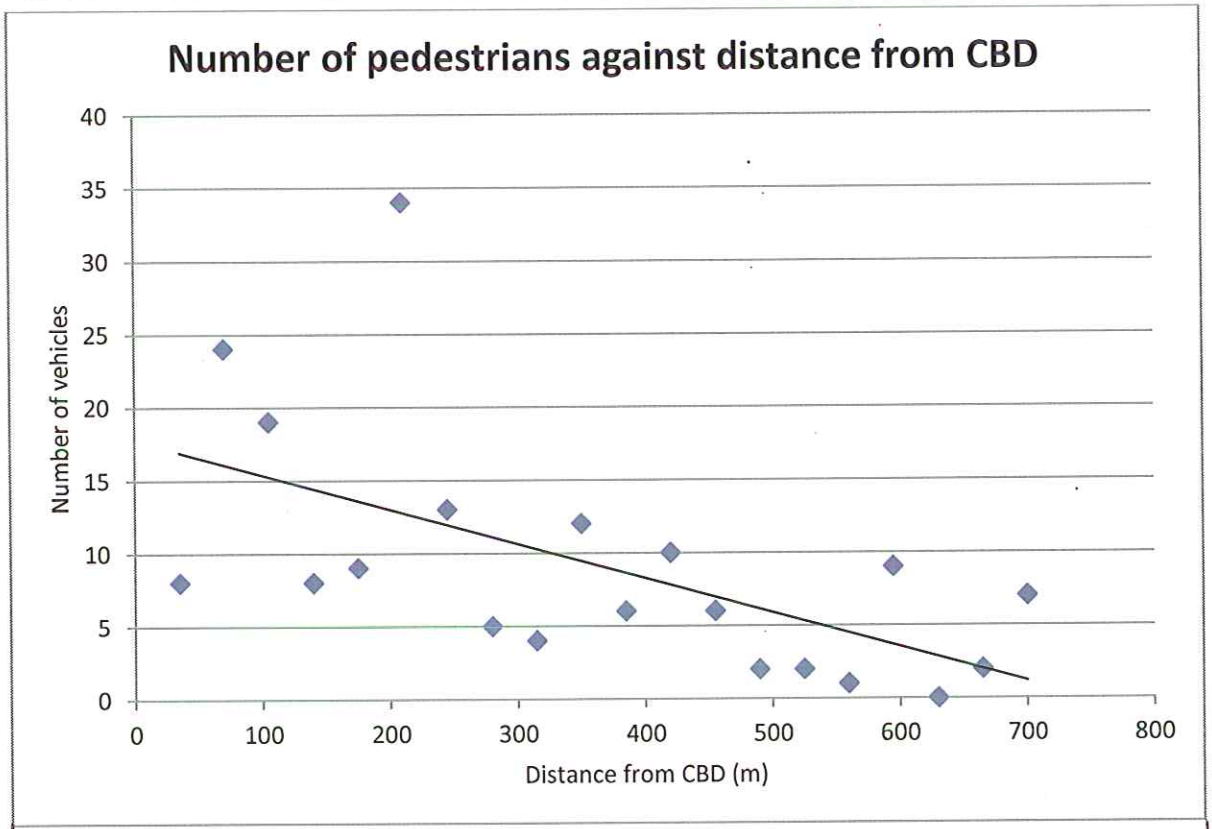


Correlation between traffic and pedestrian flows in Stratford

Figure 3b.1 Table of results for pedestrian count taken in Stratford-upon-Avon

Location	Distance from CBD (m)	Weather	0-15	16-64	64+
Union Street	35	Slightly Overcast	2	5	1
High Street	70	Sun	0	12	12
Bridge Street	105	Sun	1	13	5
Guild Street	140	Sun	0	5	3
Waterside	175	Sun	0	6	3
Henley Street	210	Sun	3	23	8
Sheep Street	245	Sun	2	6	5
Chapel Lane	280	Sun	2	2	1
Windsor Street	315	Sun	0	4	0
Rother Street	350	Cloudy	1	10	1
Birmingham Road	385	Sun	0	6	0
Gyratory	420	Sun	0	9	1
Grove Road	455	Sun	0	5	1
Warwick Road	490	Sun	0	1	1
Chestnut Walk	525	Sun	0	2	0
Bull Street	560	Sun	0	0	1
Alcester Road	595	Sun	2	7	0
Tiddington Road	630	Sun	0	0	0
Banbury Road	665	Sun	0	0	2
Birmingham Road (nr. Maybird Centre)	700	Sun	0	7	0

Figure 3b.2 Scatter graph to show relationship between number of pedestrians and distance from CBD



There is a weak negative correlation between the number of pedestrians and distance from the CBD

Figure 3b.3 Pie chart to show proportions of different ages of pedestrians in Stratford-upon-Avon

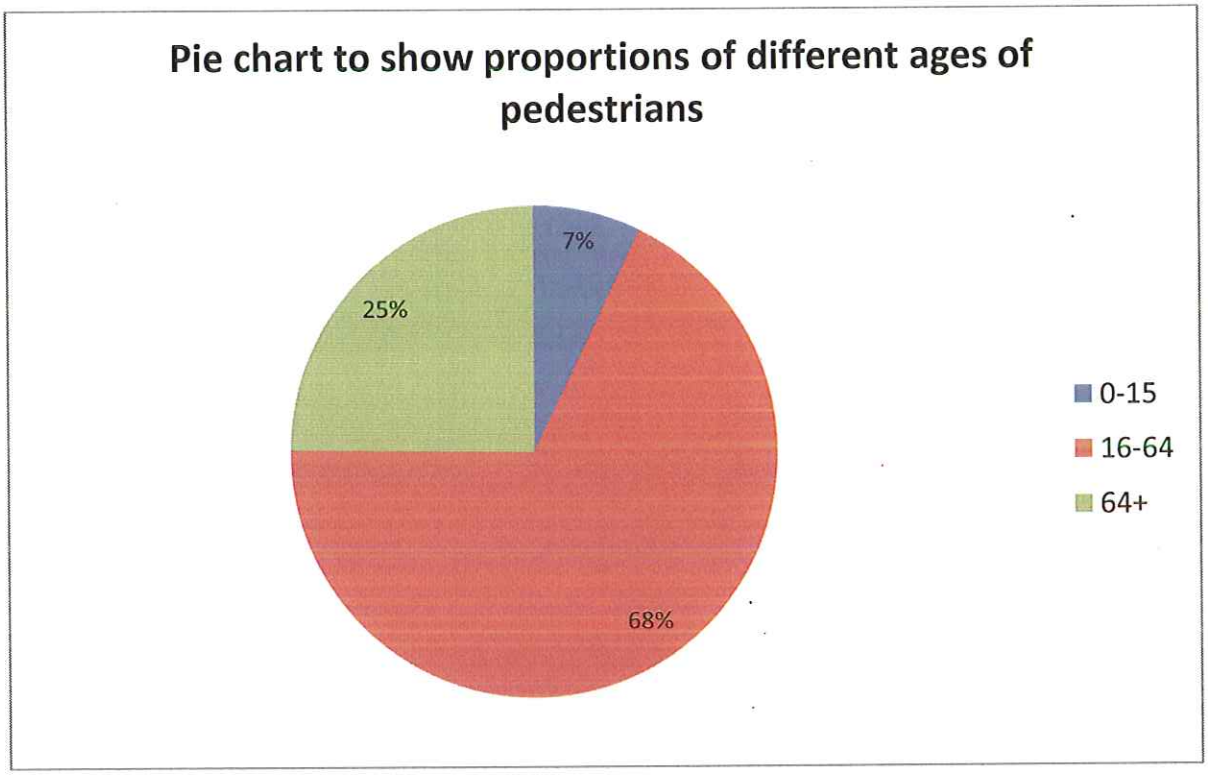


Figure 3b.4 Spearman's rank correlation coefficient to show relationship between distance from CBD and number of pedestrians

Distance from CBD (m)	Rank A	Number of Pedestrians	Rank B	Difference Between Ranks	Difference Squared
35	1	8	11.5	-10.5	110.25
70	2	24	19	-17	289
105	3	19	18	-15	225
140	4	8	11.5	-7.5	56.25
175	5	9	13.5	-8.5	72.25
210	6	34	20	-14	196
245	7	13	17	-10	100
280	8	5	7	1	1
315	9	4	6	3	9
350	10	12	16	-6	36
385	11	6	8.5	2.5	6.25
420	12	10	15	-3	9
455	13	6	8.5	4.5	20.25
490	14	2	4	10	100
525	15	2	4	11	121
560	16	1	2	14	196
595	17	9	13.5	3.5	12.25
630	18	0	1	17	289
665	19	2	4	15	225
700	20	7	10	10	100

Sum of 'Difference Squared': 2173.5

$$(R) = 1 - \frac{6\sum d^2}{n^3 - n} \qquad (R) = 1 - \frac{6 \times 2173.5}{20^3 - 20}$$

R = -0.634210526

This shows a negative correlation between distance from CBD and number of vehicles – as distance from CBD increases, number of pedestrians decreases. This is what we predicted.

Figure 3b.5 Scatter graph to show relationship between number of vehicles and number of pedestrians

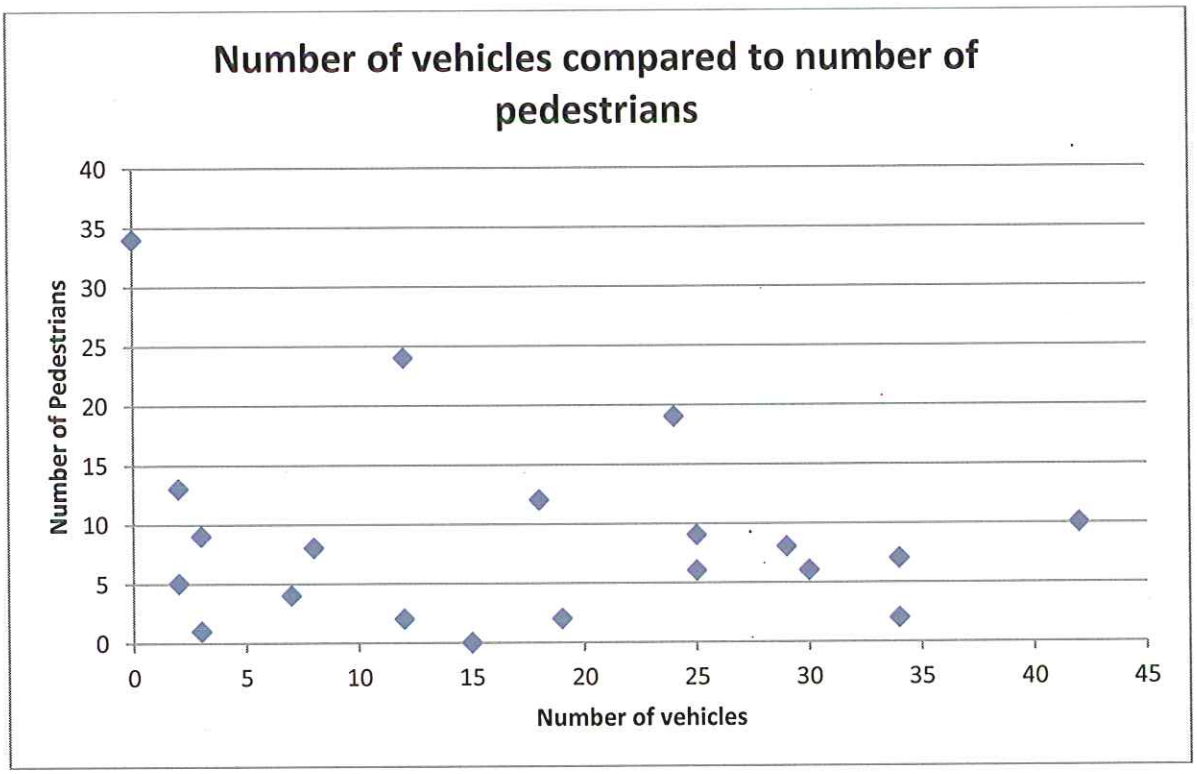


Figure 3b.6 Spearman's rank correlation coefficient to show relationship between number of vehicles and number of pedestrians

Number of vehicles	Rank A	Number of Pedestrians	Rank B	Difference Between Ranks	Difference Squared
0	1	34	20	-19	361
2	2.5	13	17	-14.5	210.25
2	2.5	5	7	-4.5	20.25
3	4.5	9	13.5	-9	81
3	4.5	1	2	2.5	6.25
7	6	4	6	0	0
8	7	8	11.5	-4.5	20.25
12	8.5	24	19	-10.5	110.25
12	8.5	2	4	4.5	20.25
15	10	0	1	9	81
18	11	12	16	-5	25
19	12	2	4	8	64
24	13	19	18	-5	25
25	14.5	6	8.5	6	36
25	14.5	9	13.5	1	1
29	16	8	11.5	4.5	20.25
30	17	6	8.5	8.5	72.25
34	18.5	2	4	14.5	210.25
34	18.5	7	10	8.5	72.25
42	20	10	15	5	25

Sum of 'Difference Squared': 1461.5

$$(R) = 1 - \frac{6\sum d^2}{n^3 - n} \qquad (R) = 1 - \frac{6 \times 2173.5}{20^3 - 20}$$

R = -0.09887218

This shows no correlation between number of pedestrians and number of vehicles. This is not what we predicted.

Figure 3b.7 Annotated photograph to show the location of and explain our first pedestrian count

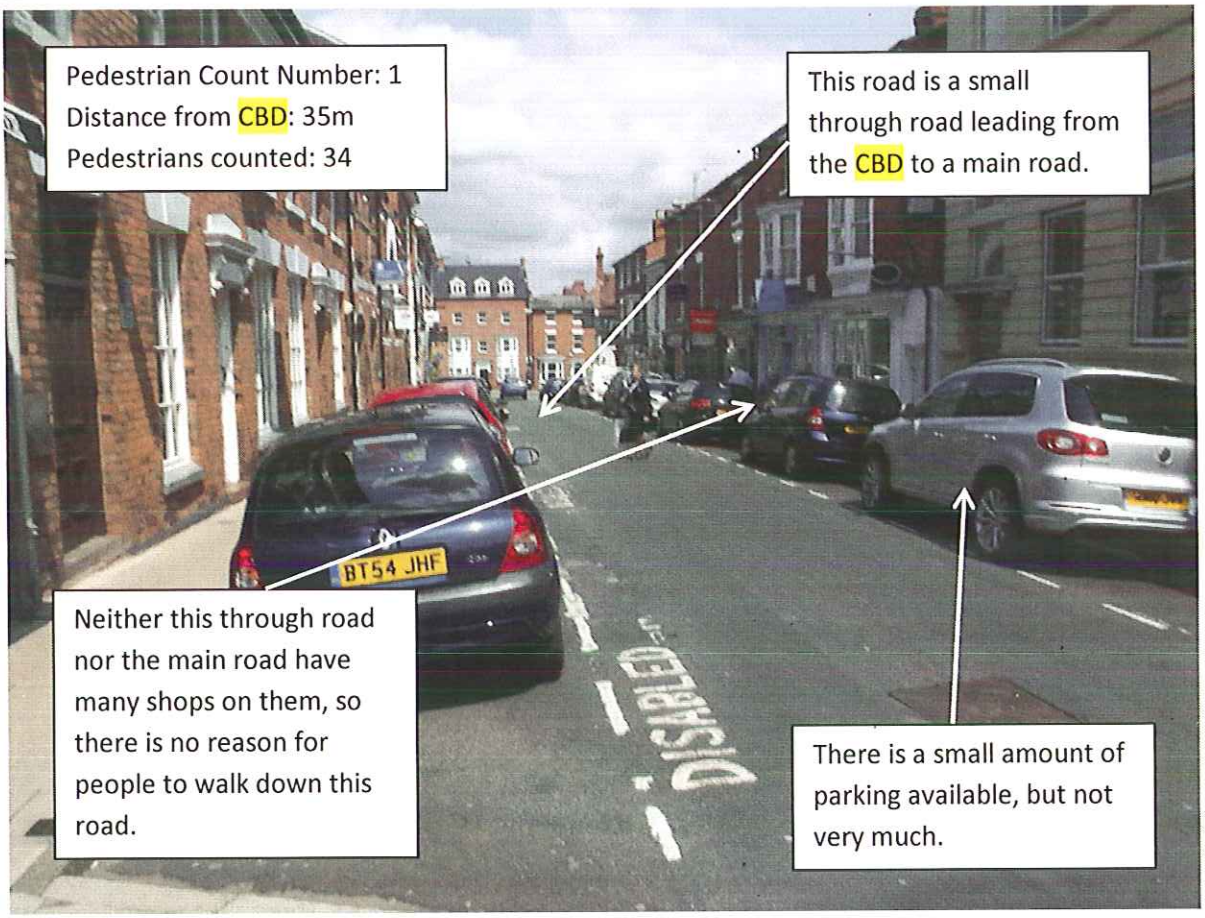
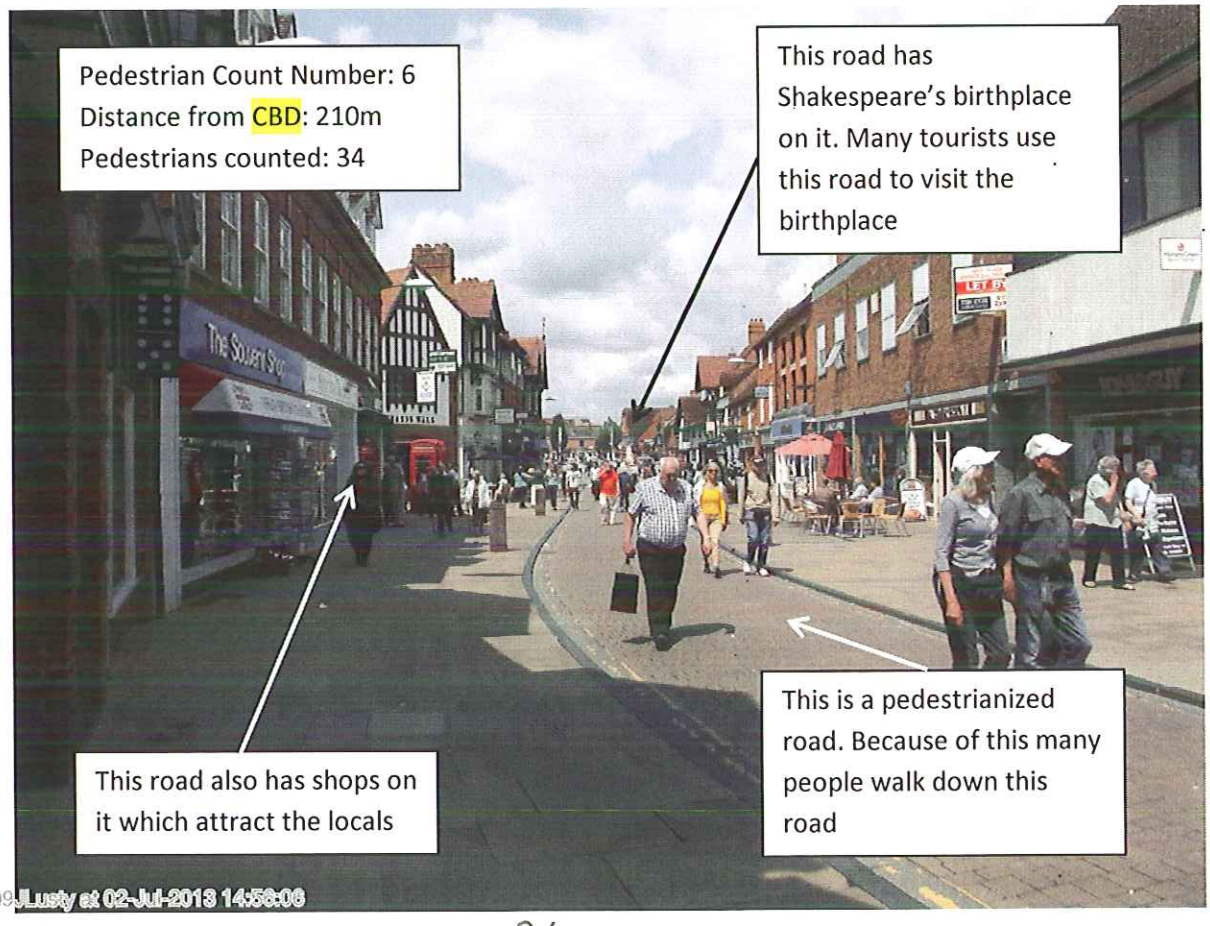


Figure 3b.8 Annotated photograph to show the location of and explain our sixth pedestrian count



Cost of parking with distance from the CBD

Figure 3c.1 Table of results for cost of parking in Stratford-upon-Avon

Car Park	Distance From CBD (m)	Cost for 30 mins	Cost for 1 hour	Cost for 2 hours
Bridge Street	97	£0.50		
High Street	68	£0.50		
Union Street	31	£0.50		
Chapel Lane	250	£0.50	£1.00	
Chapel Street	200	£0.50	£1.00	
Ely Street	210	£0.50	£1.00	
Great William Street	250	£0.50	£1.00	
John Street	150	£0.50	£1.00	
Mansell Street	340	£0.50	£1.00	
Payton Street	210	£0.50	£1.00	
Rother Street	340	£0.50	£1.00	
Scholars Lane	340	£0.50	£1.00	
Shakespeare Street	345	£0.50	£1.00	
Sheep Street	170	£0.50	£1.00	
Tyler Street	185	£0.50	£1.00	
Chestnut Walk	485	£0.50	£1.00	£2.00
Church Street	360	£0.50	£1.00	£2.00
Old Town	675	£0.50	£1.00	£2.00
Southern Lane	375	£0.50	£1.00	£2.00
Bridgefoot	315		FREE	£2.00
Riverside	530		£1.00	£2.00
Swans Nest Lane	470		£1.00	£2.00
Unicorn Meadow	375		FREE	£2.00
Church Street	415		£1.00	£2.00
Recreation Ground	615		£1.00	£2.00
Arden Street	470		£1.00	£2.00
Windsor Street	340		£1.00	£2.00

BLANK = One cannot park for that period of time

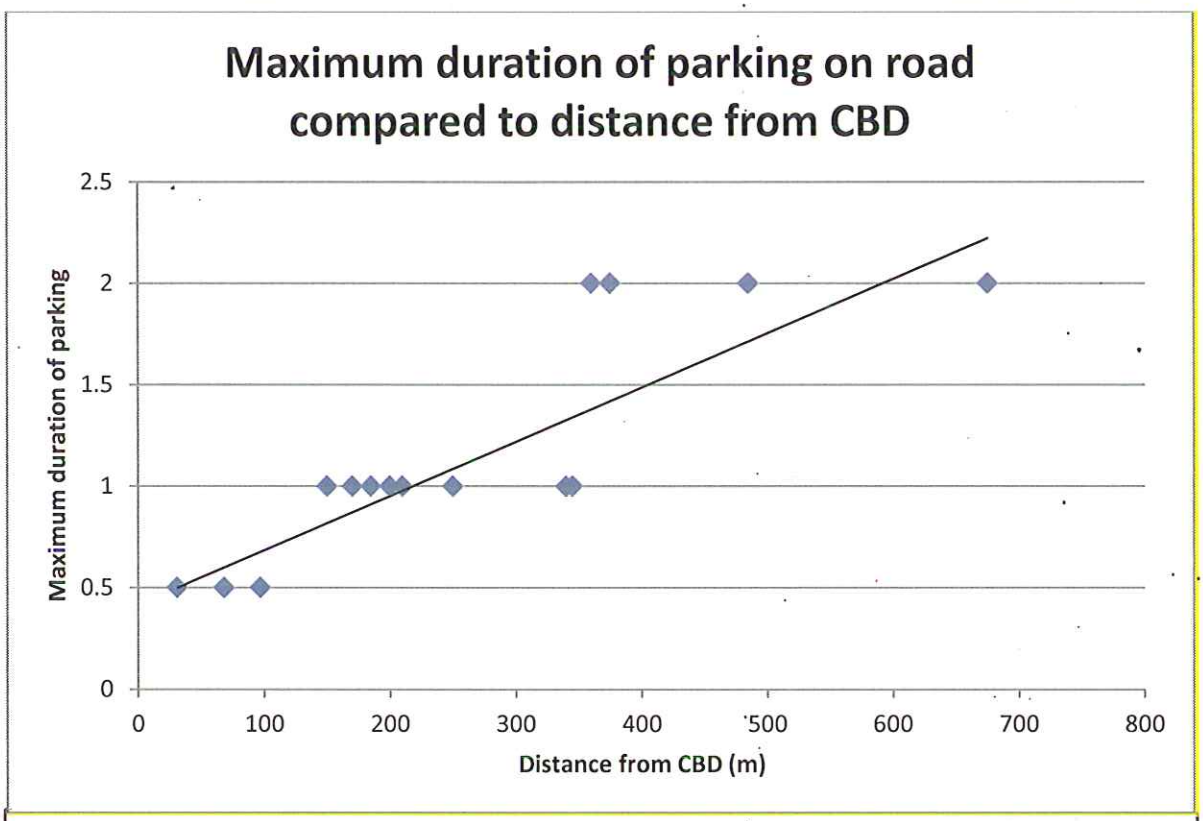
Due to nearly all of the parking costing the same price I will base my results tables on how long one can park for, as opposed to the cost of parking. Doing this leads to this table (PTO):

Figure 3c.2 Table of results for maximum duration of parking in Stratford-upon-Avon

Car Park	Distance From CBD (m)	Maximum duration of parking (hours)
Bridge Street	97	0.5
High Street	68	0.5
Union Street	31	0.5
Chapel Lane	250	1
Chapel Street	200	1
Ely Street	210	1
Great William Street	250	1
John Street	150	1
Mansell Street	340	1
Payton Street	210	1
Rother Street	340	1
Scholars Lane	340	1
Shakespeare Street	345	1
Sheep Street	170	1
Tyler Street	185	1
Chestnut Walk	485	2
Church Street	360	2
Old Town	675	2
Southern Lane	375	2
Bridgefoot	315	72
Riverside	530	72
Swans Nest Lane	470	72
Unicorn Meadow	375	72
Church Street	415	72
Recreation Ground	615	72
Arden Street	470	72
Windsor Street	340	72

As can be seen from this table, the car parks can be parked in for a lot longer than the on-road parking. Because of this, I will not include them in my next data presentation as they are in a separate category.

Figure 3c.3 Scatter graph to show relationship between maximum duration of parking and distance from CBD



There is a clear correlation between distance from CBD and the maximum duration of parking on road.

Figure 3c.4 Isoline map to show maximum duration of parking

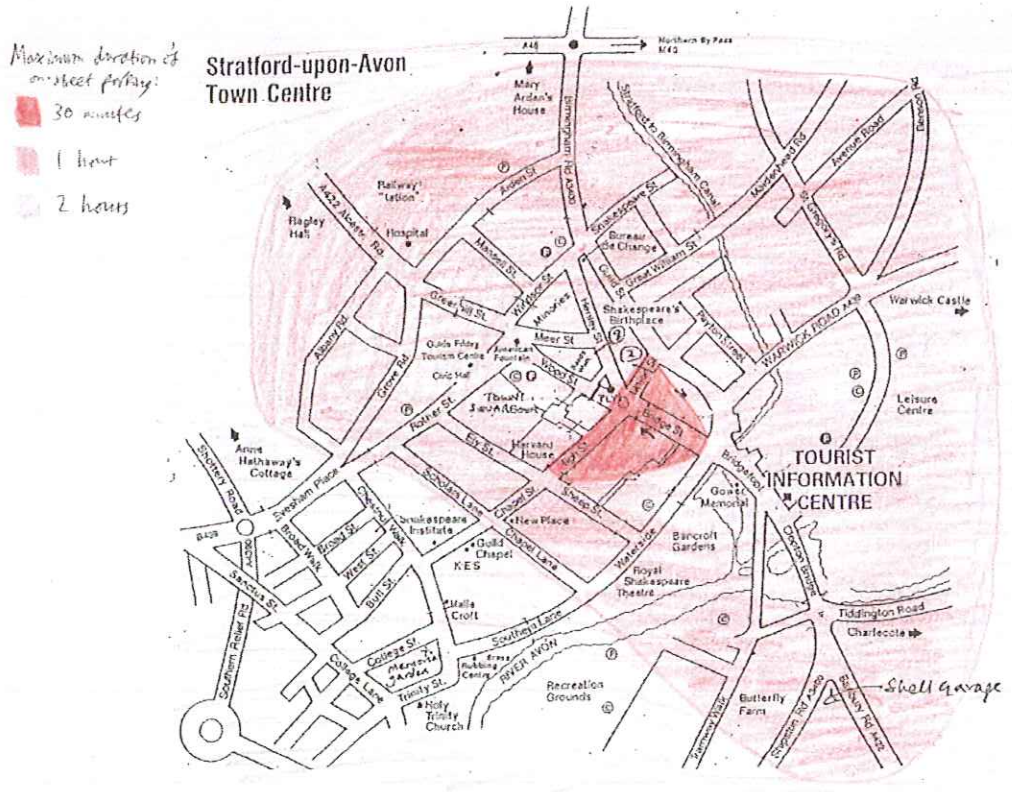


Figure 3c.5 Annotated photograph to show the location of and explain our first parking cost check

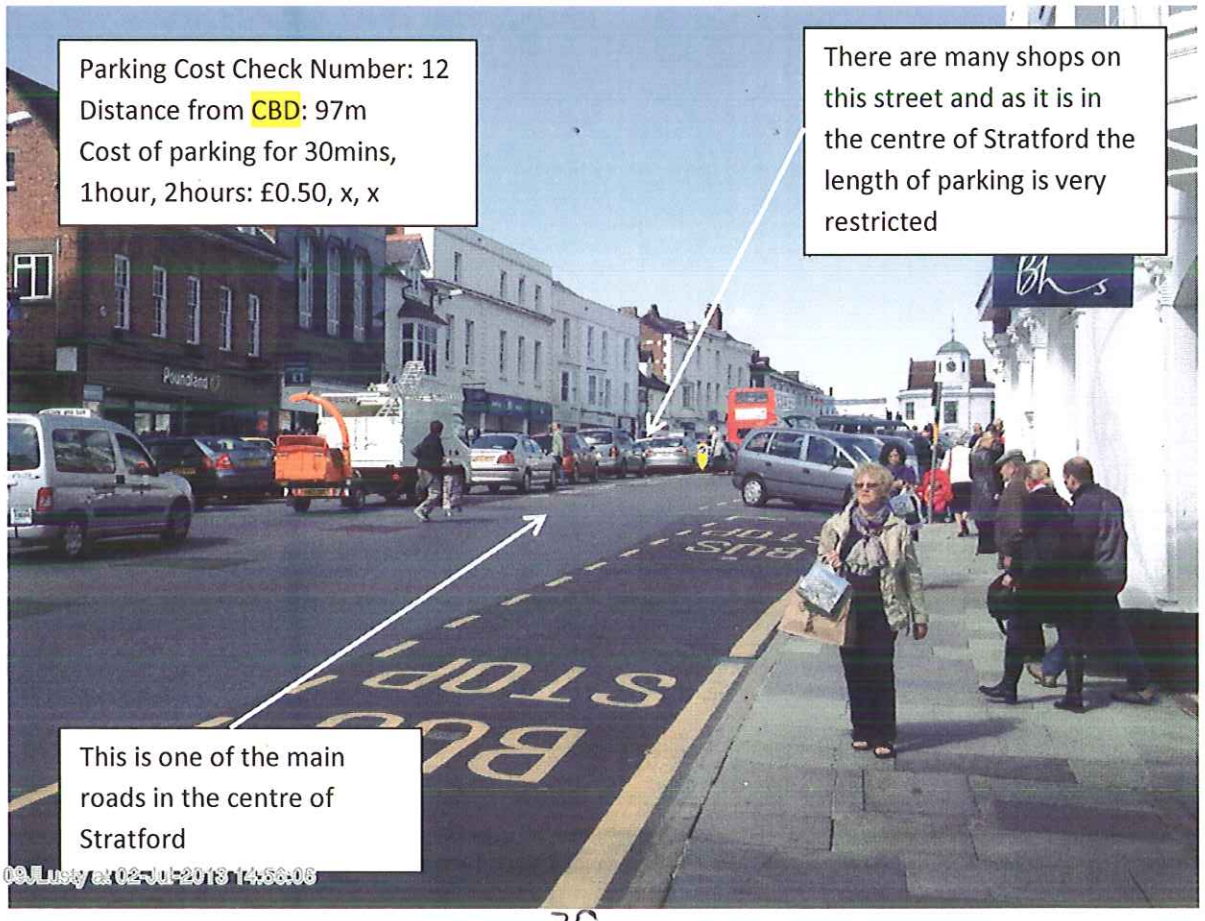


Figure 3c.6 Annotated photograph to show the location of and explain our fourth parking cost check