Data Presentation
Section 3

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Vertical Zoning

Word Count: 42

Key:

C – Commercial/Retail
H – Housing/Flats
O – Offices
V – Vacant
S – Storage
T – Tourist Attraction

Figure 3a.1 – Table of results for floor usage on Bridge Street (Stratford-upon-Avon)

Bridge Street

Direction: East

North Side

Second Floor	O	H			S	O	O	O	O	O
First Floor	O	C	S	S	S	O	C	S	S	C
Ground Floor	C	C	C	C	C	C	C	C	C	C

South Side

Second Floor	S	O	S	H		S	S	H	O	H	S	H	H	O			S
First Floor	S	S	C	S	S	S	S	S	S	S	S	S	S	C	H	S	C
Ground Floor	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C

Figure 3a.2 – Table of results for floor usage on Sheep Street (Stratford-upon-Avon)

Sheep Street

Direction: East

North

Second Floor	H	S	H	H	H			S	T			H	H								H
First Floor	S	C	S	S	S	O	C	S	T	S	V	S	V	S	S	O	H	H	H	S	H
Ground Floor	C	C	C	C	C	C	C	C	T	C	V	C	V	C	C	O	C	C	H	C	C

South

Second Floor						O		S		S	S	S			H			H
First Floor	O	H	O	O	C	C	S	O	S	C	C	O	V	S	C	V	V	H
Ground Floor	O	H	C	C	C	C	C	C	C	C	C	C	V	C	C	C	C	C

Figure 3a.3 – Table of results for floor usage on West Street (Stratford-upon-Avon)

West Street

Direction: South West

North West

Second Floor	H																		Narrow Lane		
First Floor	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H
Ground Floor	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H

North West Continued

First Floor	H	H	H	H	H	V	H	H	H	H	H	H	H	H	H	H	H	H
Ground Floor	H	H	H	H	H	V	H	H	H	H	H	H	H	H	H	H	H	H

South East

First Floor	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
Ground Floor	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

South East Continued

First Floor	H	H	H	Narrow Lane	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
Ground Floor	H	H	H		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

Figure 3a.4 – Table of results for floor usage on Jolyffe Park Road (Stratford-upon-Avon)

Jolyffe Park Road

Direction: West

North

First Floor	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
Ground Floor	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

South

First Floor	H	H	H	H	Talbot Road	H	H	H	H	Slingates Road	H	H	H	H	H	H	H
Ground Floor	H	H	H	H		H	H	H	H		H	H	H	H	H	H	C

Figure 3a.5 – Pie Chart to Show Ground Floor Building Usage in the CBD

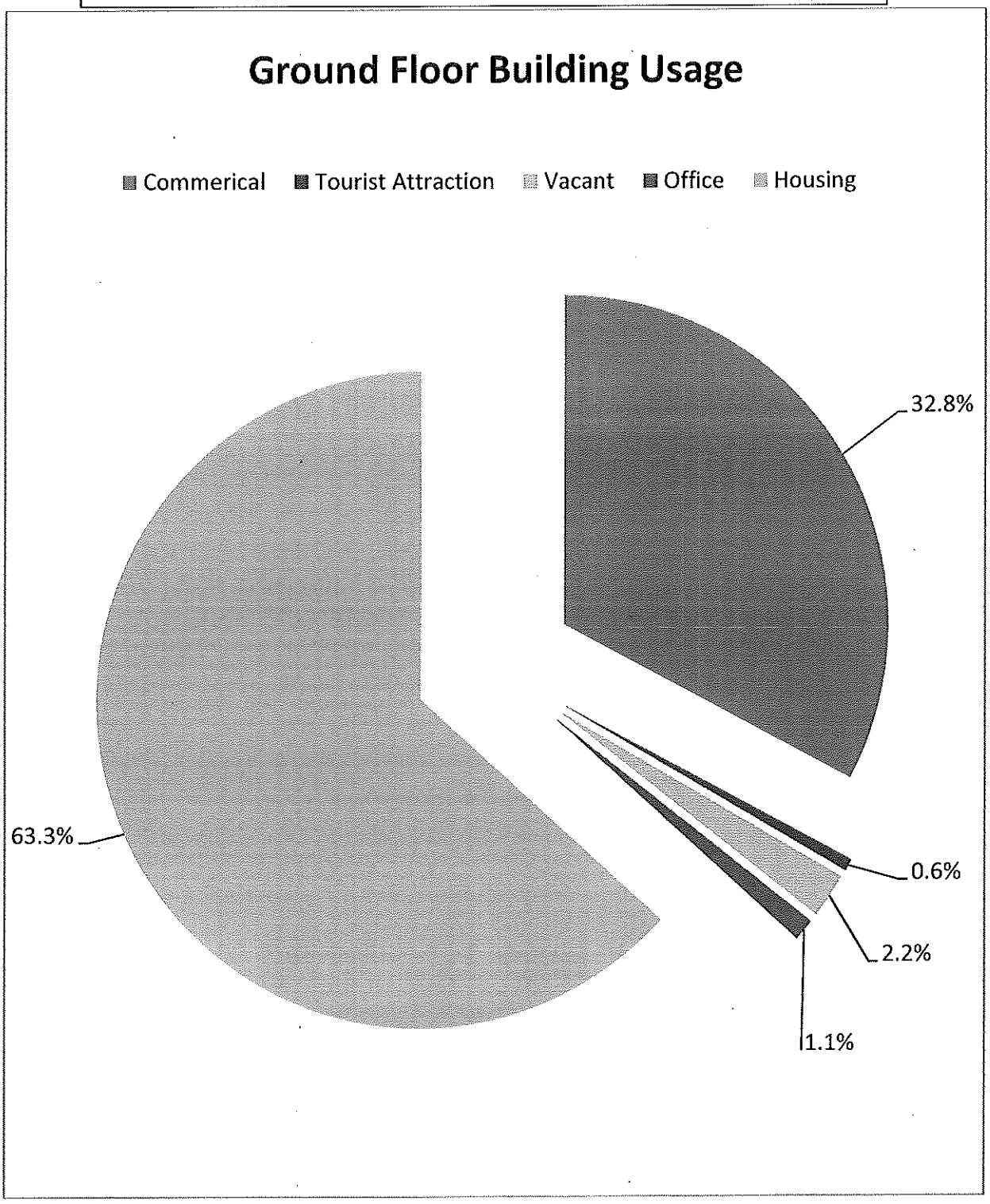


Figure 3a.6 – Pie Chart to Show First Floor Building Usage in the CBD

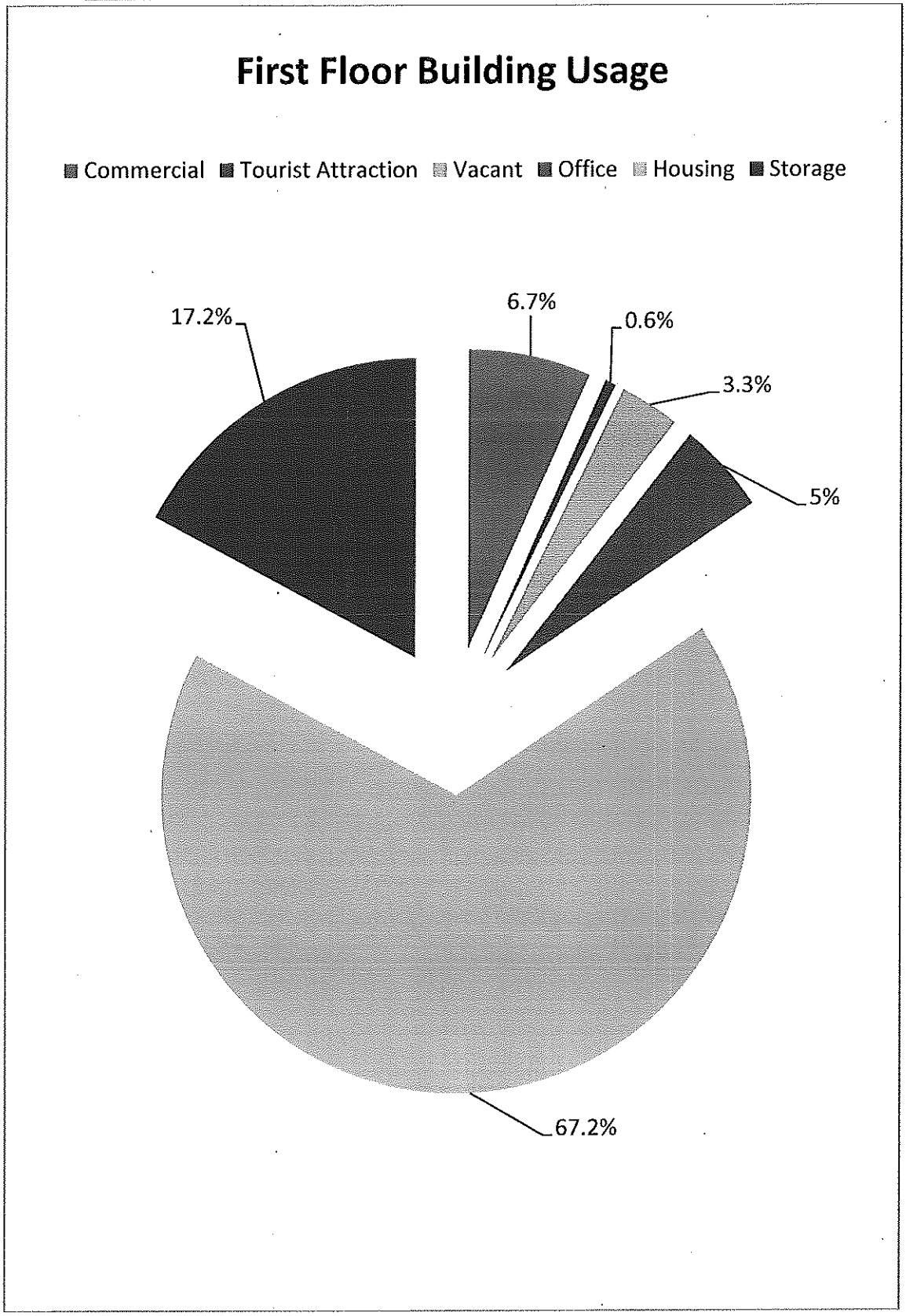
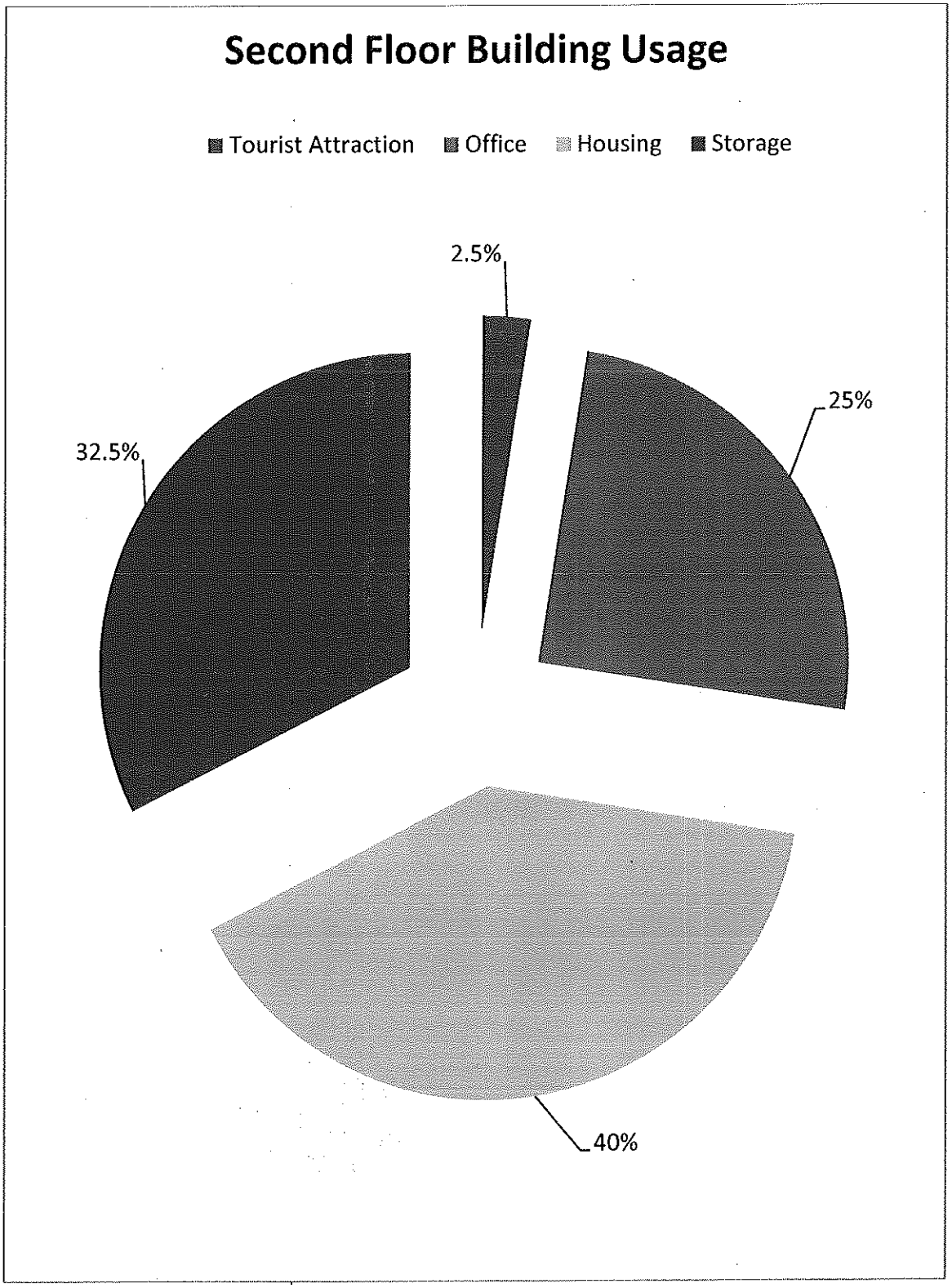


Figure 3a.7 – Pie Chart to show Second Floor Building Usage in the CBD



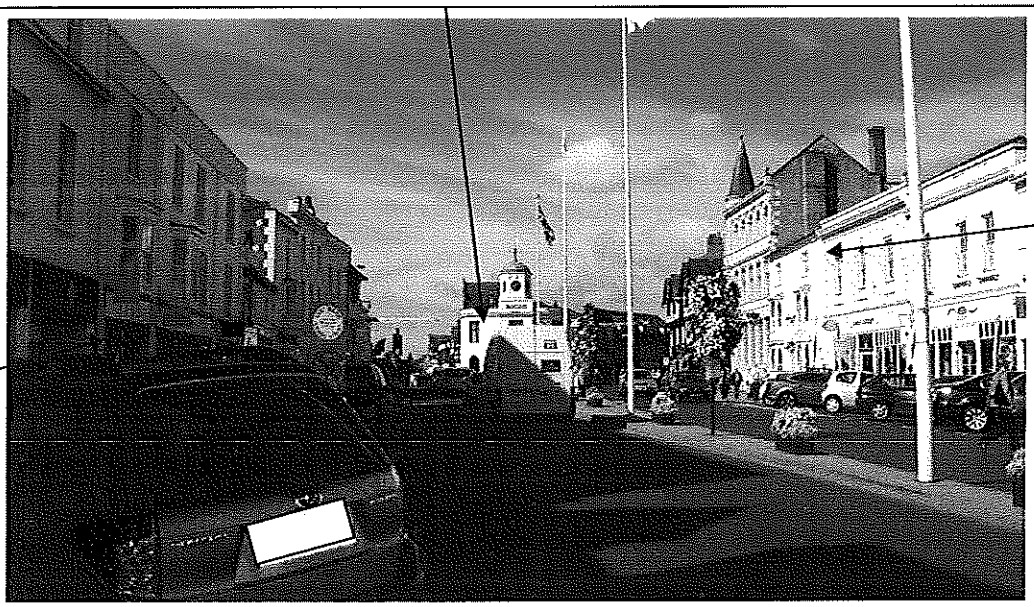
Vertical Zoning Photo Evidence

Figure 3a.8 – Annotated photograph to show the data collected on Bridge Street for Vertical Zoning

Bridge Street

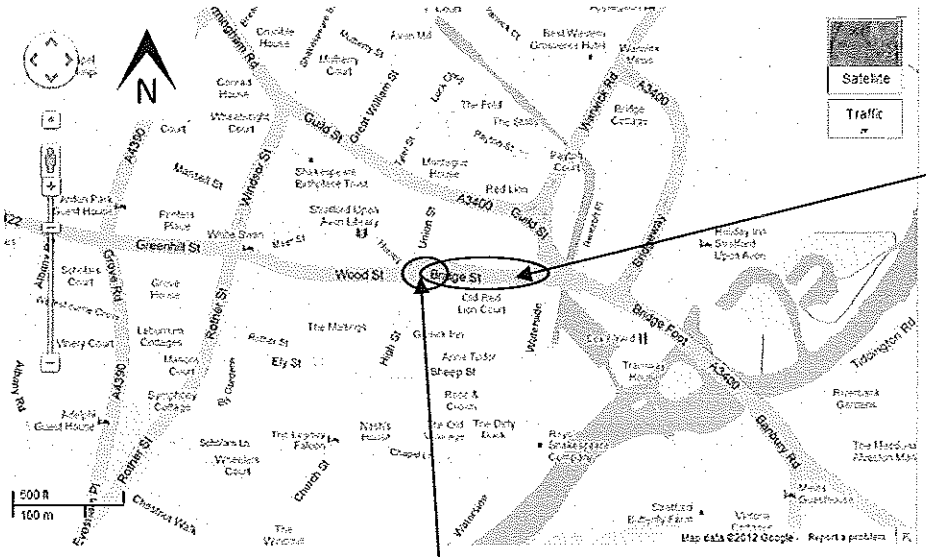
On the ground floor of every building along Bridge Street the floor is used for commercial purposes because this has the best accessibility to the passing public and traffic. The street is commercial based due to the road leading directly to the PLVI.

The PLVI is situated at the head of Bridge Street meaning that the land value of Bridge Street will be very high. This means that big brand names such as McDonalds and Boots are situated here because incomes for any businesses based here will be high.



The first and second floors showed evidence of vertical zoning due to the fact that they is mainly used for offices and storage, only occasionally did a store use two floors. This is due to poor accessibility from the street on the upper floors.

Figure 3a.8b – Map showing the position of Bridge Street in relation to the PLVI



Bridge Street investigated for vertical zoning.

Directly connected to the PLVI Bridge Street has many shops therefore attracts a lot of pedestrians.

PLVI

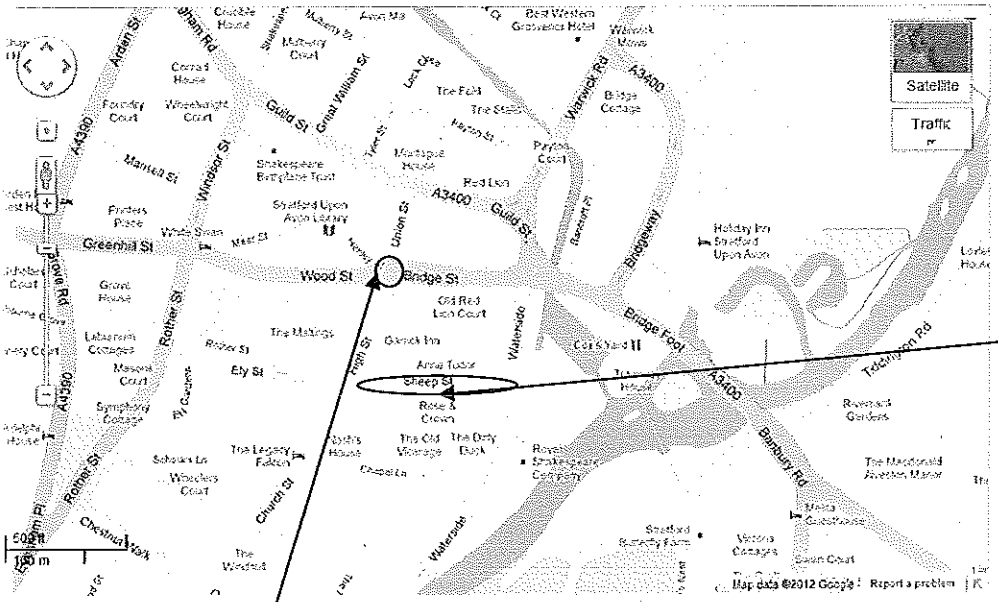
Figure 3a.9 - Annotated photograph to show the data collected on Sheep Street for Vertical Zoning

Sheep Street

The ground floors of the majority of buildings on Sheep Street have commercial uses due to these being the most accessible to the public, therefore increasing the number of people coming into the shops and thus the profits. There were many shops here because the road is only ...m from the PLVI meaning there is a large amount of passing public.

The upper floors on Sheep Street are mainly used for offices and/or storage for the businesses below. However there were some houses above more local shops which could allow shop owners to live directly above their business. It is a very attractive street for other offices such as solicitors because it is very close to the PLVI.

Figure 3a.9b – Map showing the position of Sheep Street in relation to the PLVI



Near to the PLVI Sheep Street is a commercial street meaning there are large amounts of pedestrians visiting the shops allowing many successful businesses to be situated here.

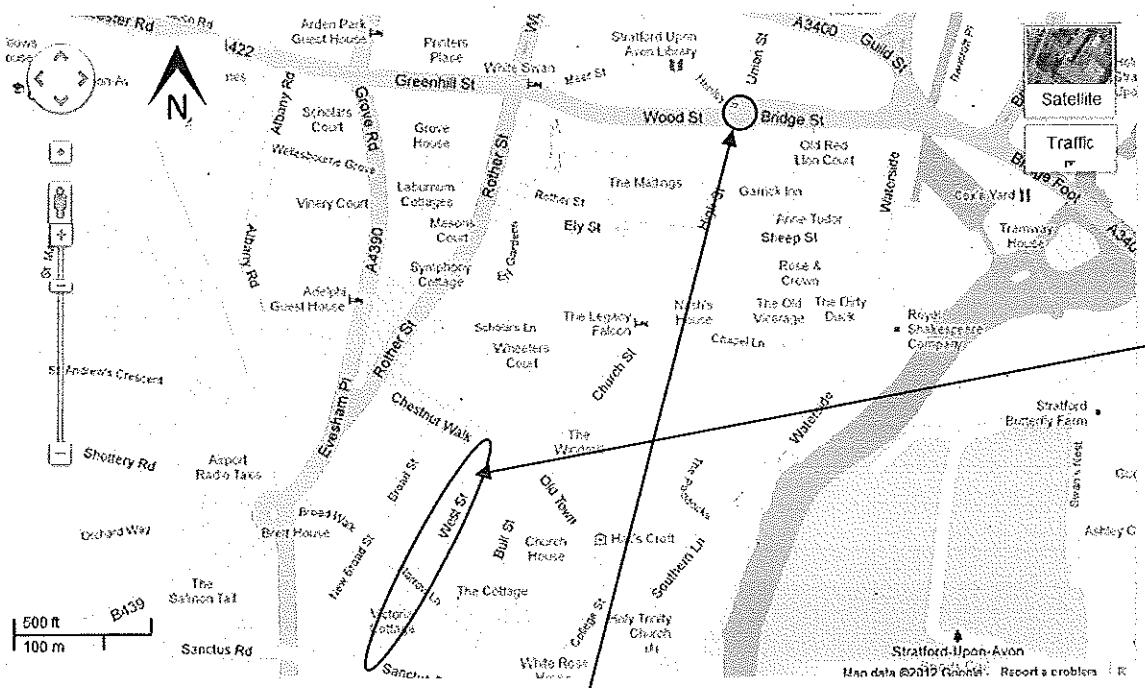
PLVI

Figure 3a.10 - Annotated photograph to show the data collected on West Street for Vertical Zoning

On West Street all floors on all buildings were used for housing. There are terraced houses all covering two floors except for the first semi-detached house which has three floors. West Street is in a convenient location due it to being almost directly in the town centre meaning it is very popular among people who need to commute to the PLVI for business and leisure, it is within walking distance.

West Street was very long with houses lining the length of both sides meaning that a lot of people could live here due to its convenient situation.

Figure 3a.10b – Map showing position of West Street in relation to the PLVI



West Street is one of the first residential streets outside of the town centre. Fairly close to the PLVI but just far enough away for it to be used for housing. It is convenient for residents who want quick and easy access to the town centre.

PLVI

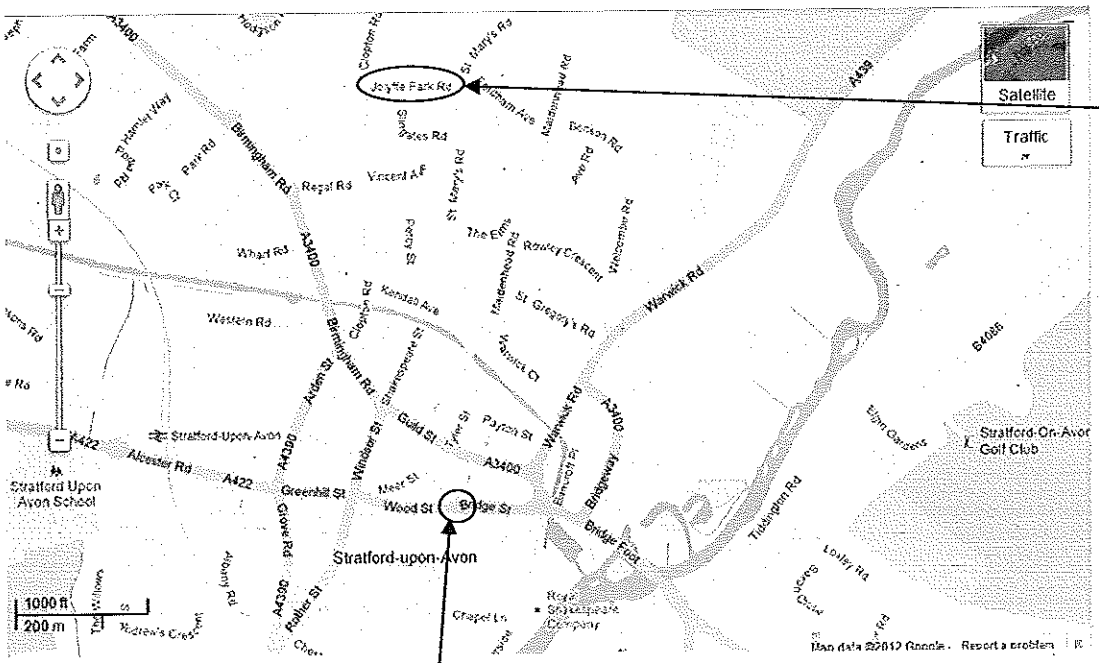
Figure 3a.11 - Annotated photograph to show the data collected on Jolyffe Park Road for Vertical Zoning

A small local newsagent is situated at the far end of the road so that residents don't have to travel all the way into the PLVI to collect basic supplies such as food and water.

Further away from the PLVI and into the suburbs all ground floors are used for housing to accommodate people who need to travel to the PLVI for work and leisure.

In the areas further away from the PLVI like this there are residential roads with detached and semi detached houses as there is more space. All floors are used for housing.

Figure 3a.11b – Map showing position of Jolyffe Park Road in relation to the PLVI



Jolyffe Park Road is in the suburbs and far away from the PLVI so shows the trend of Vertical Zoning. Buildings weren't higher that two floors and are used for housing except for one ground floor newsagent.

PLVI

Figure 3b.1 – Table of Results for Traffic Count Taken in Stratford-upon-Avon

Intervals (Per 50 Metres From PLV1)	Traffic Count (Vehicles Per Two Minutes)*
0	32
50	12
100	22
150	2
200	10
250	10
300	6
350	22
400	14
450	18
500	10
550	18
600	32
650	40
700	46
750	50
800	2
850	6
900	4
950	0

***Heading out of the CBD**

Figure 3b.2 – A Spearman's Rank Correlation Coefficient for Traffic Count in Relation to the Distance from the PLVI

Spearman's Rank Correlation Coefficient

Distance from PLVI (metres)	Rank A	No. of Vehicles in 2 Minutes	Rank B	Difference Between Ranks	Difference Squared
0	1	32	16.5	-15.5	240.25
50	2	12	10	-8	64
100	3	22	14.5	-11.5	132.25
150	4	2	2.5	1.5	2.25
200	5	10	8	-3	9
250	6	10	8	-2	4
300	7	6	5.5	1.5	2.25
350	8	22	14.5	-6.5	42.25
400	9	14	11	-2	4
450	10	18	12.5	-2.5	6.25
500	11	10	8	3	9
550	12	18	12.5	-0.5	0.25
600	13	32	16.5	-3.5	12.25
650	14	40	18	-4	16
700	15	46	19	-4	16
750	16	50	20	-4	16
800	17	2	2.5	14.5	210.5
850	18	6	5.5	12.5	156.25
900	19	4	4	15	225
950	20	0	1	19	361

Sum of 'Difference Squared': 1528.75

R= -0.14943609

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

This shows a weak link between number of cars passing a point per minute and distance from the PLVI. This was not what we predicted.

Traffic Count Photo Evidence

Figure 3b.3 – Annotated Photograph to Show the Location of and Explain our Fourth Traffic Count

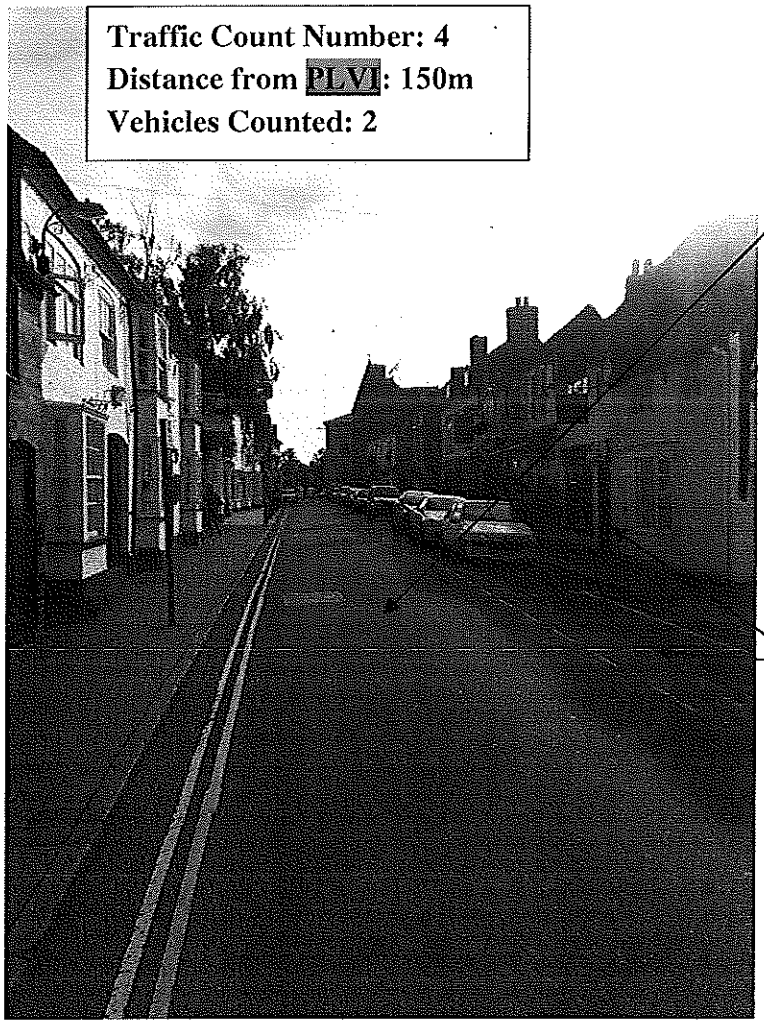


Figure 3b.3b - Annotated Photograph to Show the Location of and Explain our Fourth Traffic Count

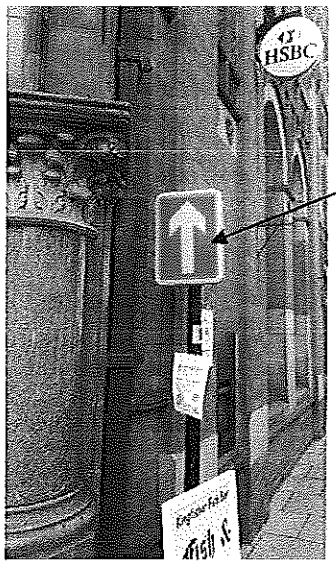
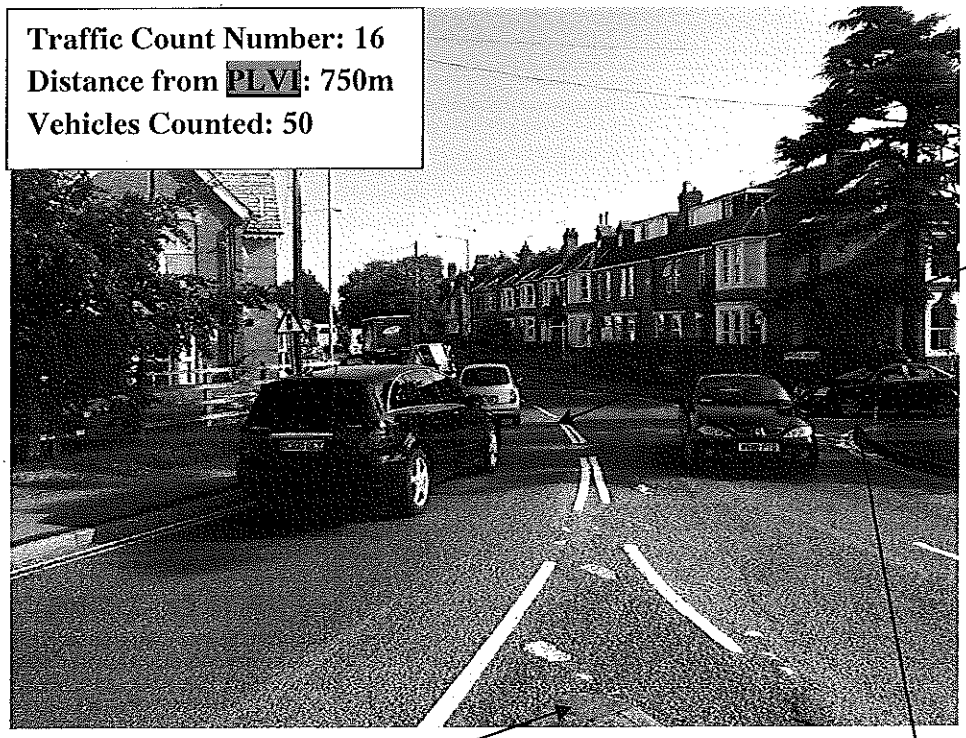


Figure 3b.4 – Annotated Photograph to Show the Location of and Explain our Sixteenth Traffic Count

Traffic Count Number: 16
Distance from PLVI: 750m
Vehicles Counted: 50



This traffic count and the ones preceding it were notably higher than the rest. This is due to the fact that this is the main road leading into the CBD from the bypass and vice versa.

This road led directly onto and from a roundabout meaning that there was heavy traffic flow in both directions. This was another reason that our traffic count here was higher because there was a small queue for the roundabout meaning there was a steady stream of cars.

There is another road leading to an increase in the traffic count coming from a residential estate. It is the only road in and out of the estate meaning that all of the cars visiting or leaving contributed to our count thus increasing it.

Figure 3c.1 – Table of Results for Car Park Analysis Taken in Stratford-upon-Avon

Car Park Number	Distance From PLVI As the Crow Flies (m)	Number of Spaces
1	125	15
2	213	252
3	260	24
4	320	272
5	330	598
6	370	67
7	385	128
8	400	162
9	440	63
10	460	42
11	460	539
12	505	382
13	525	249
14	620	204
15	730	64
16	1000	850
17	1135	46
18	1150	73
19	1700	90
20	1850	21

Figure 3c.2 – Spearman's Rank Correlation Coefficient for the Number of Parking Spaces in Car Parks in Relation to the Distance from the PLVI

Spearman's Rank Correlation Coefficient

Distance from PLVI (metres)	Rank A	No. Of Spaces Per Car Park	Rank B	Difference Between Ranks	Difference Squared
125	1	15	1	0	0
213	2	252	15	13	169
260	3	24	3	0	0
320	4	272	16	12	144
330	5	598	19	14	196
370	6	67	8	2	4
385	7	128	11	4	16
400	8	162	12	4	16
440	9	63	6	-3	9
460	10.5	42	4	-6.5	42.25
460	10.5	539	18	7.5	56.25
505	12	382	17	5	25
525	13	249	14	1	1
620	14	204	13	-1	1
730	15	64	7	-8	64
1000	16	850	20	4	16
1135	17	46	5	-12	144
1150	18	73	9	-9	81
1700	19	90	10	-9	81
1850	20	21	2	-18	324

Sum of 'Difference Squared': 1389.5

R= -0.044736842

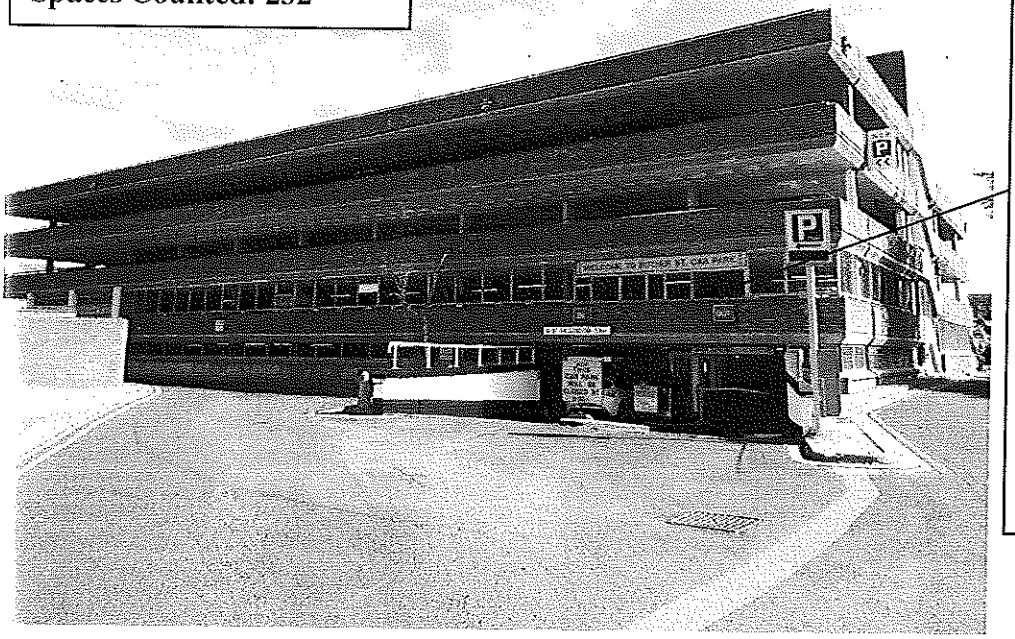
$$(R) = 1 - \frac{6\sum d^2}{n^3 - n}$$

Our results show basically no relationship between distance from the PLVI and number of spaces per car park meaning our hypothesis was wrong.

Car Park Analysis Photo Evidence

Figure 3c.3 – Annotated Photograph to Show the Location of and Explain the Data Collected at Car Park 2

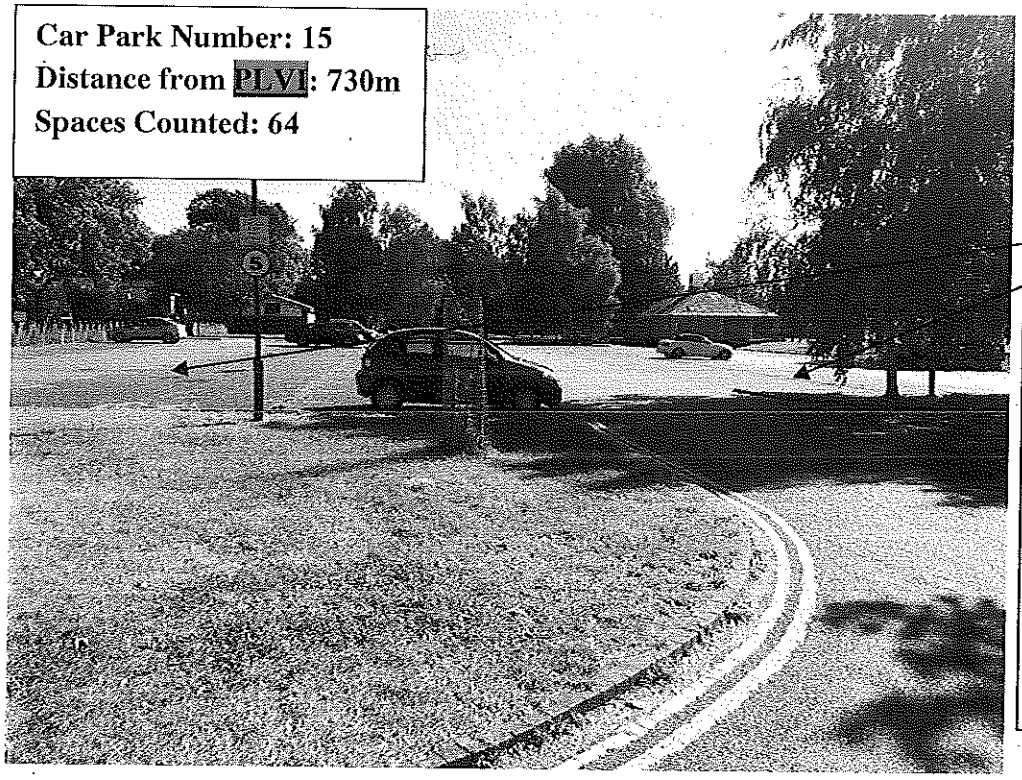
Car Park Number: 2
Distance from PLVI: 213
Spaces Counted: 252



Close to the PLVI this car park needs to supply a large amount of visitors who want to park in the CBD for shopping or for work. Big multi-storey car parks like this are built where land value is at its highest so it can still accommodate all of the people who want to park here without costing too much to build.

Figure 3c.4 – Annotated Photograph to Show the Location of and Explain the Data Collected at Car Park 15

Car Park Number: 15
Distance from PLVI: 730m
Spaces Counted: 64



This car park was out of the CBD and across the river Avon heading towards the suburbs. This means that the car park doesn't need to be as large due to the fact it isn't supplying the parking for people visiting the CBD. The use of the car park was for a children's playground and sports fields therefore meaning there were fewer spaces than in car parks within the CBD.