

**Buxton Town Team**  
**Artisan Market Footfall Analysis**  
**July 2015**

Date: 27 July 2015

Author: John Estruch

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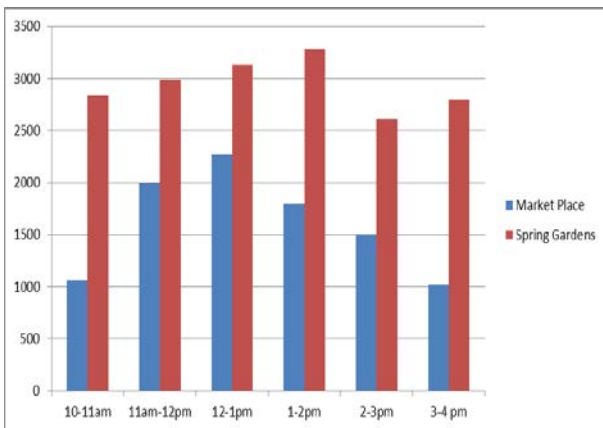
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## SUMMARY

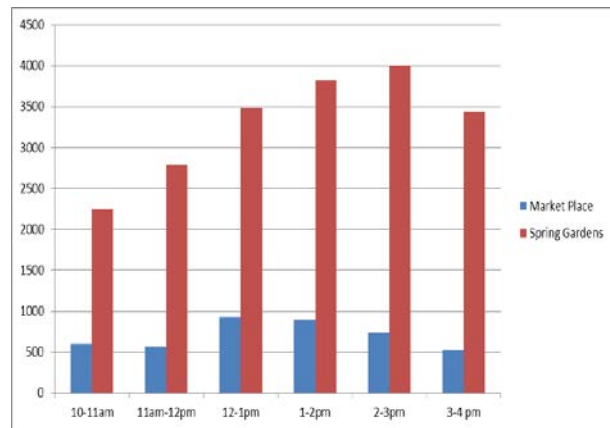
In order to gather objective data about the impact of the Artisan Market and to supplement the survey conducted by University of Derby of the Artisan market trials of June and July 2014, we have undertaken an analysis of the impact of the Artisan Market on footfall in Buxton.

Footfall was measured throughout the day on two Saturdays, one of which had an Artisan Market in the Market Place and the other in Spring Gardens:

The hourly footfall profile during each day is shown below:



Artisan Market in Market Place on 1 Nov 2014



Artisan Market in Spring Gardens on 6 Jun 2015

Additional one-hour surveys were conducted on two more Artisan Market days and on four Saturdays when the Artisan Market was not held (each within one or two weeks of one of the Artisan Market surveys). These surveys were used to assess the impact of the Artisan Market on footfall. The comparison of footfall on an Artisan Market day with the footfall on its closest measured non-Artisan Market Saturday is as follows:

Artisan Market Date	Comparison date	Artisan Market Location	Extra footfall in	
			Spring Gardens	Market Place
1 Nov 2014	18 Oct 2014	Market Pl	+9%	+212%
6 Dec 2014	13 Dec 2014	Market Pl	+7%	+128%
6 June 2015	20 June 2015	Spring Gdns	+16%	-22%
4 July 2015	27 June 2015	Spring Gdns	+30%	-32%

In addition taking into account the University of Derby survey results and reports from the Market Co.:

1. More businesses in Spring Gardens reported a drop in business than an increase when the Artisan Market was present at either location.
2. A large majority (75%+) of businesses in the Market Place reported a drop in business performance when the Artisan Market was in Spring Gardens. When the Artisan Market was in the Market Place more businesses in the Market Place reported an improvement in business than a drop in business.
3. Artisan Market traders report higher footfall and better trading in Spring Gardens than in Market Place.

The conclusions we draw from the assessment of footfall from this survey and the other information described above is:

1. The Spring Gardens is better for the Market co. and Artisan Market traders (some of whom are local but many of whom are not).
2. Some Spring Gardens businesses suffer and some benefit regardless of whether the market is in Spring Gardens or the Market Place.
3. When the Artisan Market is held in the Market Place it has a positive impact on businesses in the Market Place.
4. When the Artisan Market is held in Spring Gardens it has a seriously negative impact on businesses in the market place.

**Over all, holding the Artisan Market in the Market Place is good for the economy of Buxton, holding it the Spring Gardens is bad for the economy of Buxton.**

A more detailed description of the method used for the survey, the data collected and the analysis follow below.

## FOOTFALL MEASUREMENT METHOD

### FOOTFALL MEASUREMENT ZONES

Two zones were defined in which footfall was to be measured. The first zone which covers the area in which the Artisan Market is held in Higher Buxton (see Figure 1) includes the Market Place and part of Scarsdale Place.

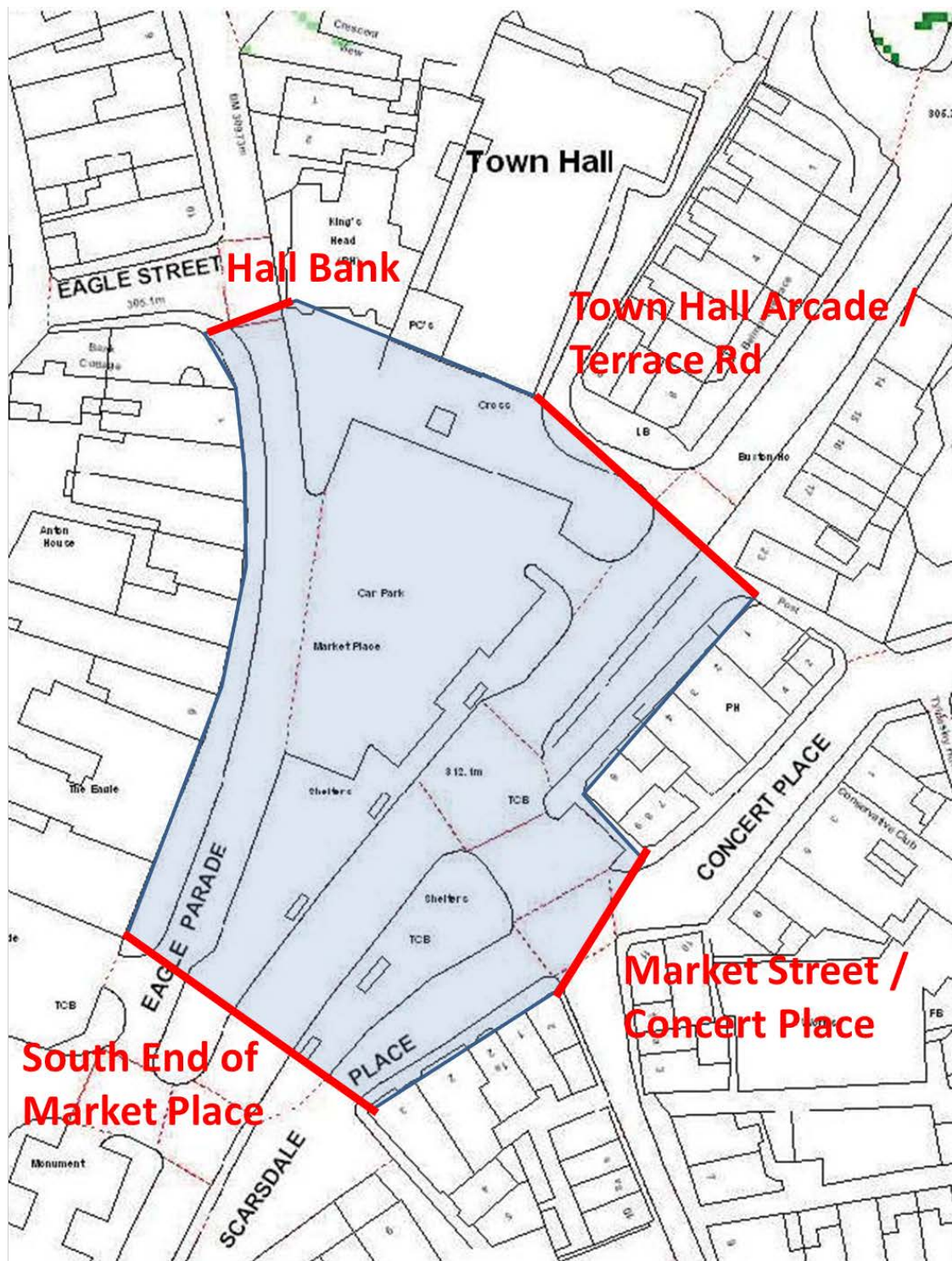


Figure 1 – Market Place Zone

The second zone covers the other shopping area around Spring Gardens (see Figure 2) and includes The Springs shopping centre and the Spring Gardens as far as Wye Street.

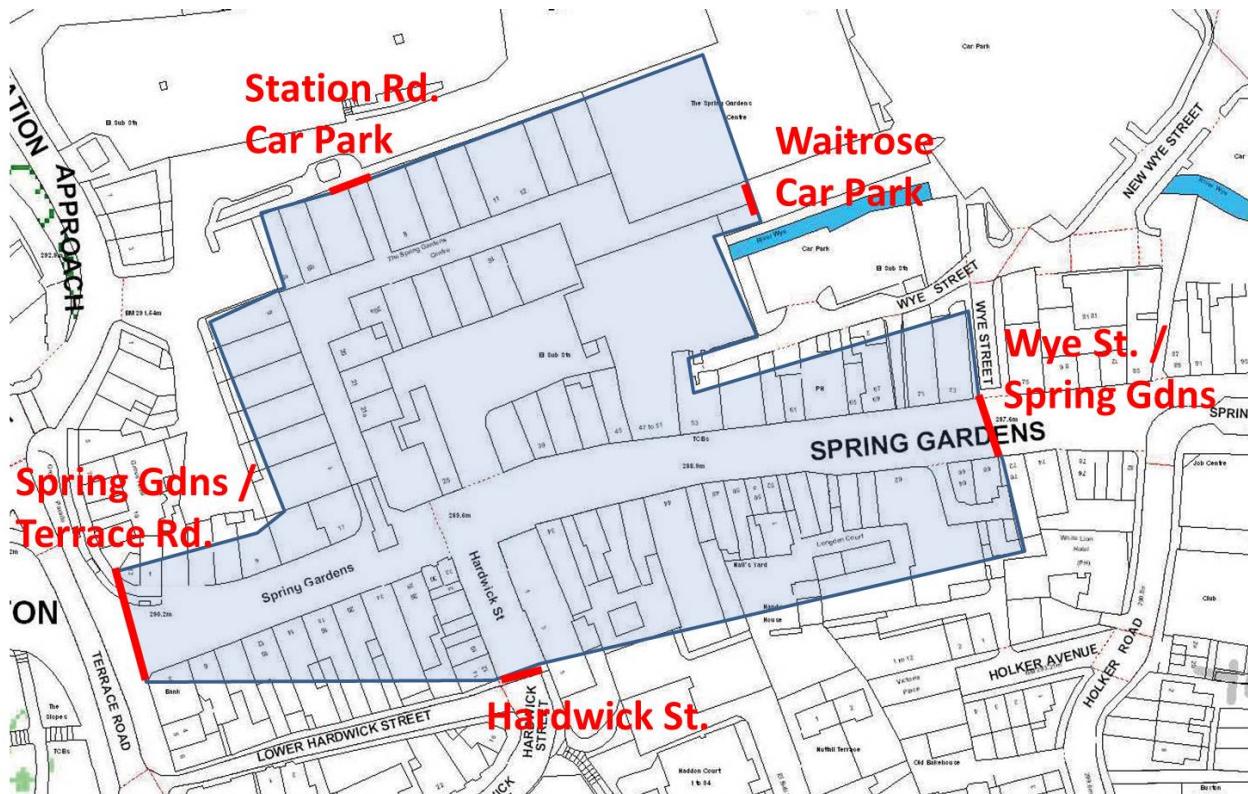


Figure 2 – Spring Gardens Zone

## **SAMPLING POINTS**

For each zone a number of sample points were defined which collectively covered all entry/exit points to the zone.

The Market Place Zone has 4 sampling points (see Figure 1):

- a. “Hall Bank” – the sampling point is a line from the Kings Head to the Corner of Eagle Street. Anyone entering/leaving the zone from Hall bank or Eagle Street will cross the line.
- b. “Town Hall Arcade / Terrace Road” – anyone entering / leaving the zone from Terrace Road or the small street next to the Town Hall will cross this line.
- c. “Market St. / Concert Place” – is a line from Chapter and Verse to the veterinary surgery. People entering leaving the Market Place cross this line but those passing from Concert Place to Market Street without going into Scarsdale Place will not.
- d. “South End of Market Place” is a line from the Lighthouse shop to the chip shop. This is a convenient place where it is possible to establish a boundary at which people can be counted which completely covers entry/exit from that side of the market.

The Spring Gardens zone has five sampling points (see Figure 2):

- e. “Spring Gdns. / Terrace Rd.” is a line between the NatWest Bank and the Corner of Maggie Mays.

- f. "Hardwick St." is at the end of the pedestrianised section of Hardwick St. so that the zone includes the shops in that pedestrianised area.
- g. "Wye St. / Spring Gdns." provides a suitable sampling point which includes people passing in or out of Spring Gardens from Wye St to the car park, from Holker Rd or from the eastern end of Spring Gardens.
- h. "Waitrose Car Park" is the door at the eastern side of the Springs centre.
- i. "Station Rd. Car Park" is the door at the northern side of the Springs centre.

## **FOOTFALL SAMPLING**

A sampling approach was used to estimate footfall. In order to estimate the footfall within a zone counts were taken at each sampling point around the zone. The number of people entering or leaving via the sampling point was counted for a period of 3 or 4 minutes (after the first two counting days it was decided that 3 minutes was sufficient to get a meaningful sample). By counting at each sampling point in turn it was generally possible to take counts at all of the sampling points for a particular zone within a 30 minute period (occasionally sampling cycles took slightly longer due to interruptions to the person counting).

In order to test the process and as a comparison, one sample cycle was taken for each zone on 18 October 2014, a Saturday when the Artisan Market was not held.

On Saturday 1 November 2014, when the Artisan Market was held in the Market Place, sample cycles were taken in the Market Place zone every hour between 10.00 to 16.00. It was intended to take samples in the Spring Gardens zone over the same period but with the resources available it was not possible to take samples in Spring Gardens in the periods 10.00-11.00 and 12.00-13.00. Estimates for these two periods were interpolated / extrapolated from the other periods when measurements were taken.

On Saturday 6 December 2014, when the Artisan Market was again held in the market place, a one hour sample was taken between 11.00 – 12.00. A similar one hour sample was taken Saturday 13 December 2014 when there was no Artisan Market.

On Saturday 6 June 2015, when the Artisan Market was held in Spring Gardens, sample cycles were taken every hour between 10.00 – 16.00.

On each of Saturday 20 June (no Artisan Market), Saturday 27 June (no Artisan Market) and Saturday 4 July (Artisan Market in Spring Gardens) sample cycles were taken for the comparison hour 11.00-12.00.

We therefore have samples for a full day for one market in each location. We also have samples for the comparison hour for two markets in each location and for 4 Saturdays each of which is within one or two weeks of the Artisan Market.

The footfall sampling data collected is shown in Appendix 1.

## **CALCULATION OF FOOTFALL ESTIMATES**

The calculation of footfall estimates for each zone was undertaken as follows (the results are shown in Appendix 1):

- 1) The number of entries and exits counted at each sample point in a sampling period (3 or 4 minutes) was multiplied by an appropriate factor (20 for 3 minute periods and 15 for 4 minute periods) to give an equivalent number of entries and exits per hour at that sampling point.
- 2) The number of entries and exits per hour at all the sample points around a particular zone for a sampling cycle were added together to give a total number of entries and exits per hour for the whole zone at the time of that sampling cycle.
- 3) As a visitor to a zone will both enter and exit the zone the estimated number of visits to the zone (The Footfall) was calculated by dividing the total number of entries and exits by 2.



## RESULTS

### FOOTFALL PER HOUR DURING ARTISAN MARKET

The method described above was applied to collect data and calculate footfall as shown in Appendix 1

**Table 1 – Footfall per hour on 1 November 2014 (Artisan Market in Market Place)**

	10.00-11.00	11.00-12.00	12.00-13.00	13.00-14.00	14.00-15.00	15.00-16.00	Total
<b>Market Place</b>	1,065	1,990	2,270	1,800	1,500	1,020	9,645
<b>Spring Gardens</b>	2,838*	2,985	3,133*	3,280	2,610	2,790	17,635

*\* No measurements were taken during these periods so estimates have been extrapolated / interpolated from periods when measurements were taken*

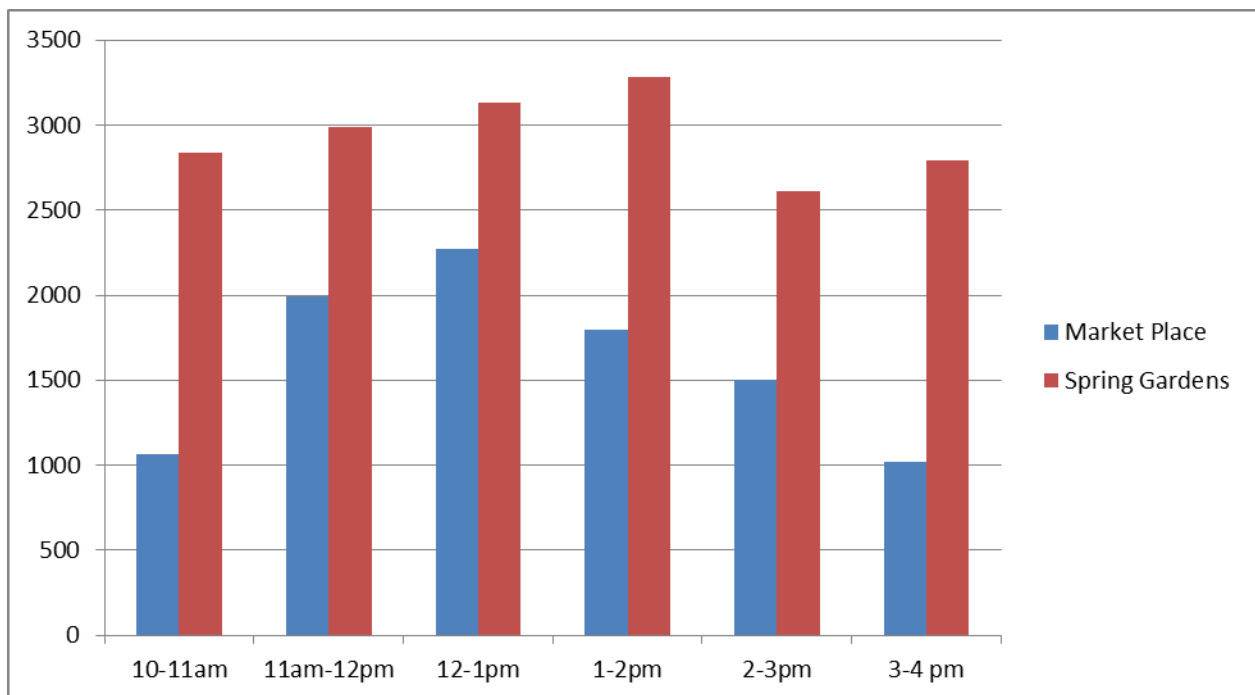


Figure 3 – Footfall per hour on 1 November 2014

**Note:** The footfall numbers represent the estimated number of visits to the sampling zones they do not represent the number of different people who visited the zone. If an individual person went in and out of the zone several times then they would be counted more than once.

**Table 2 – Footfall per hour on 6 June 2015 (Artisan Market in Spring Gardens)**

	<b>10.00- 11.00</b>	<b>11.00- 12.00</b>	<b>12.00- 13.00</b>	<b>13.00- 14.00</b>	<b>14.00- 15.00</b>	<b>15.00- 16.00</b>	<b>Total</b>
<b>Market Place</b>	600	560	930	890	730	530	4,240
<b>Spring Gardens</b>	2,250	2,790	3,490	3,820	4,000	3,440	19,790

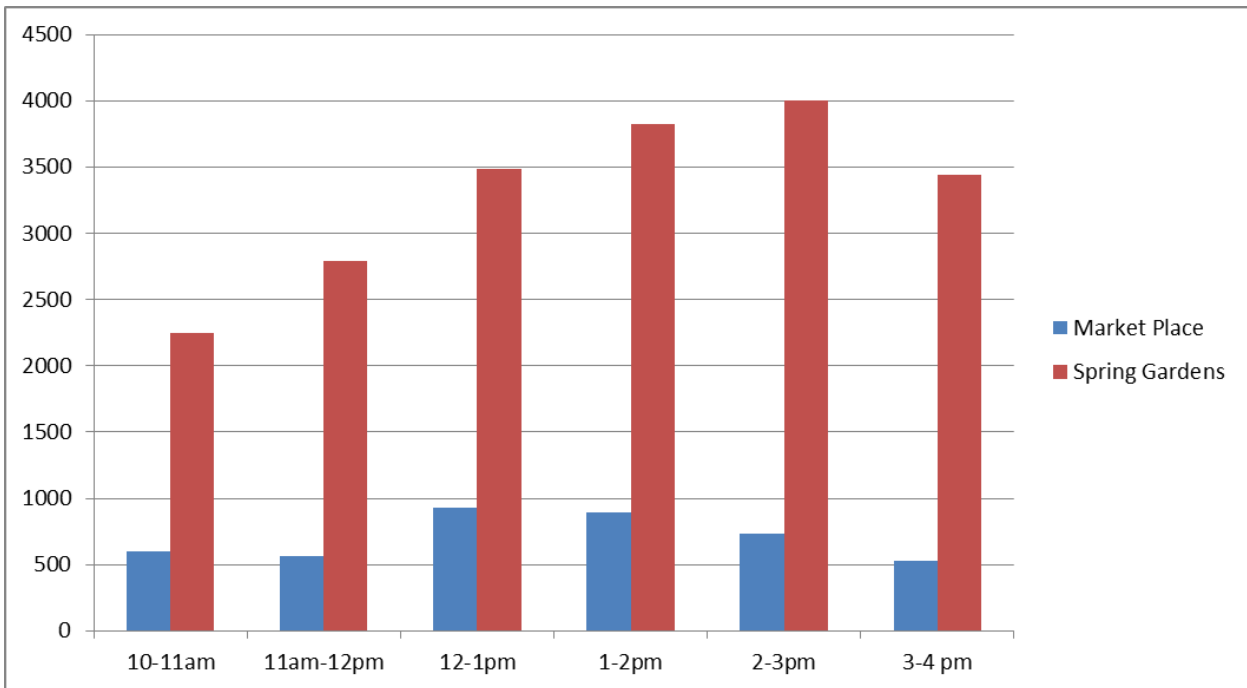


Figure 4 – Footfall per hour on 6 June 2015

## COMPARISONS BETWEEN MARKET DAYS AND NON-MARKET DAYS

In order to assess the impact of the Artisan Market on other business in Buxton comparisons were made of the footfall during the comparison hour (11.00-12.00) on days when the Artisan Market was held and on another Saturday within 1 week (in the case of 6 June 2015 it was 2 weeks) when there was no Artisan Market. By making comparisons with close Saturdays it should minimise the impact of any seasonal variations in footfall. There may be variations in footfall due to weather conditions so a note was made of the weather on each day so that any significant differences could be seen.

**Table 3 – Comparison of footfall on Saturdays with / without Artisan Market**

Date	Visits in hour		Artisan Market	% Change		Weather
	Spring Gardens	Market Place		Spring Gardens	Market Place	
18/10/2014	2738	638	No			Overcast, mild, light breeze
01/11/2014	2985	1990	<b>Market PI</b>	<b>+9%</b>	<b>+212%</b>	Sunny Intervals, cool, moderate breeze
06/12/2012	2560	1640	<b>Market PI</b>	<b>+7%</b>	<b>+128%</b>	Sunny intervals, cold, moderate breeze
13/12/2014	2400	720	No			Sunny intervals, cold, moderate breeze
06/06/2015	2790	560	<b>Spring Gdns</b>	<b>+16%</b>	<b>-22%</b>	Sunny intervals, cool, blustery wind
20/06/2015	2500	870	No			Overcast, mild, light breeze
27/06/2014	2530	990	No			Overcast, warmish, light breeze
04/07/2015	3290	670	<b>Spring Gdns</b>	<b>+30%</b>	<b>-32%</b>	Sunny, hot, light breeze

The comparison shows that on the two occasions when the Artisan Market was held in the Market Place there was a slight increases in footfall Spring Gardens and very large increases in the Market Place (2-3 times as many visits).

When the Artisan Market was held in Spring Gardens there was a moderate increase in footfall (the larger increase of 30% also corresponded to nicer weather than the comparison Saturday). However there was a significant decrease in footfall in the Market Place on both occasions.

## **CONCLUSIONS**

### ***INTERPRETATION OF THE DATA***

The direct interpretation of the data shows:

1. There is more footfall in Spring Gardens than the Market Place
2. When the Artisan Market is held in Market Place:
  - a. There is a slight increase in footfall in Spring Gardens
  - b. There is a very large increase in footfall in Market Place
3. When the Artisan Market is held in Spring Gardens:
  - a. There is a modest increase in footfall in Spring Gardens
  - b. There is a significant decrease in footfall in Market Place

This interpretation of the above footfall data is consistent with the conclusions of the University of Derby's surveys conducted during the Artisan Market Trials.

### ***OTHER INFORMATION***

The footfall data collected here does not directly indicate the economic impact of the Artisan Market on Buxton however there are other sources which provide additional information:

1. The University of Derby's survey conducted at the Artisan Market trials of June and July 2014 obtained the view of "bricks and mortar" businesses on the impact of the Artisan Market on their businesses:
  - a. More businesses in Spring Gardens disagreed than agreed that their business performance had increased when the Artisan Market was present at either location.
  - b. A large majority (75%+) of businesses in the Market Place disagreed that business performance had improved when the Artisan Market was in Spring Gardens. When the Artisan Market was in the Market Place slightly more businesses in the Market place agreed than disagreed that their business performance had improved.
2. The Market Co. which operates the Artisan Market has reported that its traders report higher footfall and better trading in Spring Gardens than in Market Place. They experienced difficulty in retaining traders as the Artisan Market was held in Market Place in September, November and December 2014.

## ***ECONOMIC IMPACT ON BUXTON***

The conclusions we draw from the assessment of footfall from this survey and the other information described above is:

1. The Market Co. and the traders on the Artisan Market, (some of whom are local but many of whom come from more than 10 miles from Buxton) have better trading conditions when the market is held in Spring Gardens.
2. The Artisan Market has a mixed impact on “bricks and mortar” businesses in Spring Gardens with some benefitting and some suffering. This can be seen as averaging out to a broadly neutral impact regardless of whether the market is in Spring gardens or the Market Place.
3. When the Artisan Market is held in the Market Place it has a positive impact on businesses in the market place.
4. When the Artisan market is held in Spring Gardens it has a seriously negative impact on businesses in the market place.

## VALIDITY OF THE ESTIMATES

The data and calculations in this report give an estimate of the footfall during the measurement periods. There are number of factors which mean that the estimate is not entirely accurate:

### **PEOPLE MAKING MULTIPLE VISITS**

In this analysis we have only attempted to count the number of visits to the sampling zones. If an individual visited a zone several times they will have been counted multiple times in the footfall. It was not practical to identify each individual and eliminate duplicate entries. Therefore we have defined “footfall” as the “number of visits to the sampling zone” not as “the number of individual visitors to the sampling zone”. This is a common position for any measurement of footfall which does not have a means of identifying individuals in the survey.

Some attempt was made to eliminate some obvious multiple visits:

- Springs Centre security staff and the Waitrose trolley collectors were not counted.
- Anyone who “dithered” at the sampling point and walked a short distance in and out in a short period of time was only counted once.

Otherwise we should assume that the numbers include individuals making multiple visits. The sampling method used does not allow us to make an estimate of the number of multiple visits or of the number of individual visitors.

### **STATISTICAL ERROR**

1. Because a sampling technique was used in which the number of entries and exits was only counted at the sampling point for 3 or 4 minutes in every hour, the calculated figure may be different to the actual number of entries / exits in the hour. Assuming that the flow of people in and out of the zones is roughly constant within each hour then this statistical “standard error” can be estimated (assuming a Poisson distribution of entry/exit counts then the standard error in any count is roughly equal to the square root of the count: Reference (for example . <http://labs.physics.dur.ac.uk/skills/skills/poisson.php> ). The standard errors are shown in Appendix 1.

### **SYSTEMATIC ERRORS**

The sampling process only counted:

- people entering or leaving a zone on foot
- adults in wheelchairs or mobility scooters

It did not count:

- children in buggies
- cyclists
- drivers or passengers in any vehicles.

The most significant impact of this approach on the footfall estimates is that it will not have properly counted anyone who entered and/or left the Market Place zone by bus. It will also exclude anyone who parked their car within the Market Place zone.

## APPENDIX 1- SAMPLING DATA

Date: 18/10/2014    Weather: Overcast, mild, light breeze    Counter: John Estruch    Artisan Mkt: No

Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
<b>18/10/2014</b>	Market place	11:35		South End of Mkt place	4	33	495				
18/10/2014	Market place	11:40		Market St. / Concert Place	4	23	345				
18/10/2014	Market place	11:46		Terrace Rd / Town Hall Arcade	4	20	300				
18/10/2014	Market place	11:52		Hall Bank	4	9	135				
18/10/2014	Market place		11am-12pm			85		1275	637.5	11%	69
18/10/2014	Spring Gardens	12:00		Spring Gardens /Terrace Rd	4	102	1530				
18/10/2014	Spring Gardens	12:10		Wye St. / Spring Gardens	4	134	2010				
18/10/2014	Spring Gardens	12:20		Station Rd Car Park	4	26	390				
18/10/2014	Spring Gardens	12:26		Waitrose Car Park	4	61	915				
18/10/2014	Spring Gardens	12:35		Hardwick St.	4	42	630				
18/10/2014	Spring Gardens		12-1pm			365		5475	2737.5	5%	143

**Date: 01/11/2014    Weather: Sunny Intervals, cool, moderate breeze    Counter: John Estruch    Artisan Mkt: Market Place**

Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
<b>01/11/2014</b>	Market place	10:30		South End of Mkt place	4	52	780				
01/11/2014	Market place	10:35		Hall Bank	4	23	345				
01/11/2014	Market place	10:41		Terrace Rd / Town Hall Arcade	4	57	855				
01/11/2014	Market place	10:50		Market St. / Concert Place	4	10	150				
01/11/2014	Market place		10-11am			142		2130	1065	8%	89
01/11/2014	Spring Gardens	11:06		Spring Gardens /Terrace Rd	4	114	1710				
01/11/2014	Spring Gardens	11:12		Hardwick St.	3	38	760				
01/11/2014	Spring Gardens	11:20		Wye St. / Spring Gardens	3	118	2360				
01/11/2014	Spring Gardens	11:25		Waitrose Car Park	3	15	300				
01/11/2014	Spring Gardens	11:30		Station Rd Car Park	3	42	840				
01/11/2014	Spring Gardens		11am-12pm			327		5970	2985	6%	165
01/11/2014	Market place	11:44		Terrace Rd / Town Hall Arcade	3	52	1040				
01/11/2014	Market place	11:51		Hall Bank	3	39	780				
01/11/2014	Market place	11:55		South End of Mkt place	3	74	1480				
01/11/2014	Market place	12:02		Market St. / Concert Place	3	34	680				
01/11/2014	Market place		11am-12pm			199		3980	1990	7%	141
01/11/2014	Market place	12:38		Hall Bank	3	29	580				
01/11/2014	Market place	12:42		Market St. / Concert Place	3	106	2120				
01/11/2014	Market place	12:50		South End of Mkt place	3	32	640				
01/11/2014	Market place	12:56		Terrace Rd / Town Hall Arcade	3	60	1200				
01/11/2014	Market place		12-1pm			227		4540	2270	7%	151



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Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
01/11/2014	Spring Gardens	13:05		Spring Gardens /Terrace Rd	3	111	2220				
01/11/2014	Spring Gardens	13:12		Hardwick St.	3	36	720				
01/11/2014	Spring Gardens	13:16		Wye St. / Spring Gardens	3	131	2620				
01/11/2014	Spring Gardens	13:21		Waitrose Car Park	3	28	560				
01/11/2014	Spring Gardens	13:26		Station Rd Car Park	3	22	440				
01/11/2014	Spring Gardens		1-2pm			328		6560	3280	6%	181
01/11/2014	Market place	13:35		Terrace Rd / Town Hall Arcade	3	72	1440				
01/11/2014	Market place	13:39		Hall Bank	3	31	620				
01/11/2014	Market place	13:50		South End of Mkt place	3	60	1200				
01/11/2014	Market place	13:54		Market St. / Concert Place	3	17	340				
01/11/2014	Market place		1-2pm			180		3600	1800	7%	134
01/11/2014	Spring Gardens	14:02		Spring Gardens /Terrace Rd	3	103	2060				
01/11/2014	Spring Gardens	14:06		Hardwick St.	3	24	480				
01/11/2014	Spring Gardens	14:11		Wye St. / Spring Gardens	3	84	1680				
01/11/2014	Spring Gardens	14:15		Waitrose Car Park	3	23	460				
01/11/2014	Spring Gardens	14:19		Station Rd Car Park	3	27	540				
01/11/2014	Spring Gardens		2-3pm			261		5220	2610	6%	162
01/11/2014	Market place	14:33		Terrace Rd / Town Hall Arcade	3	33	660				
01/11/2014	Market place	14:37		Hall Bank	3	27	540				
01/11/2014	Market place	14:42		South End of Mkt place	3	71	1420				
01/11/2014	Market place	14:46		Market St. / Concert Place	3	19	380				
01/11/2014	Market place		2-3pm			150		3000	1500	8%	122
01/11/2014	Spring Gardens	14:54		Spring Gardens /Terrace Rd	3	99	1980				
01/11/2014	Spring Gardens	14:58		Hardwick St.	3	19	380				

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Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
01/11/2014	Spring Gardens	15:03		Wye St. / Spring Gardens	3	94	1880				
01/11/2014	Spring Gardens	15:07		Waitrose Car Park	3	44	880				
01/11/2014	Spring Gardens	15:12		Station Rd Car Park	3	23	460				
01/11/2014	Spring Gardens		2-3pm			279		5580	2790	6%	167
01/11/2014	Market place	15:19		Terrace Rd / Town Hall Arcade	3	35	700				
01/11/2014	Market place	15:24		Hall Bank	3	16	320				
01/11/2014	Market place	15:28		South End of Mkt place	3	33	660				
01/11/2014	Market place	15:32		Market St. / Concert Place	3	18	360				
01/11/2014	Market place		1-2pm			102		2040	1020	10%	101

Date: 06/12/2014

Weather: Sunny intervals, cold, moderate breeze

Counter: John Estruch

Artisan Mkt: Market Place

Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
06/12/2014	Spring Gardens	11:06		Spring Gardens /Terrace Rd	3	68	1360				
06/12/2014	Spring Gardens	11:23		Hardwick St.	3	42	840				
06/12/2014	Spring Gardens	11:11		Wye St. / Spring Gardens	3	83	1660				
06/12/2014	Spring Gardens	11:15		Waitrose Car Park	3	36	720				
06/12/2014	Spring Gardens	11:19		Station Rd Car Park	3	27	540				
06/12/2014	Spring Gardens		11am-12pm			256		5120	2560	6%	160
06/12/2014	Market place	11:47		Terrace Rd / Town Hall Arcade	3	48	960				
06/12/2014	Market place	11:35		Hall Bank	3	19	380				
06/12/2014	Market place	11:39		South End of Mkt place	3	67	1340				
06/12/2014	Market place	11:43		Market St. / Concert Place	3	30	600				
06/12/2014	Market place		11am-12pm			164		3280	1640	8%	128

Date: 13/12/2014 Weather: Sunny intervals, cold, moderate breeze Counter: John Estruch Artisan Mkt: No

Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
<b>13/12/2014</b>	Spring Gardens	11:00		Spring Gardens /Terrace Rd	3	75	1500				
13/12/2014	Spring Gardens	11:04		Hardwick St.	3	20	400				
13/12/2014	Spring Gardens	11:08		Wye St. / Spring Gardens	3	74	1480				
13/12/2014	Spring Gardens	11:12		Waitrose Car Park	3	49	980				
13/12/2014	Spring Gardens	11:16		Station Rd Car Park	3	22	440				
13/12/2014	Spring Gardens		11am-12pm			240		4800	2400	6%	155
13/12/2014	Market place	11:28		Terrace Rd / Town Hall Arcade	3	19	380				
13/12/2014	Market place	11:32		Hall Bank	3	2	40				
13/12/2014	Market place	11:36		South End of Mkt place	3	39	780				
13/12/2014	Market place	11:40		Market St. / Concert Place	3	12	240				
13/12/2014	Market place		11am-12pm			72		1440	720	12%	85

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Date: 06/06/2015 Weather: Sunny intervals, cool, blustery wind Counter: John Estruch Artisan Mkt: Spring Gardens

Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
06/06/2015	Spring Gardens	10:09		Spring Gardens /Terrace Rd	3	60	1200				
06/06/2015	Spring Gardens	10:15		Hardwick St.	3	19	380				
06/06/2015	Spring Gardens	10:19		Wye St. / Spring Gardens	3	97	1940				
06/06/2015	Spring Gardens	10:25		Waitrose Car Park	3	31	620				
06/06/2015	Spring Gardens	10:29		Station Rd Car Park	3	18	360				
06/06/2015	Spring Gardens		10am-11am			225		4500	2250	7%	150
06/06/2015	Market place	10:37		Terrace Rd / Town Hall Arcade	3	14	280				
06/06/2015	Market place	10:41		Hall Bank	3	5	100				
06/06/2015	Market place	10:45		South End of Mkt place	3	22	440				
06/06/2015	Market place	10:50		Market St. / Concert Place	3	19	380				
06/06/2015	Market place		10am-11am			60		1200	600	13%	77
06/06/2015	Spring Gardens	11:01		Spring Gardens /Terrace Rd	3	97	1940				
06/06/2015	Spring Gardens	11:05		Hardwick St.	3	20	400				
06/06/2015	Spring Gardens	11:10		Wye St. / Spring Gardens	3	129	2580				
06/06/2015	Spring Gardens	11:15		Waitrose Car Park	3	18	360				
06/06/2015	Spring Gardens	11:19		Station Rd Car Park	3	15	300				
06/06/2015	Spring Gardens		11am-12pm			279		5580	2790	6%	167
06/06/2015	Market place	11:30		Terrace Rd / Town Hall Arcade	3	12	240				
06/06/2015	Market place	11:34		Hall Bank	3	3	60				
06/06/2015	Market place	11:38		South End of Mkt place	3	30	600				
06/06/2015	Market place	11:45		Market St. / Concert Place	3	11	220				
06/06/2015	Market place		11am-12pm			56		1120	560	13%	75

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*All together, better*

Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
06/06/2015	Spring Gardens	12:00		Spring Gardens /Terrace Rd	3	144	2880				
06/06/2015	Spring Gardens	12:04		Hardwick St.	3	33	660				
06/06/2015	Spring Gardens	12:08		Wye St. / Spring Gardens	3	134	2680				
06/06/2015	Spring Gardens	12:16		Waitrose Car Park	3	23	460				
06/06/2015	Spring Gardens	12:22		Station Rd Car Park	3	15	300				
06/06/2015	Spring Gardens		12pm-1pm			349		6980	3490	5%	187
06/06/2015	Market place	12:35		Terrace Rd / Town Hall Arcade	3	22	440				
06/06/2015	Market place	12:40		Hall Bank	3	8	160				
06/06/2015	Market place	12:45		South End of Mkt place	3	36	720				
06/06/2015	Market place	12:50		Market St. / Concert Place	3	27	540				
06/06/2015	Market place		12pm-1pm			93		1860	930	10%	96
06/06/2015	Spring Gardens	13:10		Spring Gardens /Terrace Rd	3	168	3360				
06/06/2015	Spring Gardens	13:14		Hardwick St.	3	21	420				
06/06/2015	Spring Gardens	13:21		Wye St. / Spring Gardens	3	160	3200				
06/06/2015	Spring Gardens	13:26		Waitrose Car Park	3	22	440				
06/06/2015	Spring Gardens	13:30		Station Rd Car Park	3	11	220				
06/06/2015	Spring Gardens		1pm-2pm			382		7640	3820	5%	195
06/06/2015	Market place	13:41		Terrace Rd / Town Hall Arcade	3	24	480				
06/06/2015	Market place	13:45		Hall Bank	3	10	200				
06/06/2015	Market place	13:49		South End of Mkt place	3	38	760				
06/06/2015	Market place	13:54		Market St. / Concert Place	3	17	340				
06/06/2015	Market place		1pm-2pm			89		1780	890	11%	94
06/06/2015	Spring Gardens	14:01		Spring Gardens /Terrace Rd	3	153	3060				
06/06/2015	Spring Gardens	14:05		Hardwick St.	3	22	440				

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*All together, better*

Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
06/06/2015	Spring Gardens	14:11		Wye St. / Spring Gardens	3	176	3520				
06/06/2015	Spring Gardens	14:16		Waitrose Car Park	3	36	720				
06/06/2015	Spring Gardens	14:21		Station Rd Car Park	3	13	260				
06/06/2015	Spring Gardens		2pm-3pm			400		8000	4000	5%	200
06/06/2015	Market place	14:30		Terrace Rd / Town Hall Arcade	3	25	500				
06/06/2015	Market place	14:34		Hall Bank	3	15	300				
06/06/2015	Market place	14:38		South End of Mkt place	3	23	460				
06/06/2015	Market place	14:43		Market St. / Concert Place	3	10	200				
06/06/2015	Market place		2pm-3pm			73		1460	730	12%	85
06/06/2015	Spring Gardens	15:00		Spring Gardens /Terrace Rd	3	137	2740				
06/06/2015	Spring Gardens	15:12		Hardwick St.	3	18	360				
06/06/2015	Spring Gardens	15:17		Wye St. / Spring Gardens	3	129	2580				
06/06/2015	Spring Gardens	15:21		Waitrose Car Park	3	41	820				
06/06/2015	Spring Gardens	15:25		Station Rd Car Park	3	19	380				
06/06/2015	Spring Gardens		3pm-4pm			344		6880	3440	5%	185
06/06/2015	Market place	15:31		Terrace Rd / Town Hall Arcade	3	8	160				
06/06/2015	Market place	15:35		Hall Bank	3	4	80				
06/06/2015	Market place	15:43		South End of Mkt place	3	36	720				
06/06/2015	Market place	15:39		Market St. / Concert Place	3	5	100				
06/06/2015	Market place		3pm-4pm			53		1060	530	14%	73

Date: 20/06/2015 Weather: Overcast, mild, light breeze Counter: J Estruch Artisan Mkt: No

Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
20/06/2015	Spring Gardens	11:16		Spring Gardens /Terrace Rd	3	74	1480				
20/06/2015	Spring Gardens	11:20		Hardwick St.	3	21	420				
20/06/2015	Spring Gardens	11:24		Wye St. / Spring Gardens	3	92	1840				
20/06/2015	Spring Gardens	11:28		Waitrose Car Park	3	29	580				
20/06/2015	Spring Gardens	11:32		Station Rd Car Park	3	34	680				
20/06/2015	Spring Gardens		11am-12pm			250		5000	2500	6%	158
20/06/2015	Market place	11:41		Terrace Rd / Town Hall Arcade	3	21	420				
20/06/2015	Market place	11:45		Hall Bank	3	10	200				
20/06/2015	Market place	11:49		South End of Mkt place	3	42	840				
20/06/2015	Market place	11:54		Market St. / Concert Place	3	14	280				
20/06/2015	Market place		11am-12pm			87		1740	870	11%	93



Date: 27/06/2014 Weather: Overcast, warmish, light breeze Counter: J Estruch/R Silson Artisan Mkt: No

Date	Location	Time (start of sample)	Time period	Sample Point	Sample period (minutes)	No of people entry / exits	Hourly equivalent entry / exits	Hourly total entry / exit for location	Hourly total visits to location	Statistical error % (see note 1)	Statistical error
27/06/2015	Spring Gardens	11:00		Spring Gardens /Terrace Rd	3	88	1760				
27/06/2015	Spring Gardens	11:05		Hardwick St.	3	39	780				
27/06/2015	Spring Gardens	11:10		Wye St. / Spring Gardens	3	81	1620				
27/06/2015	Spring Gardens	11:16		Waitrose Car Park	3	24	480				
27/06/2015	Spring Gardens	11:20		Station Rd Car Park	3	21	420				
27/06/2015	Spring Gardens		11am-12pm			253		5060	2530	6%	159
27/06/2015	Market place	11:33		Terrace Rd / Town Hall Arcade	3	27	540				
27/06/2015	Market place	11:37		Hall Bank	3	7	140				
27/06/2015	Market place	11:46		South End of Mkt place	3	37	740				
27/06/2015	Market place	11:51		Market St. / Concert Place	3	28	560				
27/06/2015	Market place		11am-12pm			99		1980	990	10%	99

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Date: 04/07/2015 Weather: Sunny, hot, light breeze Counter: Dick Silson Artisan Mkt: Spring Gardens

04/07/2015	Spring Gardens	11:00	Spring Gardens /Terrace Rd	3	104	2080				
04/07/2015	Spring Gardens	11:05	Hardwick St.	3	21	420				
04/07/2015	Spring Gardens	11:10	Wye St. / Spring Gardens	3	154	3080				
04/07/2015	Spring Gardens	11:15	Waitrose Car Park	3	30	600				
04/07/2015	Spring Gardens	11:21	Station Rd Car Park	3	20	400				
04/07/2015	Spring Gardens	11am-12pm			329		6580	3290	6%	181
04/07/2015	Market place	11:28	Terrace Rd / Town Hall Arcade	3	13	260				
04/07/2015	Market place	11:33	Hall Bank	3	6	120				
04/07/2015	Market place	11:38	South End of Mkt place	3	32	640				
04/07/2015	Market place	11:45	Market St. / Concert Place	3	16	320				
04/07/2015	Market place	11am-12pm			67		1340	670	12%	82

## Notes

1. Assuming a Poisson distribution of “visits” to a zone, the standard error on an individual count is approximately equal to the square root of the count (Ref. e.g. <http://labs.physics.dur.ac.uk/skills/skills/poisson.php> )