

Winchester Station Quarter Parking Surveys



Summary Report

May 2015

Summary

Winchester City Council have commissioned a range of parking surveys to better understand existing parking activity and driver behaviour in the 'Station Quarter' area of the city centre.

This report summarises the types of survey undertaken, their methodologies and key findings / conclusions.

Weekday off-street car park utilisation

- All surveyed car parks are operating beyond their desirable maximum capacities
- Total parking utilisation across the study area is c.98% meaning that there are virtually no spaces available in any car park

Saturday off-street car park utilisation

- All surveyed car parks are operating within their desirable maximum capacities with less than half of the available spaces filled at peak times

On-street car park utilisation

- There is a limited supply of on-street parking; it is typically very well used on weekdays and Saturdays with few spaces available

Parking interviews

- Long stay parking is prevalent at all car parks and is directly linked to employment-related journey purposes (work, business, rail commuting)
- Leisure and shopping activity dominates on Saturday
- Weekday parking activity is generally frequent (typically at least two to three times per week) but not as frequently as might be expected (ie daily) given the employment journey purposes
- Saturday parking frequencies are typically monthly or less



Route analysis

- Interview data for journey origin and car park destination has been used to determine likely car park access routes
- In general, demand to each of the off-street car parks is drawn from all directions
- Given this spread of demand, a proportion of all car park access/egress movements pass through the city centre – eg there are c.1200 movements per weekday through the City Road junction between the south and the Coach Park, Worthy Lane and Cattle Market car parks

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Introduction

Purpose

To inform future development plans in the 'Station Quarter' area of Winchester City Centre, Winchester City Council have commissioned a range of parking surveys to better understand existing parking activity and driver behaviour. This latest data builds on previous survey information that is several years old and may not be fully representative of current conditions.

Surveys

A comprehensive programme of surveys were commissioned that included the following elements:

- On-street parking activity
- Off-street parking activity
- Detailed interviews with drivers at off-street car parks

In order to provide a good understanding of any differences in usage between weekdays and the weekend, surveys were undertaken on a Wednesday and a Saturday.

Results

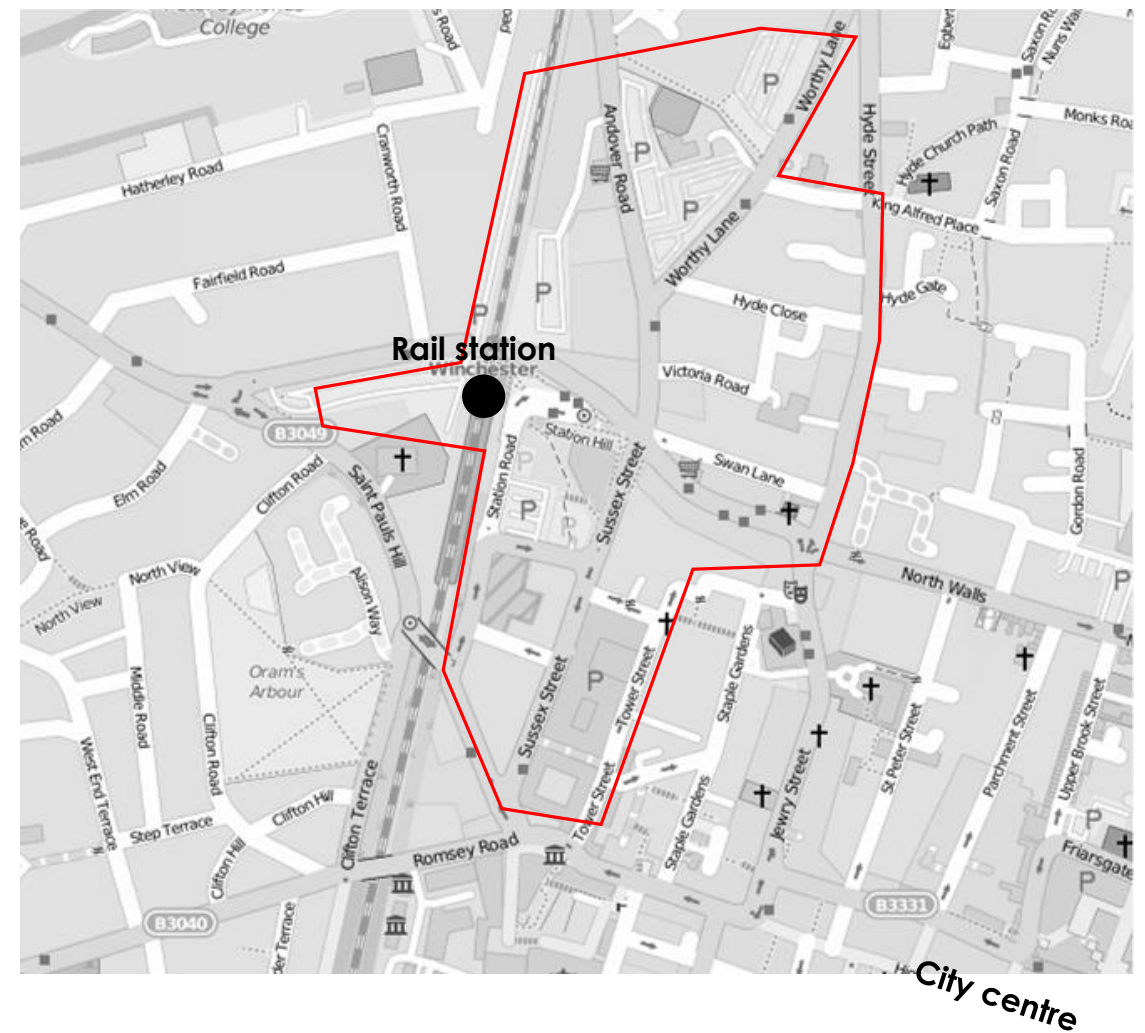
The data from these surveys will enable key conclusions to be made about:

- Peak car park utilisation and available spare capacity
- Overall area-wide parking stress
- On-street parking conditions
- Different parking patterns (journey purpose, duration, etc) by car park and by day of the week
- Likely routes taken by drivers to each car park

The Study Area

For the purposes of parking data collection, the Station Quarter is defined by the following boundaries:

- North – Coach Park and Cattle Market car parks
- East – Hyde Street / Tower Street
- South – Romsey Road
- West - the rail line (plus the station car park)



Off-street parking supply

Off-street parking

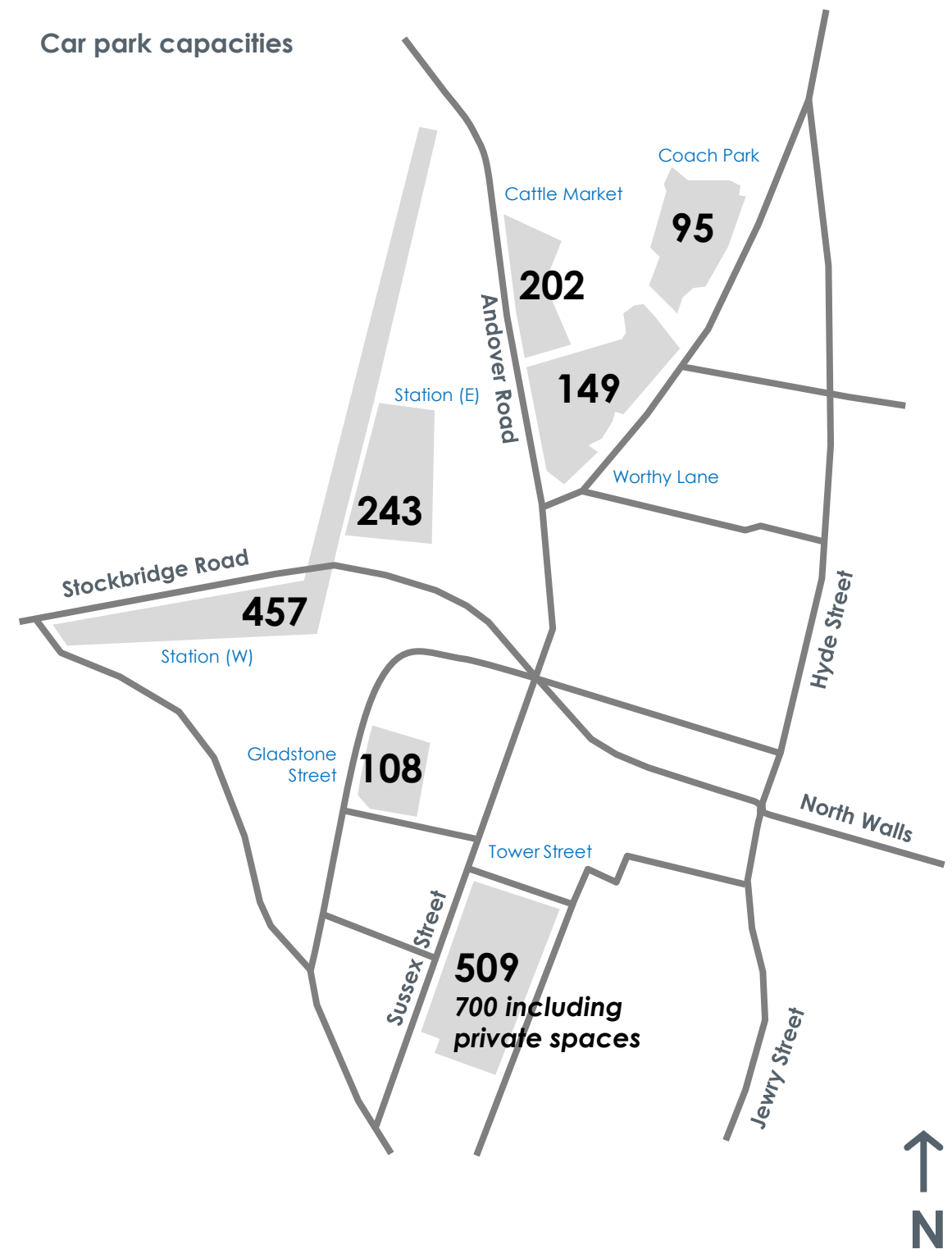
Within the study area there are 7 main off-street car parks that have been surveyed:

- Coach Par, 95 spaces
- Cattle Market, 202 spaces
- Worthy Lane, 149 spaces
- Station (East of rail line), 243 spaces
- Station (West of rail line), 457 spaces
- Gladstone Street, 108 spaces
- Tower Street, 509 spaces (additional 191 private spaces)
- Total off-street supply, 1763 public spaces (1954 including private spaces)

Other than the two station car parks that are operated by Network Rail, all car parks are operated by Winchester City Council.

With the exception of Station (East) which recently has had an additional level of parking deck added and Tower Street which is multi-storey, all car parks are on a single level.

Car park capacities



On-street parking supply

On-street parking

In addition to off-street car parks there is on-street parking available within the Station Quarter area.

In total there are 155 spaces made up of the following types:

- 89 resident spaces
- 7 pay and display spaces
- 52 shared use (resident / pay and display) spaces
- 7 other spaces (disabled, short stay rail station parking)

The 59 spaces available for general public use (pay and display / shared use) represent a very small amount of parking supply relative to the number of off-street spaces (c.3% of the total supply).

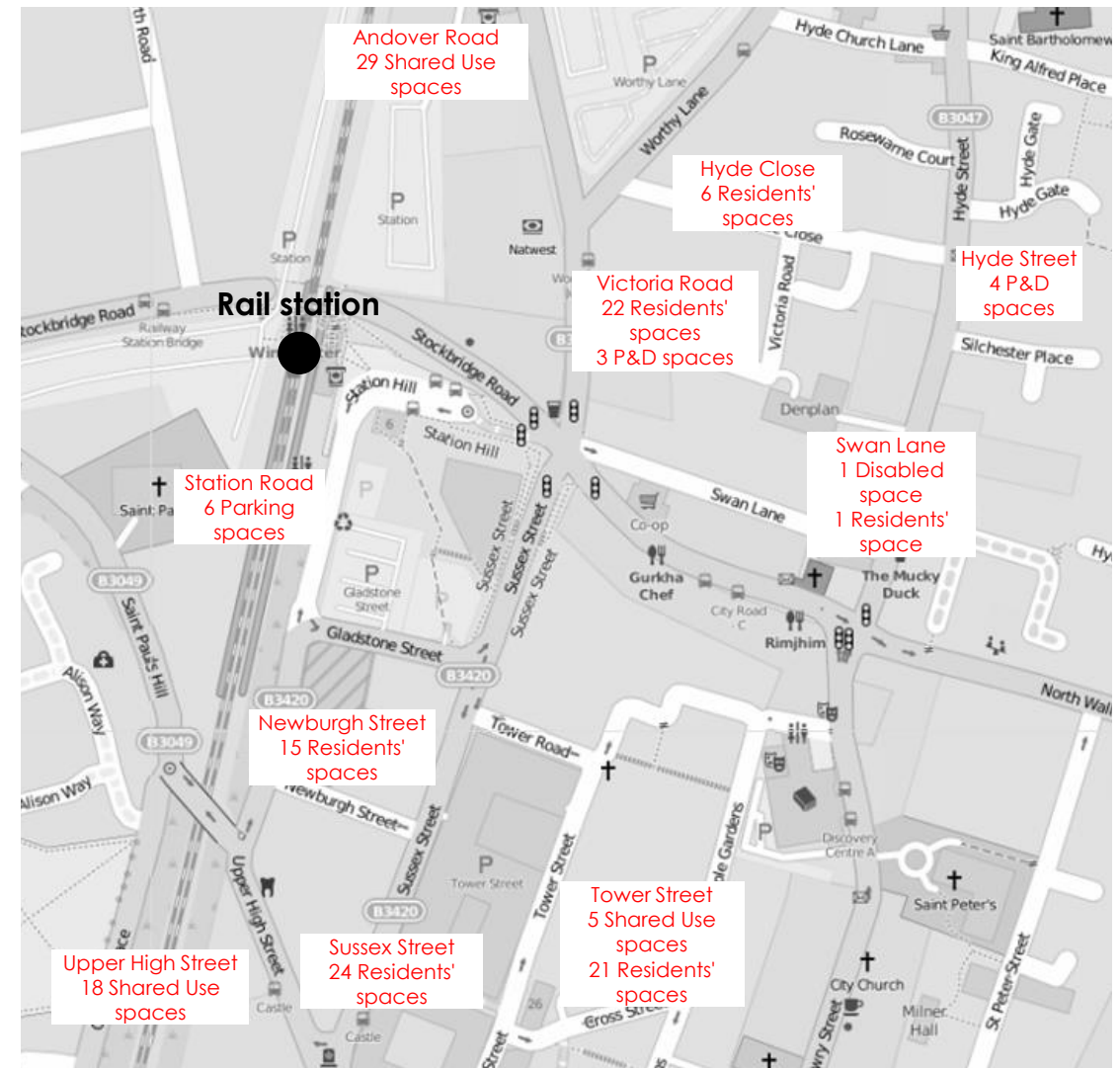
The key streets for publicly available on-street spaces are:

- Andover Road (29 spaces) and
- Upper High Street (18 spaces)

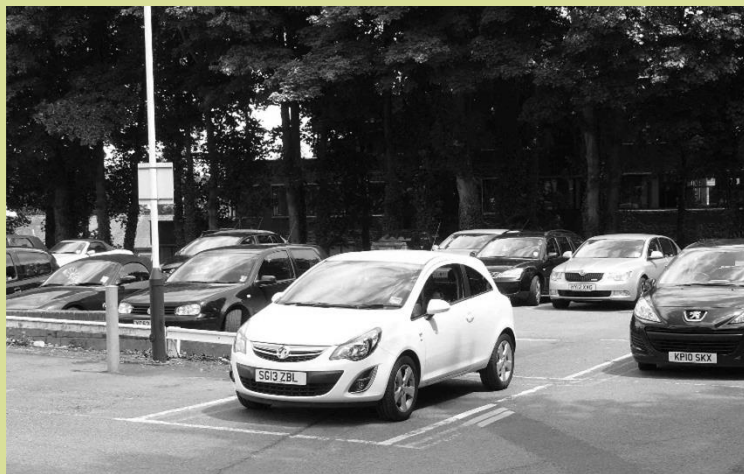
Combined, these two streets comprise 84% of the overall on-street supply.

The analysis of on-street parking activity therefore focusses on the two streets above plus the other streets at an aggregate level.

Location of on-street parking



Accumulation Surveys - Weekday



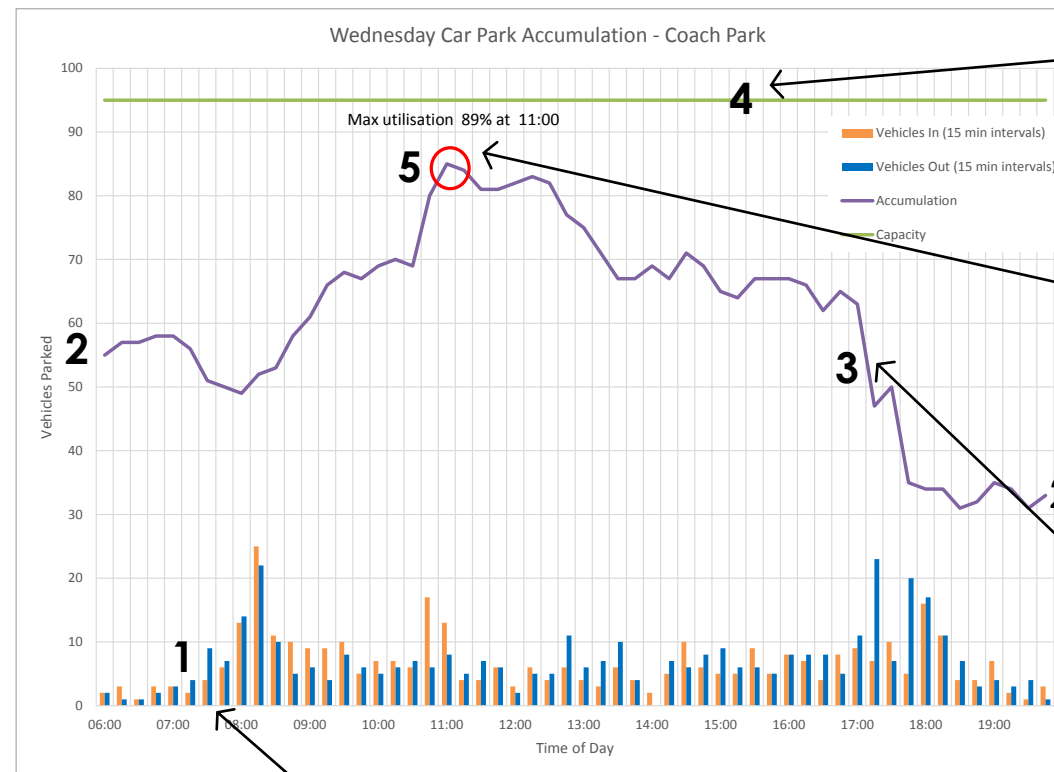
Accumulation Survey Methodology

Off-street car parks

Automatic counts of all vehicles entering and exiting each car park were undertaken and the results aggregated into 15-minute periods (1). This was supplemented by manual checks of the number of vehicles parked at the start of the survey period (2) and the end of the survey period.

Parking accumulation (3) was calculated in the normal way (*vehicles entering in 15-minute period – vehicles exiting in 15-minute period + existing number of vehicles from preceding period*).

Based on the total car park capacity (4), the maximum utilisation is highlighted with a red circle (5).



The car park's maximum capacity is shown with the green line

Maximum car park utilisation is indicated with the red circle

The number of cars parked in the car park at any one time is shown with the purple curve

The bars at the bottom of the chart gives the number of vehicles entering (orange) and exiting (blue) the car park in 15-minute intervals

On-street parking

Conventional 'parking beat' surveys were undertaken that counted the number of vehicles parked every 30 minutes.

The parking beats were split into individual streets, spaces and parking bay types to enable a detailed analysis of parking utilisation/accumulation.

Accumulation and car park operation capacity

Parking accumulation in excess of 85% of total car park capacity is considered to be the point at which operational capacity has been reached. At this level of usage people may find it difficult to locate a vacant space and may instead choose to leave to the car park and look elsewhere for a space.

Accumulation Summary - Weekday

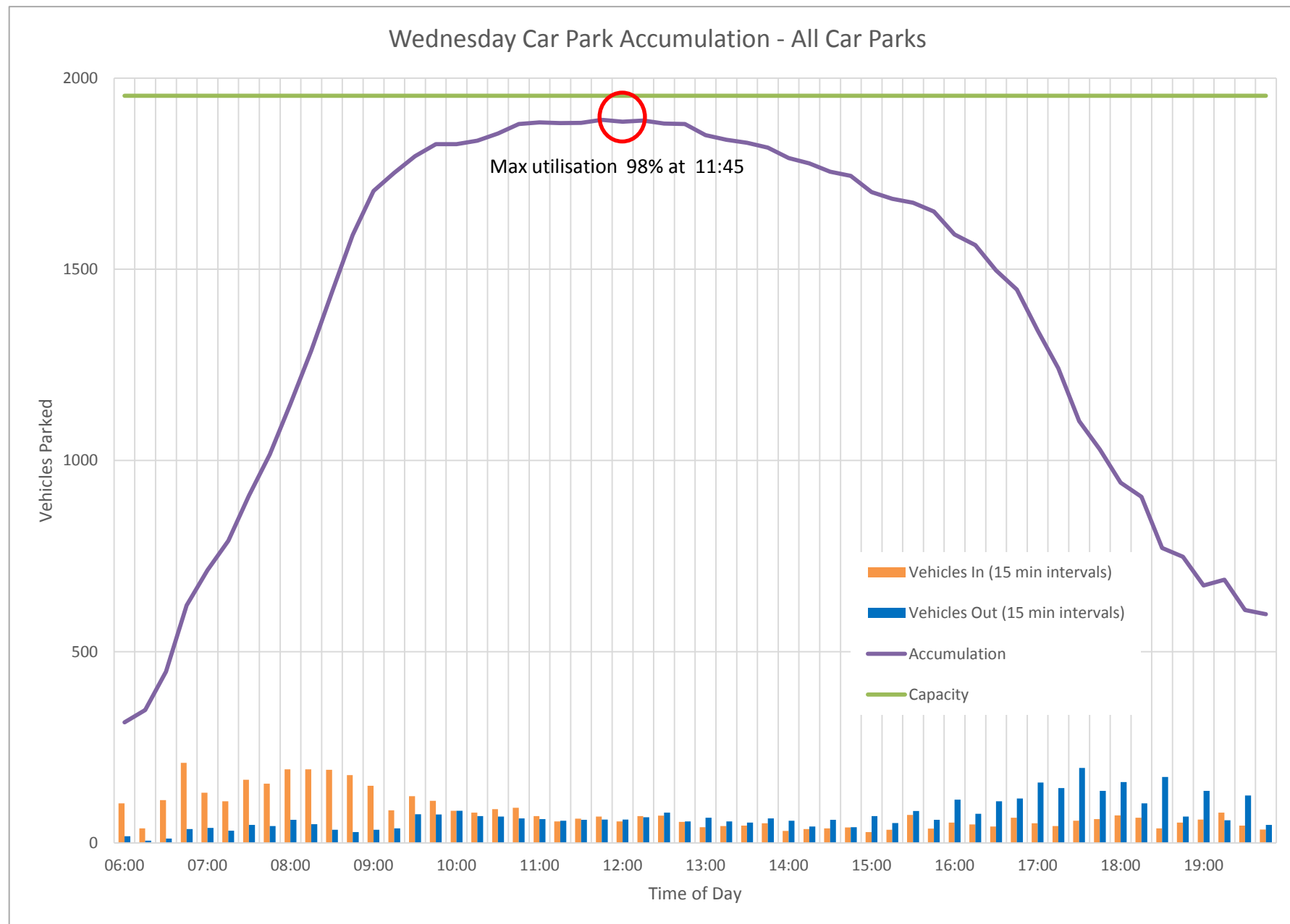
| CAR PARK | Capacity | Total inflow | Total outflow | Maximum accumulation | Minimum spare capacity | Max utilisation % | Average utilisation |
|---------------|----------|--------------|---------------|----------------------|------------------------|-------------------|---------------------|
| Coach Park | 95 | 365 | 391 | 85 | 10 | 89% | 64% |
| Cattle Market | 202 | 400 | 311 | 196 | 6 | 97% | 56% |
| Worthy Lane | 149 | 300 | 241 | 150 | (-1) | 101% | 71% |
| Station East | 243 | 463 | 441 | 246 | (-3) | 101% | 82% |
| Station West | 457 | 921 | 902 | 455 | 2 | 100% | 84% |
| Tower St | 700 | 1633 | 1398 | 673 | 27 | 96% | 64% |
| Gladstone St | 108 | 383 | 353 | 106 | 2 | 98% | 24% |
| ALL | 1954 | 4465 | 4037 | 1911 | 43 | 98% | 71% |

- Across all off-street car parks the maximum utilisation of 98% indicates that there is effectively no spare capacity available in the station quarter area; this is particularly the case between mid morning and mid afternoon. It is well in excess of a desirable operational maximum utilisation of 85%.
- Of the total parking supply of 1954 spaces, at the busiest time there are only 43 spaces available, of which two-thirds are in Tower Street.

| ON-STREET | Capacity | Maximum accumulation | Minimum spare capacity | Max utilisation % | Average utilisation |
|------------------------------|----------|----------------------|------------------------|-------------------|---------------------|
| Andover Road | 29 | 23 | 6 | 79% | 73% |
| Upper High Street | 19 | 19 | 0 | 100% | 90% |
| All on-street parking | 59 | 49 | 8 | 83% | 76% |

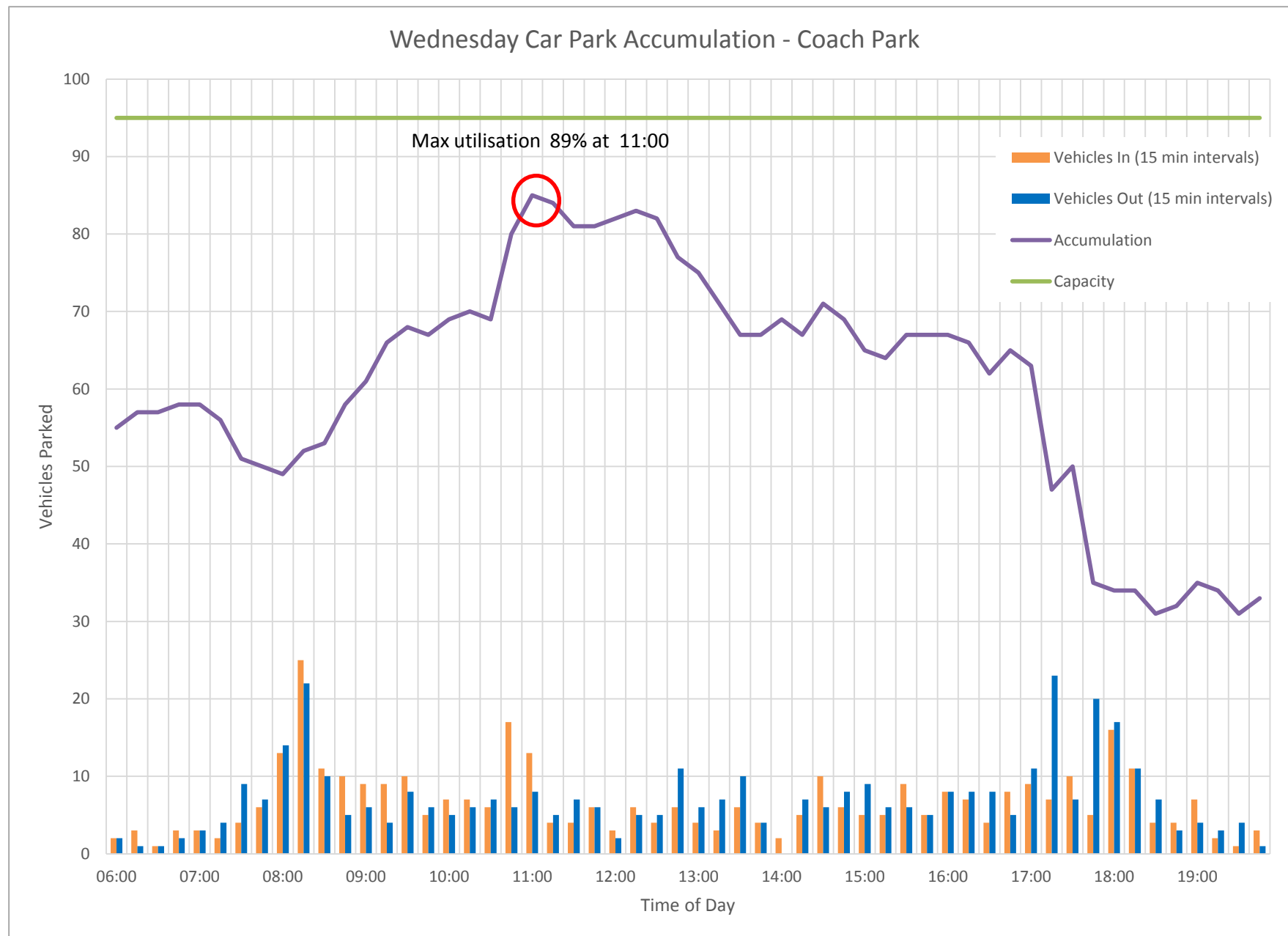
- On-street parking provision is also very busy with generally very little available capacity during the day.

Weekday Accumulation – All car parks



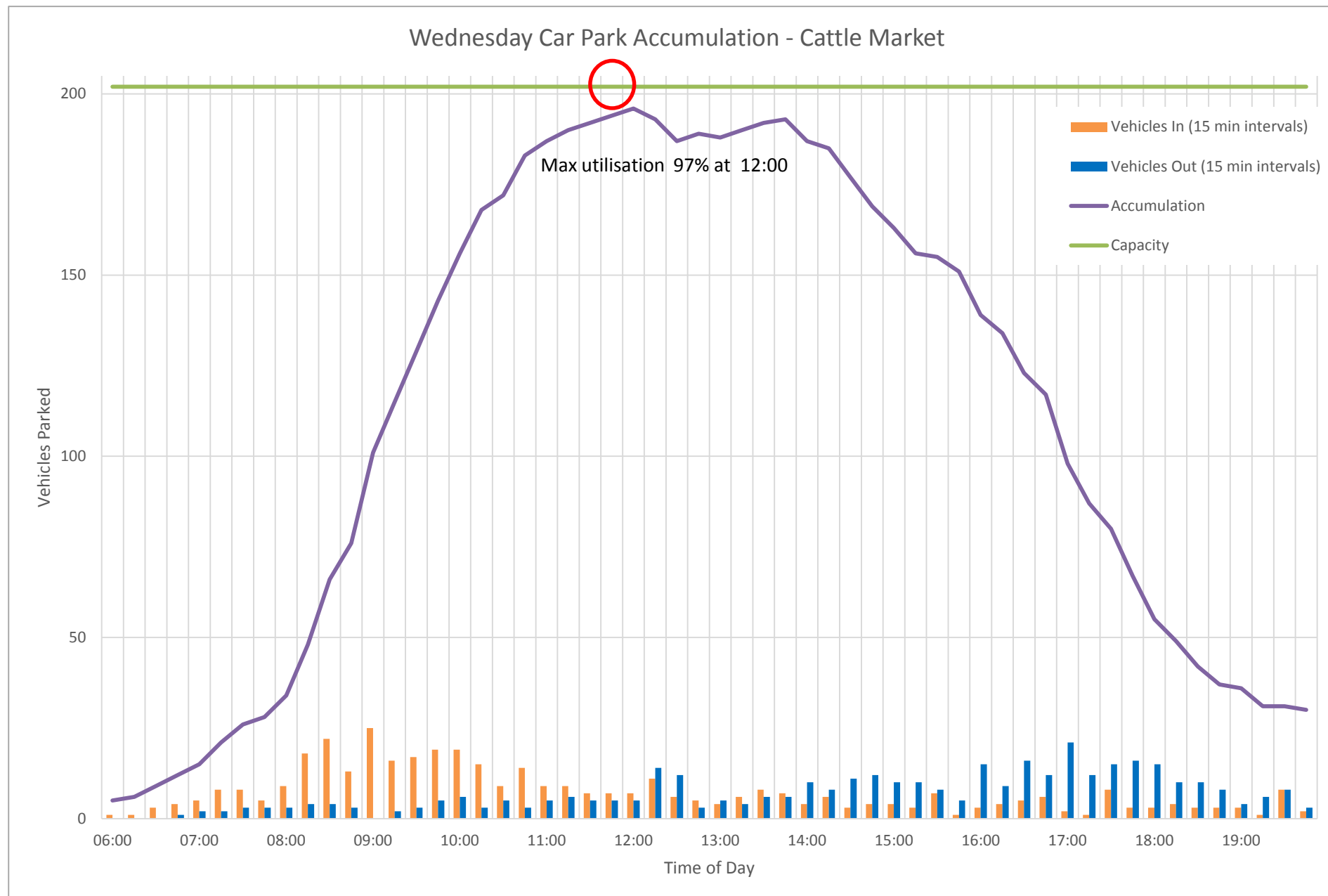
- Overall, there is a clear trend of tidal movement with high proportions of total movement arriving in the morning and then leaving in the evening
- There is still continual activity during the working day although the volumes of vehicles entering/exiting car parks is at a much lower level
- The maximum utilisation of 98% indicates that there is effectively no spare capacity available in the Station Quarter area; this is particularly the case between mid morning and mid afternoon

Weekday Accumulation – Coach Park



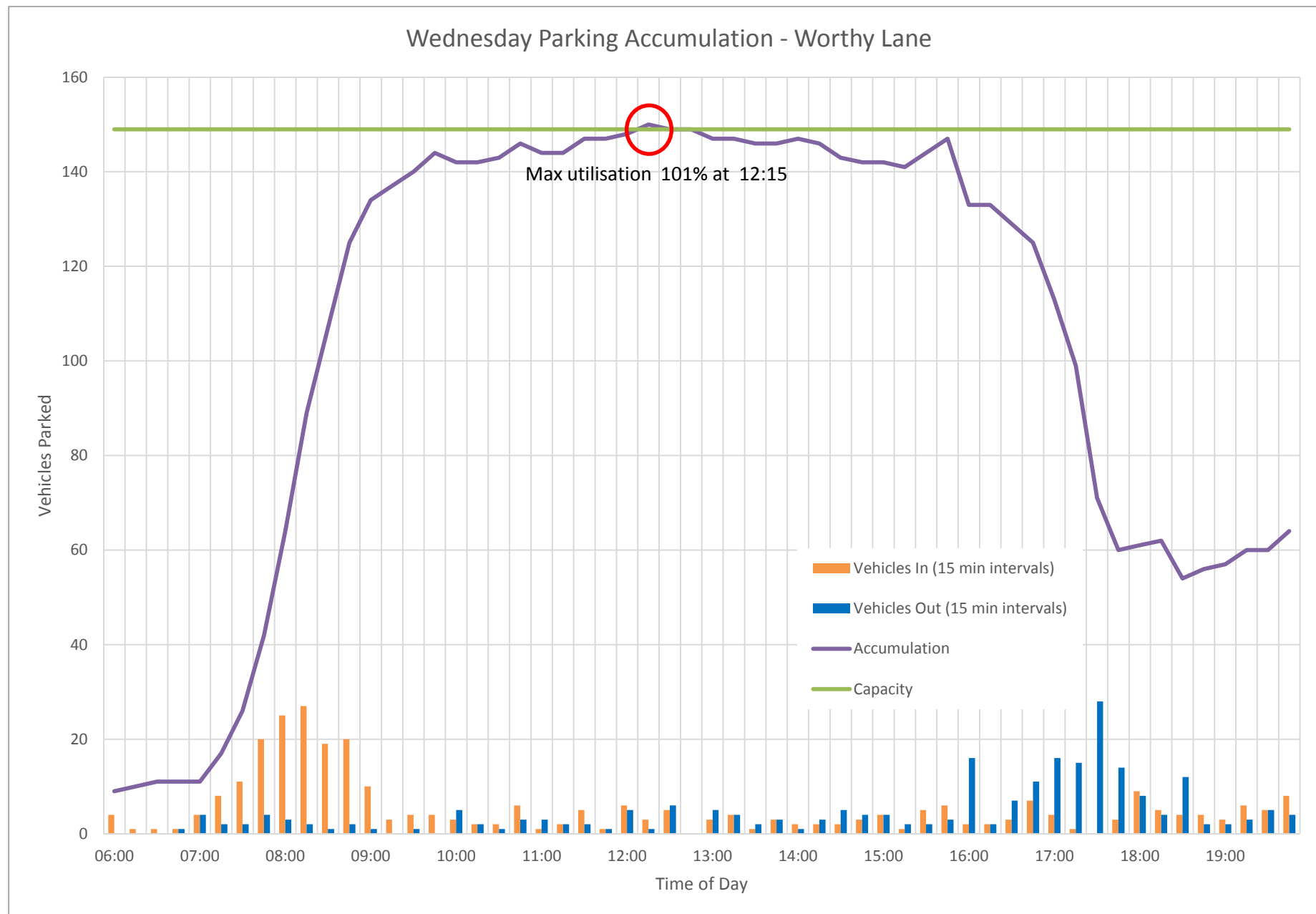
- Whilst there are peaks of activity during the morning (8-9am) and evening (5-6pm) there is a general balance between in and out movements
- There is a prevailing trend for the car park to become slowly busier during the morning and then slowly empty during the afternoon
- At the start of the survey (6am) the car park was already half full suggesting use by local residents
- Whilst in excess of the desirable maximum of 85%, the maximum utilisation of 89% indicates that there is some spare capacity available at peak times

Weekday Accumulation – Cattle Market



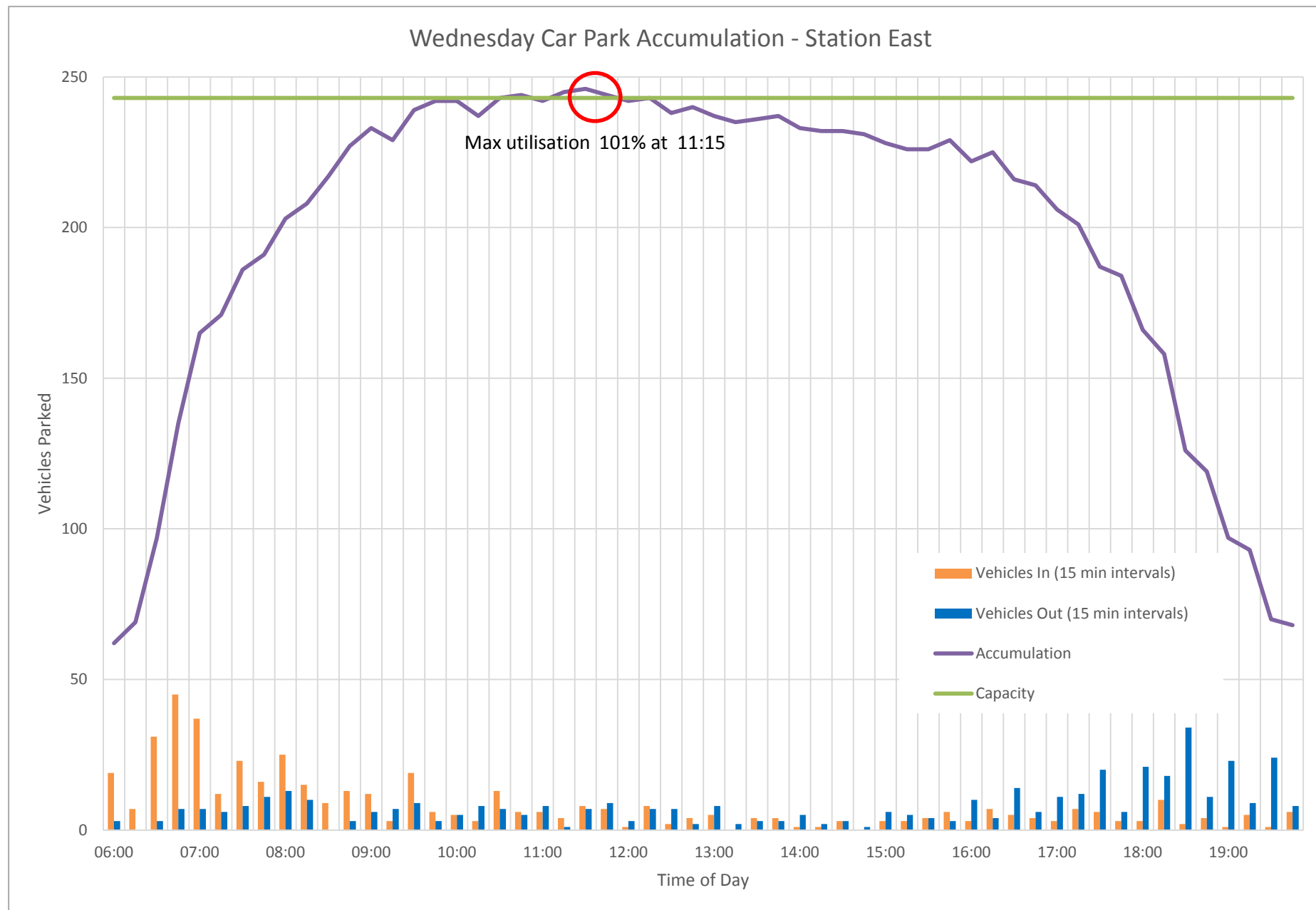
- There is a clear trend of vehicles arriving in the morning and then leaving in the evening – although the morning and afternoon ‘peaks’ are over several hours. This suggests use by a mix of users (not just workers and/or commuters) which is borne out in the interview responses (see page 31)
- The maximum utilisation of 97% indicates that there is effectively no spare capacity available between late morning and mid afternoon

Weekday Accumulation – Worthy Lane



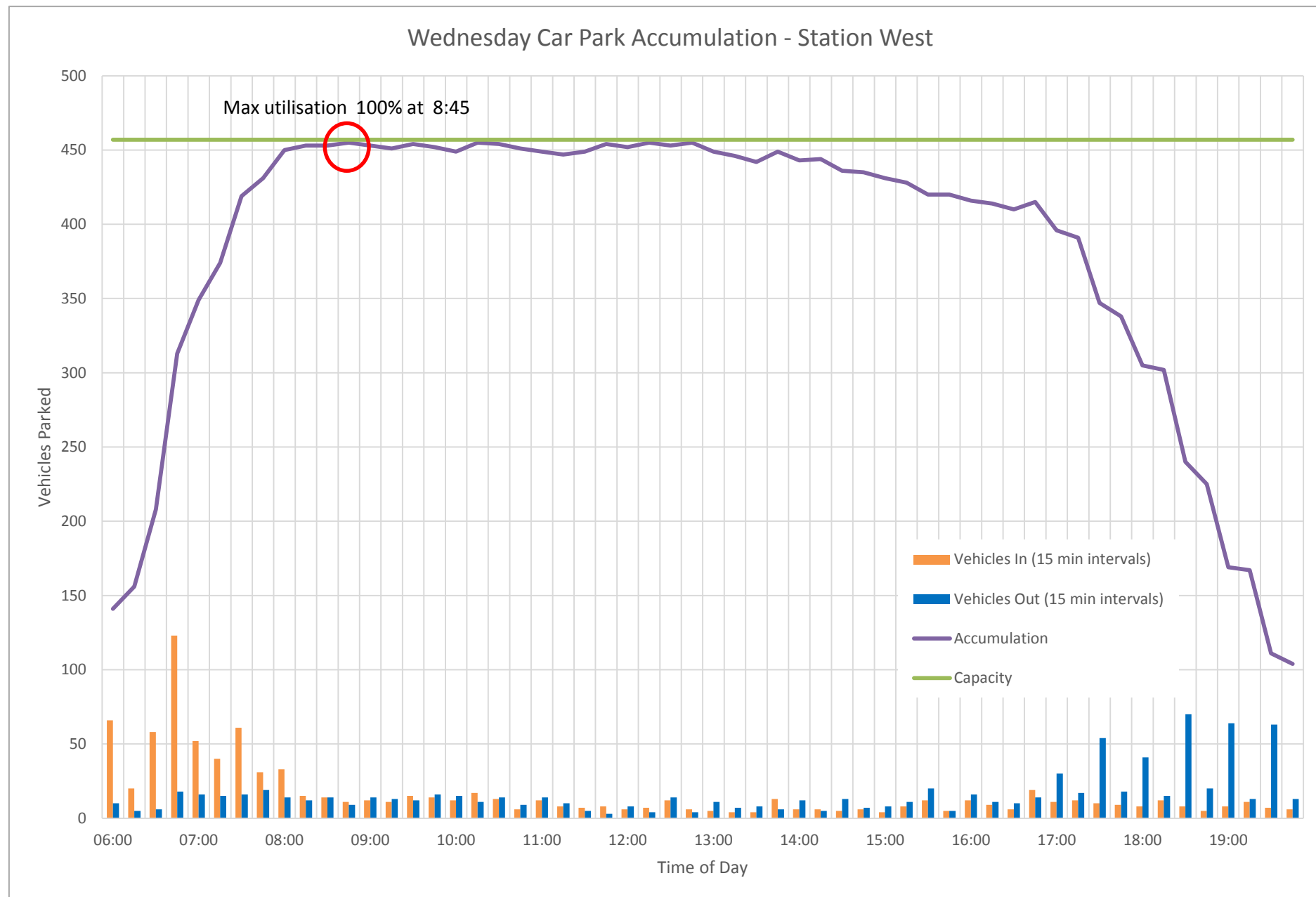
- There is a very clear trend of vehicles arriving in the morning (notably 8-9am) and then leaving in the late afternoon but forming more pronounced peaks than Cattle Market – again this is borne out in the interview data (see page 30)
- The accumulation curve shows that there is no spare capacity available throughout much of the working day

Weekday Accumulation – Station East



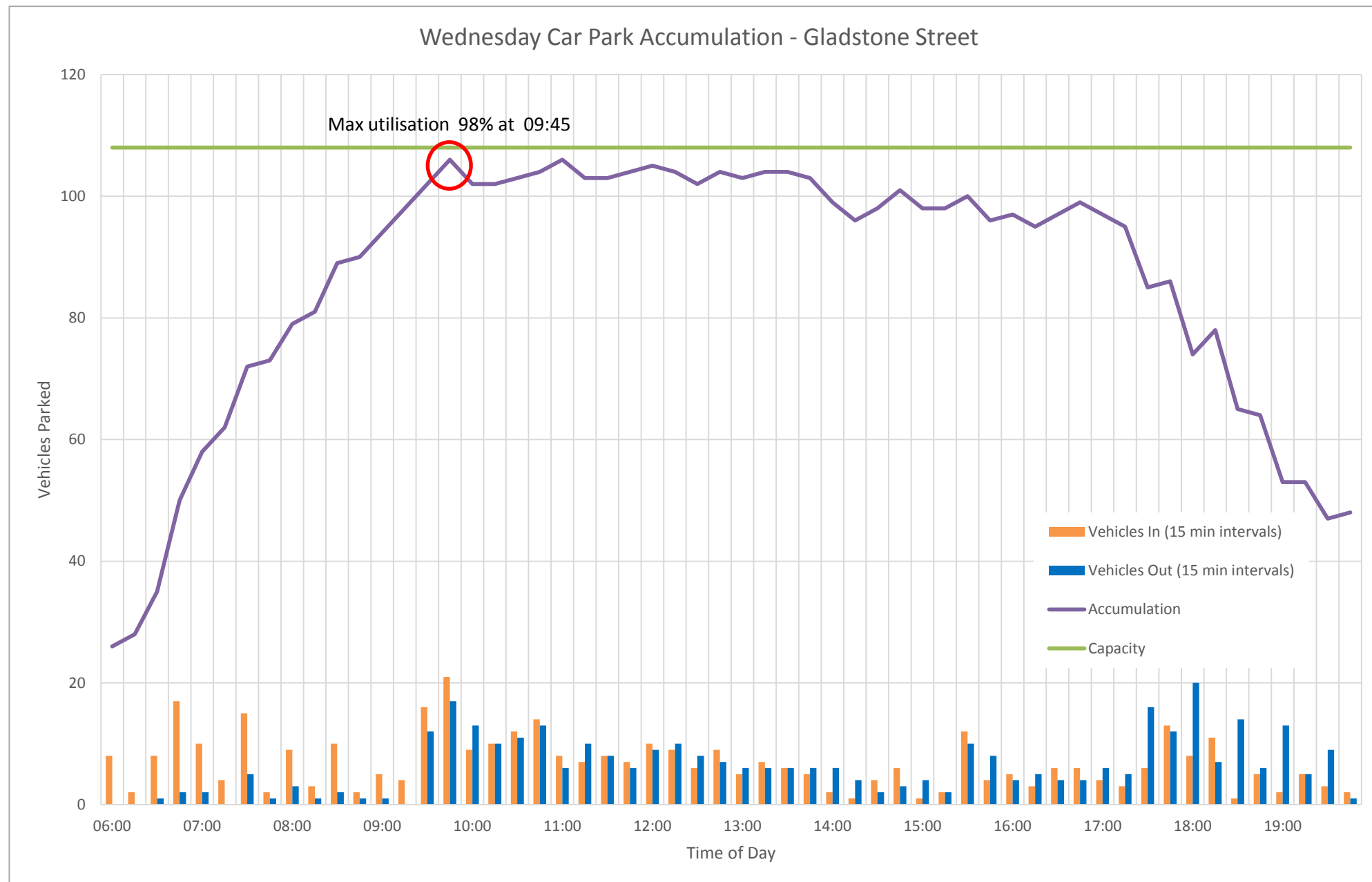
- There is a clear trend of rail commuter activity taking place with vehicles arriving in the early morning (many pre-8am) and then leaving later in the evening (post-6pm)
- The accumulation curve shows that there is no spare capacity available throughout much of the working day

Weekday Accumulation – Station West



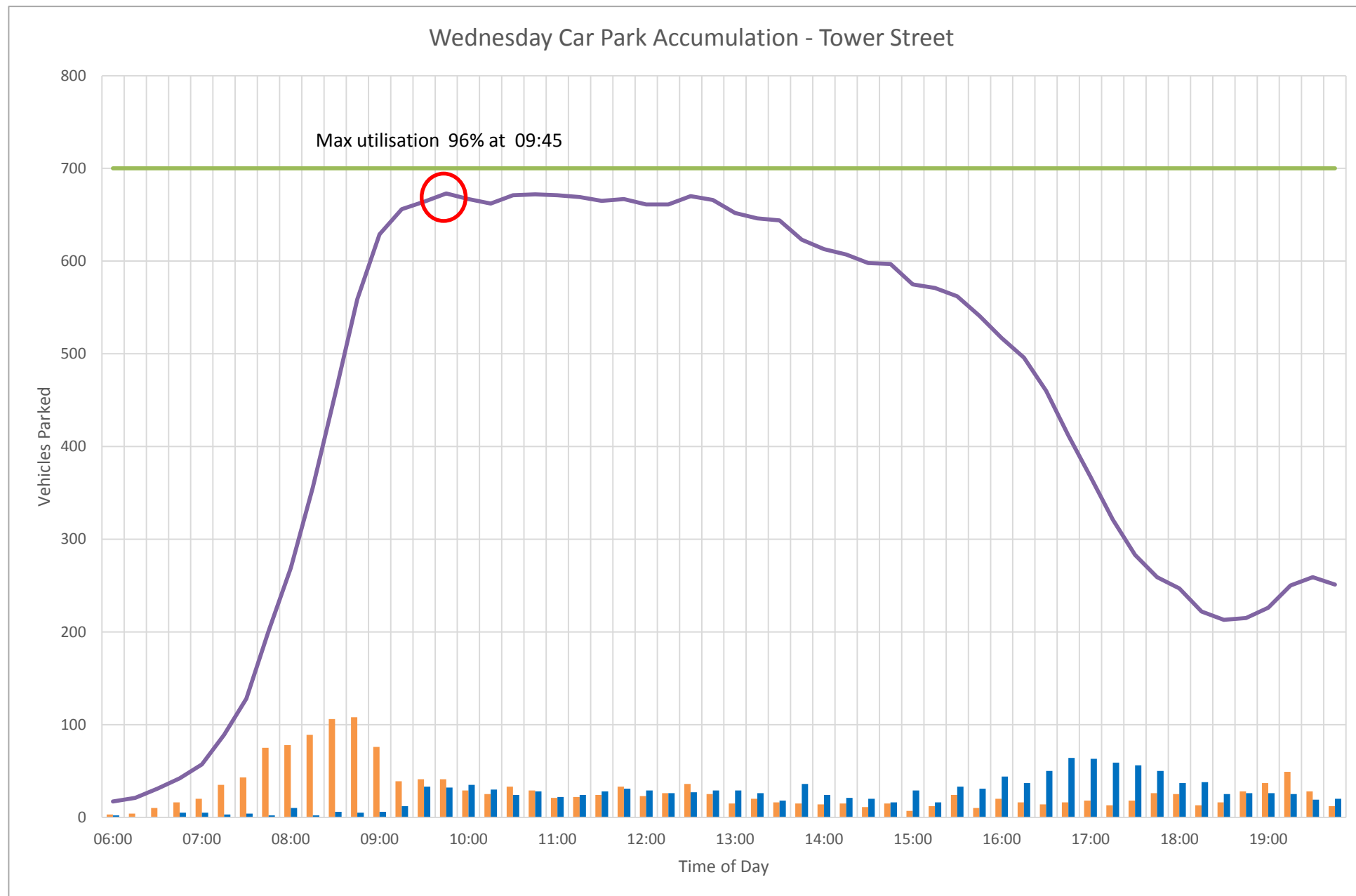
- As with the other station car park, there is a clear trend of rail commuter activity taking place with vehicles arriving in the early morning (many pre-8am) and then leaving later in the evening (post-6pm)
- The accumulation curve shows that there is no spare capacity available throughout the working day

Weekday Accumulation – Gladstone Street



- There is steady accumulation of vehicles parking during the morning from 6am onwards until the car park is full by 10am – the relatively late (post-6pm) exit profile suggests the car park is used by rail commuters – this is borne out by journey purpose data (see page 31)
- During the day there is a steady inbound/outbound flow of vehicles which indicates an element of shorter stay parking activity (see page 30)

Weekday Accumulation – Tower Street



- Similar to the non-rail station car parks, there is a clear trend of vehicles arriving in the morning (8-9am) and then leaving in the late afternoon / evening (4-6pm) – this is borne out in the interview data (see page 31) which suggests more use by local workers in Winchester rather than rail commuters
- The accumulation curve shows that there is effectively no spare capacity available between the morning and early afternoon when spaces then become available again

Accumulation Surveys - Saturday



Accumulation Summary - Saturday

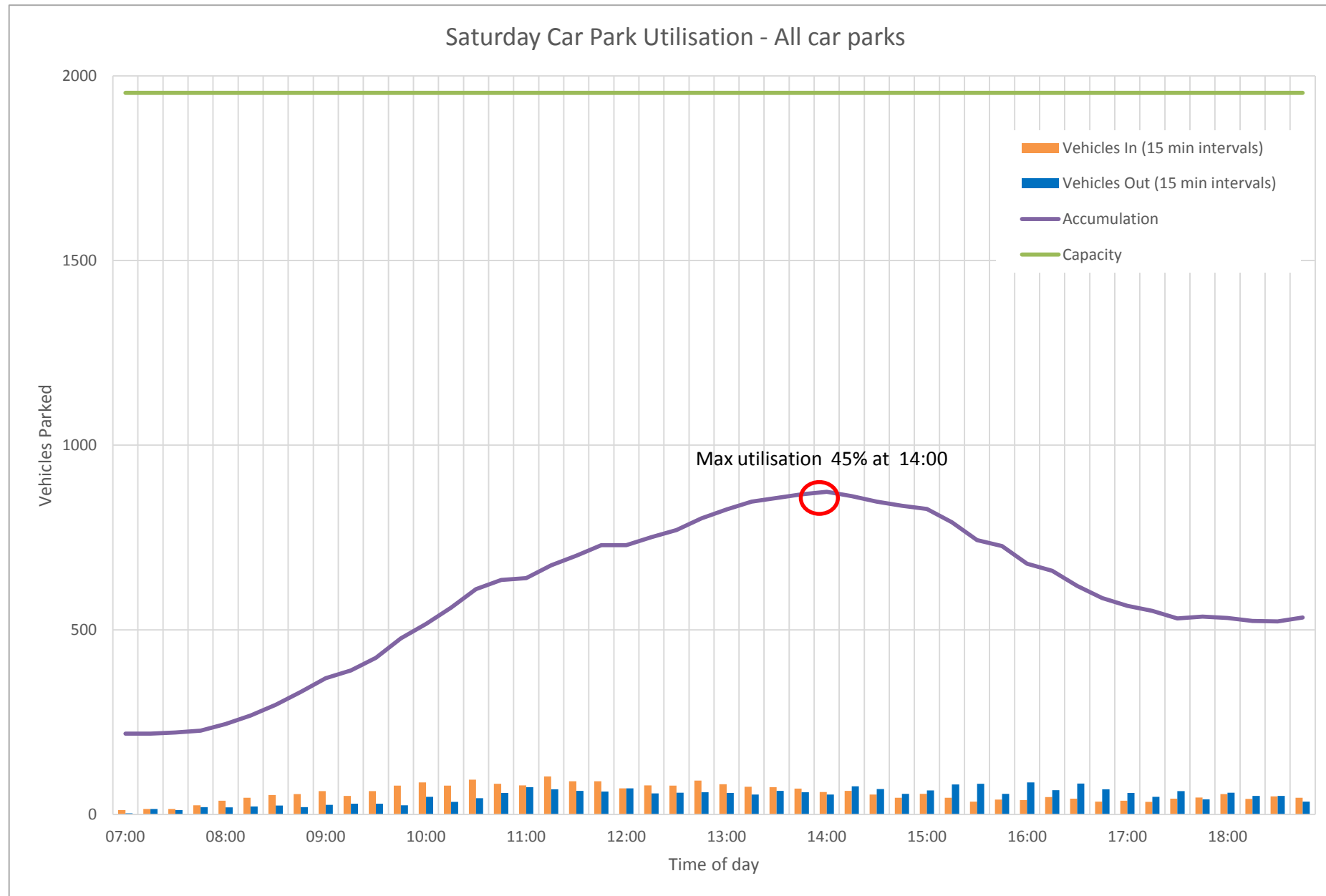
| SATURDAY | Capacity | Total inflow | Total outflow | Maximum accumulation | Minimum spare capacity | Max utilisation % | Average utilisation |
|---------------|----------|--------------|---------------|----------------------|------------------------|-------------------|---------------------|
| Coach Park | 95 | 232 | 213 | 52 | 43 | 55% | 36% |
| Cattle Market | 202 | 99 | 101 | 13 | 86 | 6% | 4% |
| Worthy Lane | 149 | 224 | 212 | 88 | 61 | 59% | 35% |
| Station East | 243 | 221 | 203 | 87 | 156 | 36% | 29% |
| Station West | 457 | 492 | 415 | 180 | 277 | 39% | 30% |
| Tower St | 700 | 1219 | 1054 | 398 | 302 | 57% | 36% |
| Gladstone St | 108 | 264 | 230 | 68 | 40 | 63% | 41% |
| ALL | 1954 | 2751 | 2428 | 874 | 1080 | 45% | 30% |

- Across all off-street car parks the maximum utilisation of 45% indicates that there is plenty of spare capacity available in the station quarter area. None of the car parks exceed 63% maximum utilisation meaning that all are working within operational capacity.

| ON-STREET | Capacity | Maximum accumulation | Minimum spare capacity | Max utilisation % | Average utilisation |
|------------------------------|----------|----------------------|------------------------|-------------------|---------------------|
| Andover Road | 29 | 19 | 10 | 65% | 58% |
| Upper High Street | 19 | 17 | 2 | 94% | 88% |
| All on-street parking | 59 | 42 | 17 | 71% | 66% |

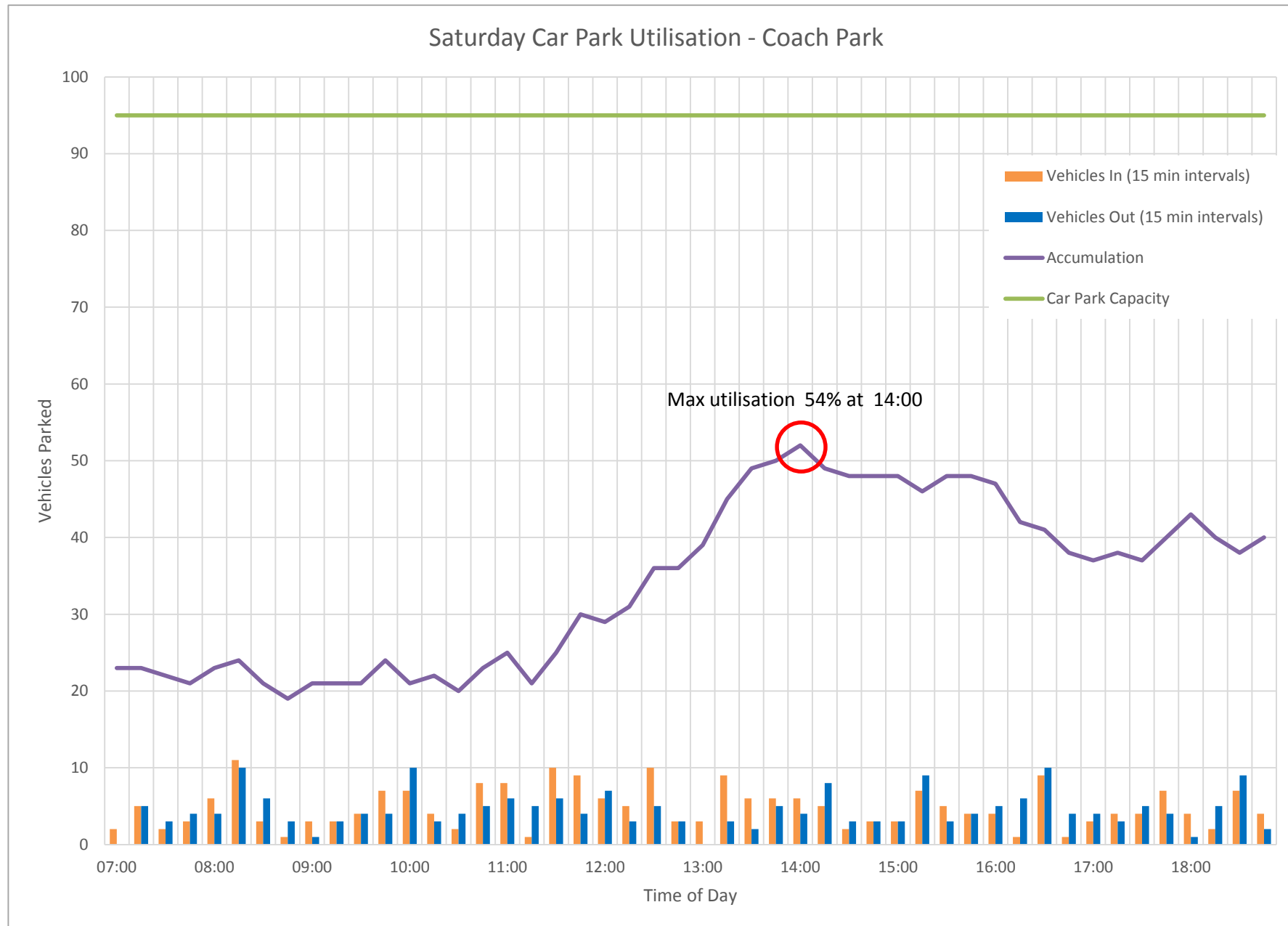
- On-street parking provision is also consistently busy throughout the day – there is limited capacity on Upper High Street but more free spaces on Andover Road, further from the city centre.

Saturday Accumulation – All car parks



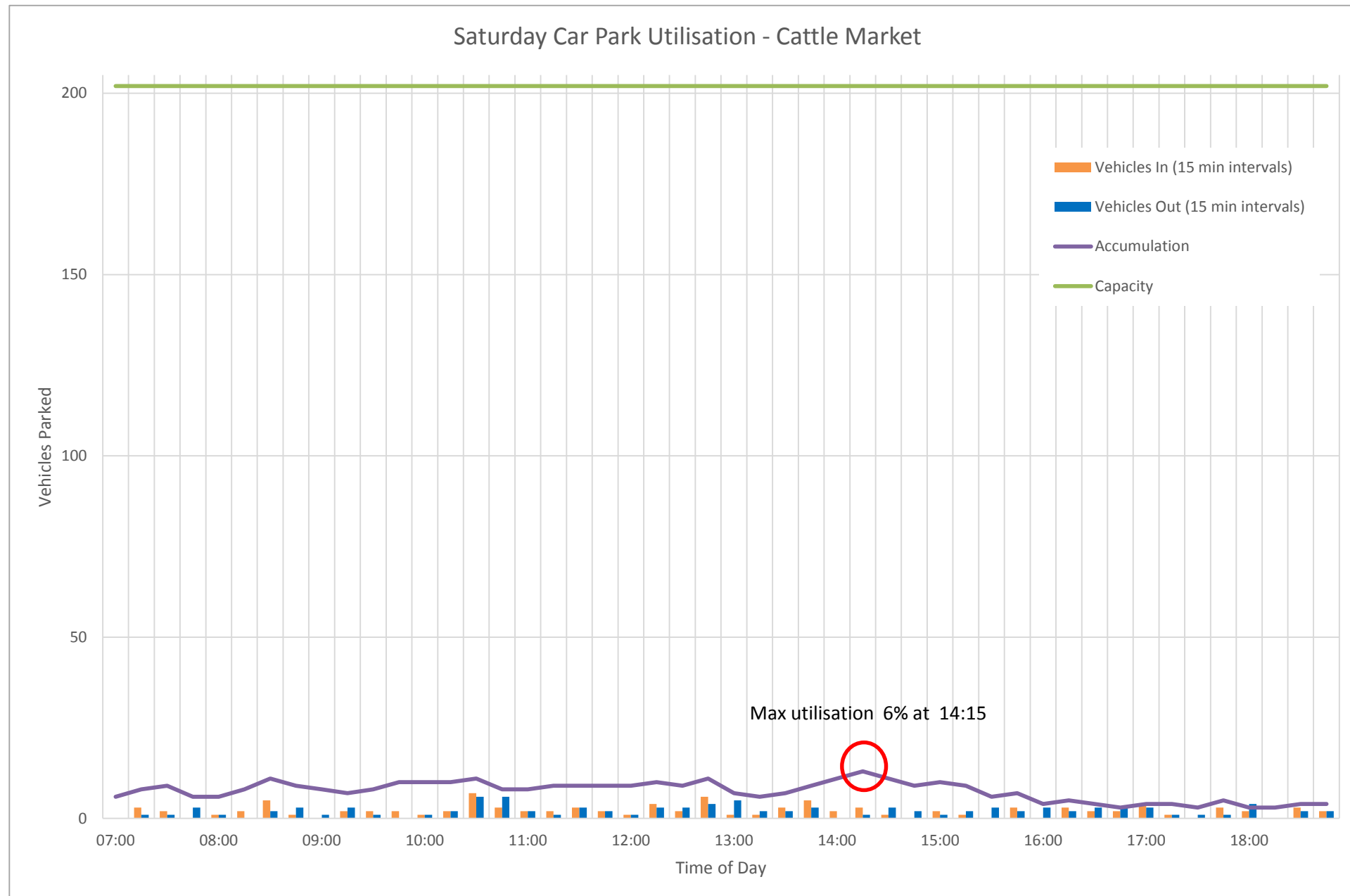
- Overall, there is a general trend of vehicles arriving throughout the morning and then leaving during the afternoon
- Unlike the weekday there is more continuous activity during the working day with no significant peaks
- The maximum utilisation of 45% indicates that there is plenty of spare capacity available in the Station Quarter area

Saturday Accumulation – Coach Park



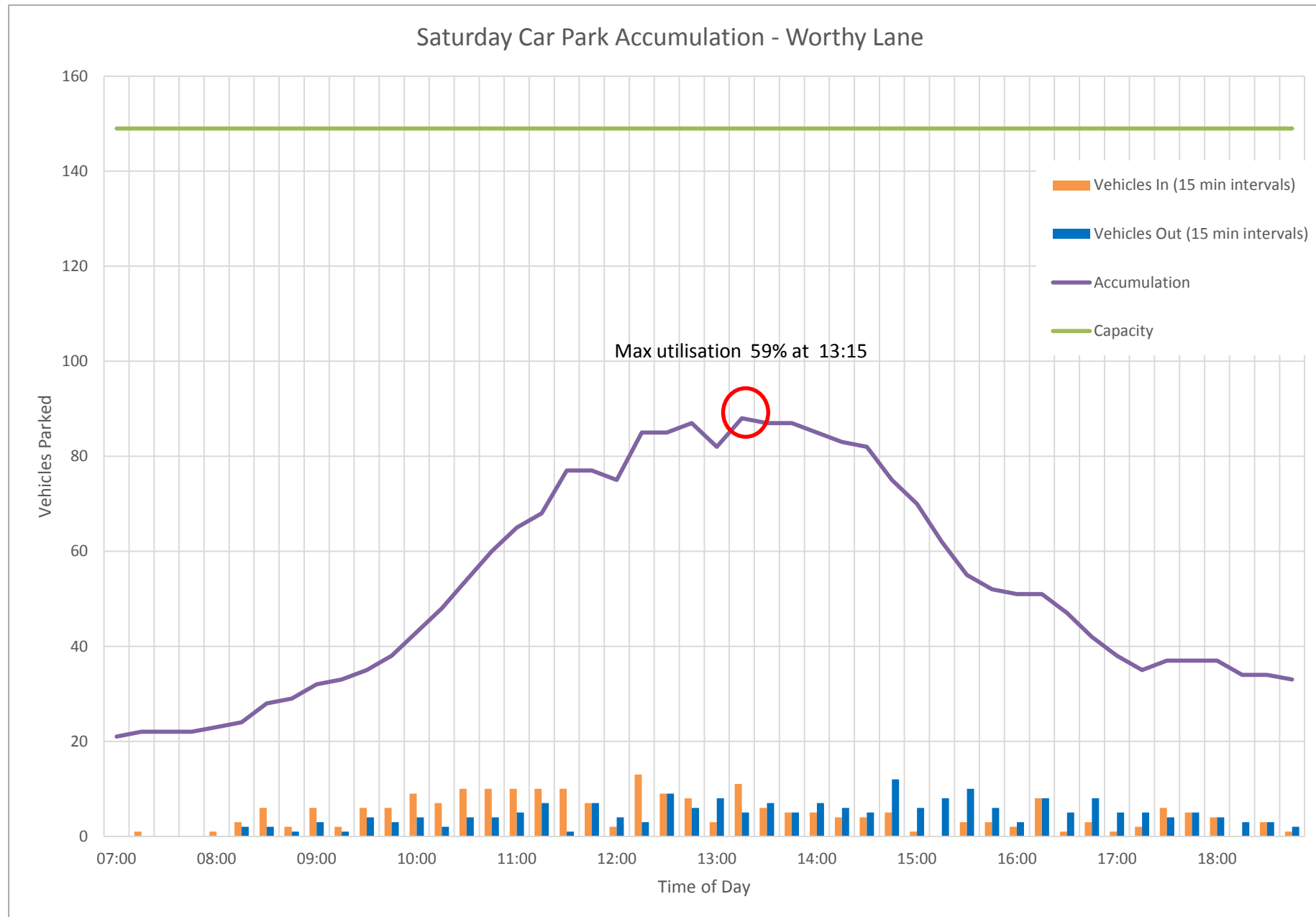
- There is a general pattern of vehicles entering/exiting the car park throughout the day – the balance of ins/outs leads to the car park becoming busier during the day leading to it being approximately half full from the early afternoon onwards

Saturday Accumulation – Cattle Market



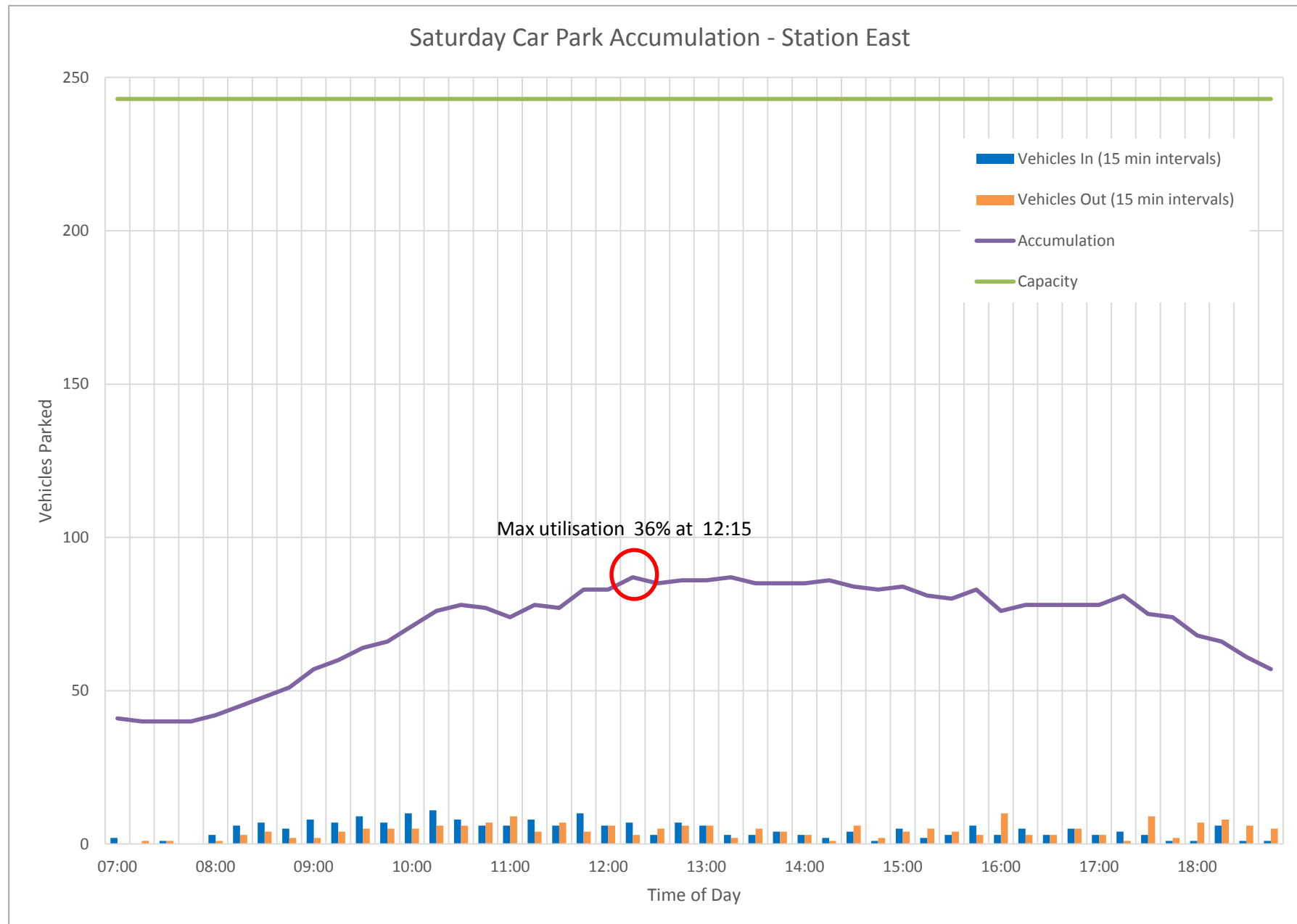
- With the Worthy Lane car park no more than half full at the busiest time, it is unsurprising that the more remote Cattle Market car park is very quiet throughout the day

Saturday Accumulation – Worthy Lane



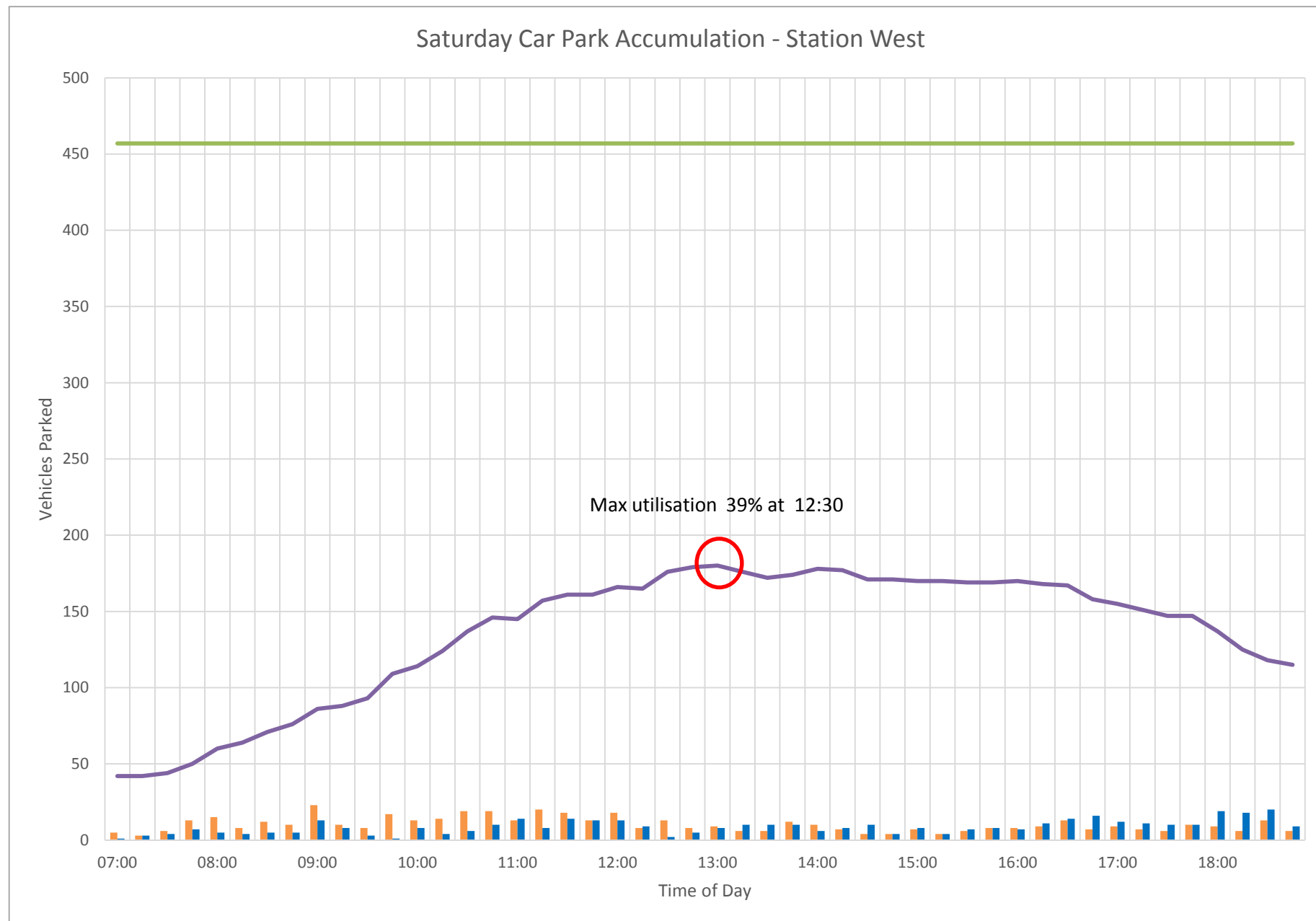
- There is a general pattern of vehicles entering the car park during the morning leading to the car park slowly filling up to a maximum of just over half full at lunchtime

Saturday Accumulation – Station East



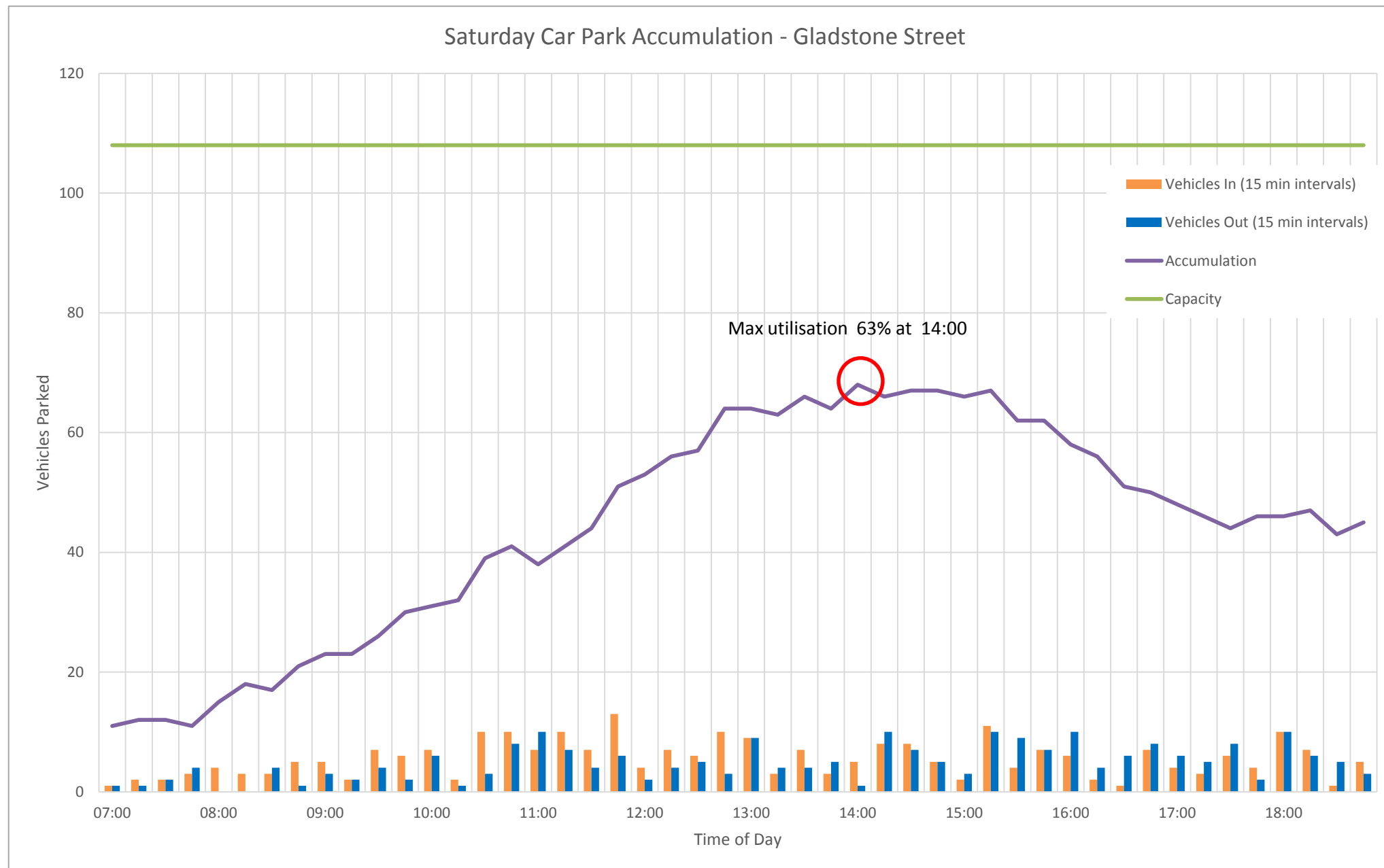
- There is a general pattern of vehicles entering the car park during the morning leading to the car park slowly filling up to a maximum under half full at lunchtime

Saturday Accumulation – Station West



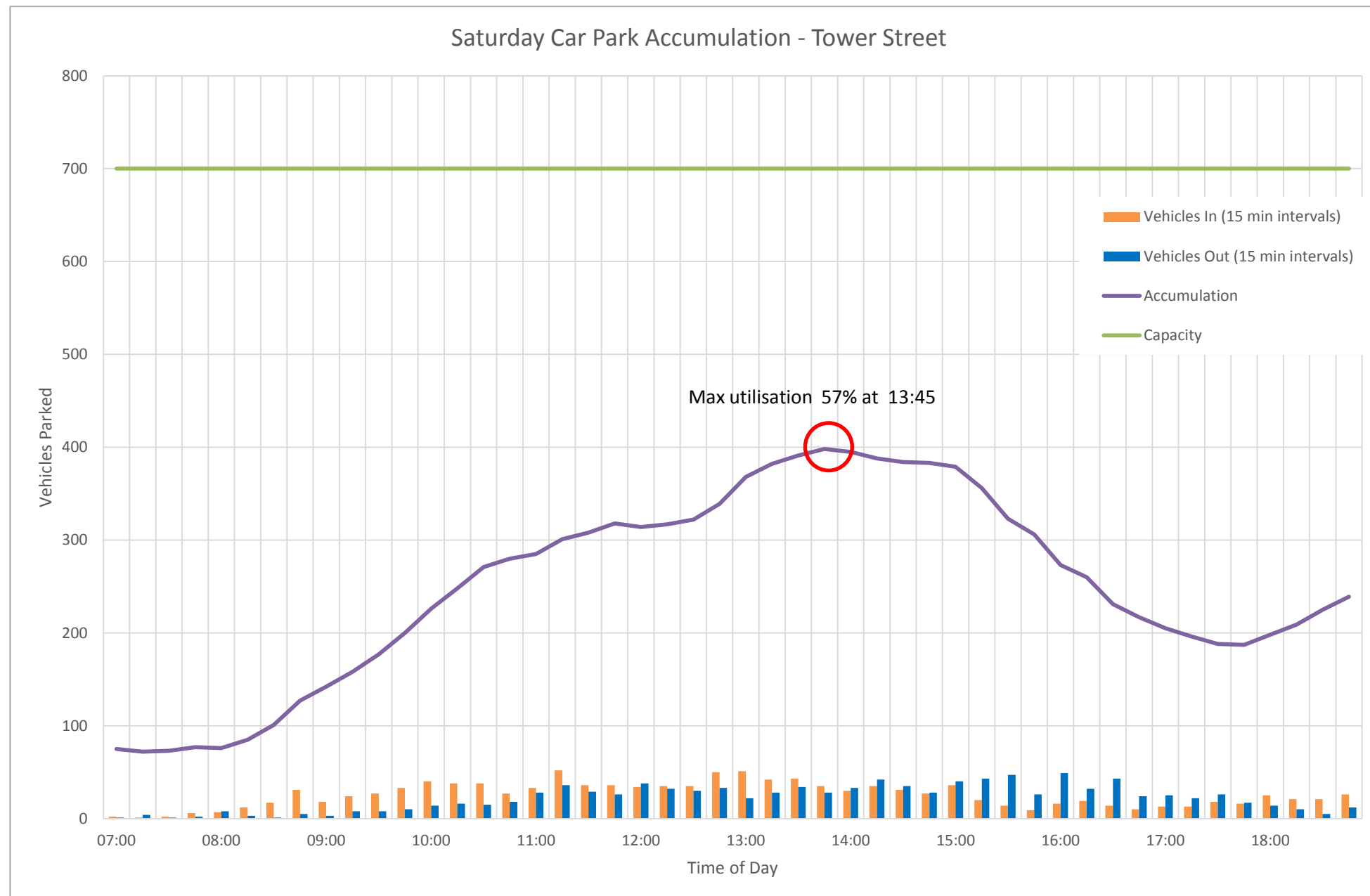
- As with the other station car park there is a general pattern of vehicles entering the car park during the morning leading to the car park slowly filling up to a maximum under half full at lunchtime

Saturday Accumulation – Gladstone Street



- There is a general pattern of vehicles entering/exiting the car park throughout the day – the balance of ins/outs leads to the car park becoming busier during the day leading to it being approximately two-thirds full from the early afternoon onwards

Saturday Accumulation – Tower Street



- There is a general pattern of vehicles entering the car park during the morning leading to the car park slowly filling up to a maximum of just over half full in the early afternoon
- Interestingly there is an increase in parking activity towards the end of the surveyed period suggesting that the car park is an attractive choice for evening use by visitors

Parking Interviews



Parking Interviews

Introduction

Detailed parking interviews were undertaken with motorists on the same days as the parking accumulation surveys:

- Wednesday 18th March (between 6am and 8pm)
- Saturday 21st March (between 7am and 7pm)

A sampling approach was taken and, as such, the interview responses received represent a proportion of the total parking activity.

These March interviews have been combined with earlier, identical surveys undertaken in February to provide a larger sample to better reflect all parking activity and behaviours. These February surveys were undertaken on :

- Thursday 26th February (between 6am and 8pm)
- Saturday 28th February (between 7am and 7pm)

Sample rates

Based on the total inbound car park flows captured by the accumulation surveys and the number of interviews undertaken, the following sample rates have been achieved:

| Car park | Weekday sample rate | Saturday sample rate |
|----------------------|---------------------|----------------------|
| Coach Park | 20% | 31% |
| Cattle Market | 28% | 46% |
| Worthy Lane | 44% | 33% |
| Station East | 28% | 29% |
| Station West | 20% | 26% |
| Gladstone Street | 22% | 25% |
| Tower Street | 10% | 14% |
| ALL CAR PARKS | 20% | 23% |

Based on these sample rates we can reliably extrapolate the interview responses received up to the total parking activity observed.

Interview questions

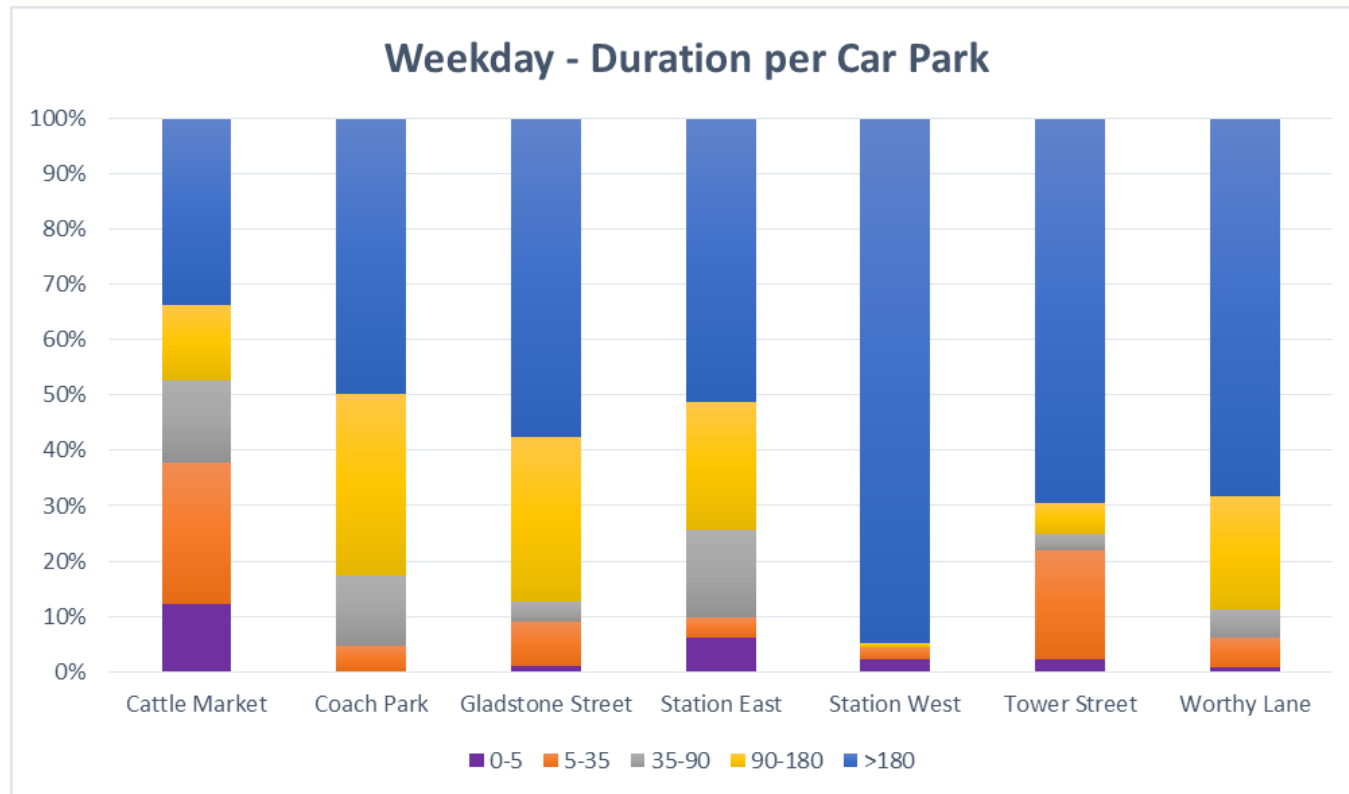
The number of interview questions was kept to a minimum in order to maximise the number of interviews and limit respondent fatigue.

The questions asked were:

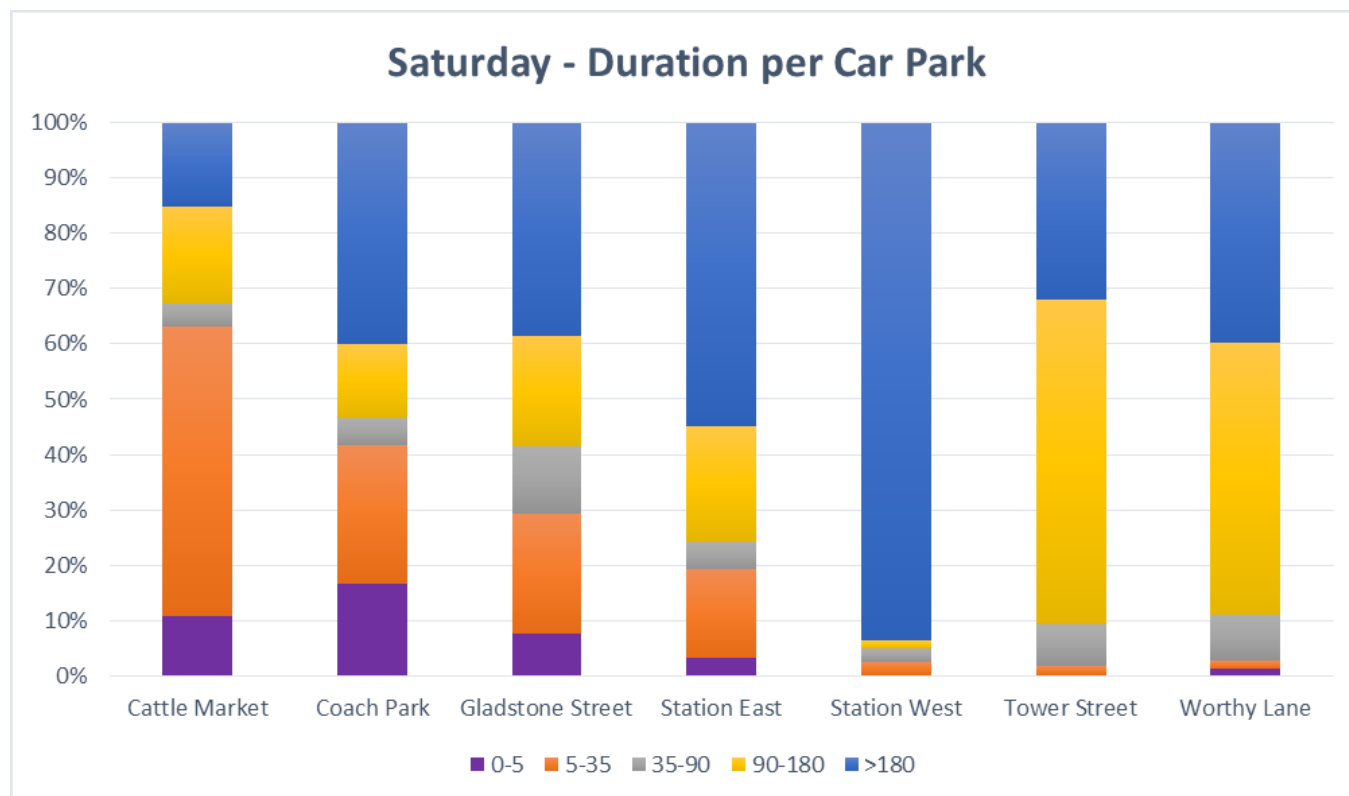
1. Journey origin (including postcode)
2. Car park arrival time
3. Number of people in car (excluding driver)
4. Duration of stay
5. Journey purpose (eg rail commuting, work, shopping, leisure, education, health, etc)
6. Parking frequency (eg daily, weekly, monthly)
7. Car park choice (eg ease of access, cost, space availability)

The questions were designed to be appropriate for people both arriving at the car park (and beginning their stay) or leaving the car park (having completed their stay).

Interview Results – Parking Duration

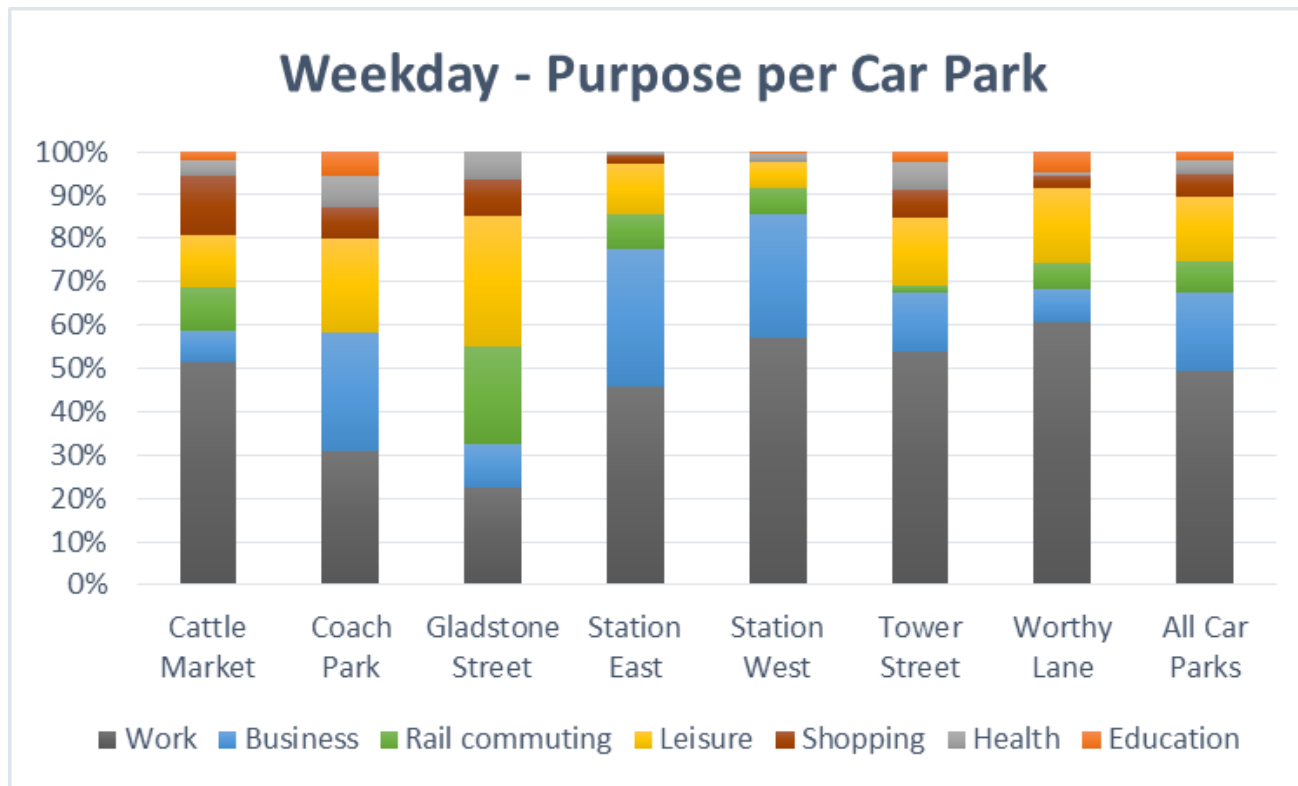


- The predominant parking duration for all car parks is longer stays of greater than 3 hours
- Station West sees the greatest amount of long-stay parking activity which is expected given its use by rail commuters
- Tower Street and Worthy Lane also see significant long stay activity (more than two-thirds of responses)
- Cattle Market and Tower Street have the largest percentages of shorter stay parking activity with up to a third of respondents staying for no more than half an hour

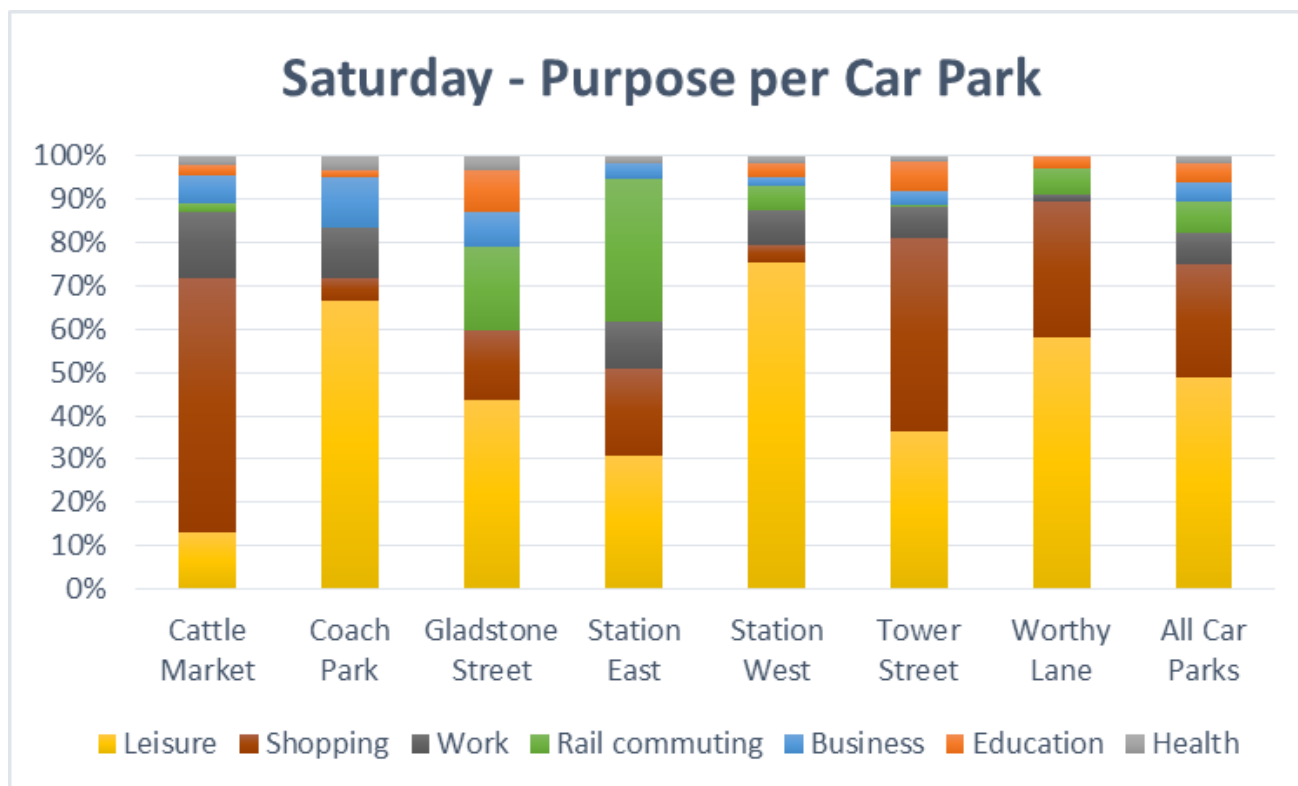


- Saturday parking durations for each car park are broadly similar to the weekday patterns albeit with higher percentages of shorter stay activity
- Tower Street and Worthy Lane see a lot of medium-term duration parking (90-180 minutes) whilst Cattle Market, Coach Park and Gladstone Street see more shorter durations
- Station West remains dominated by long-stay durations

Interview Results – Journey Purpose

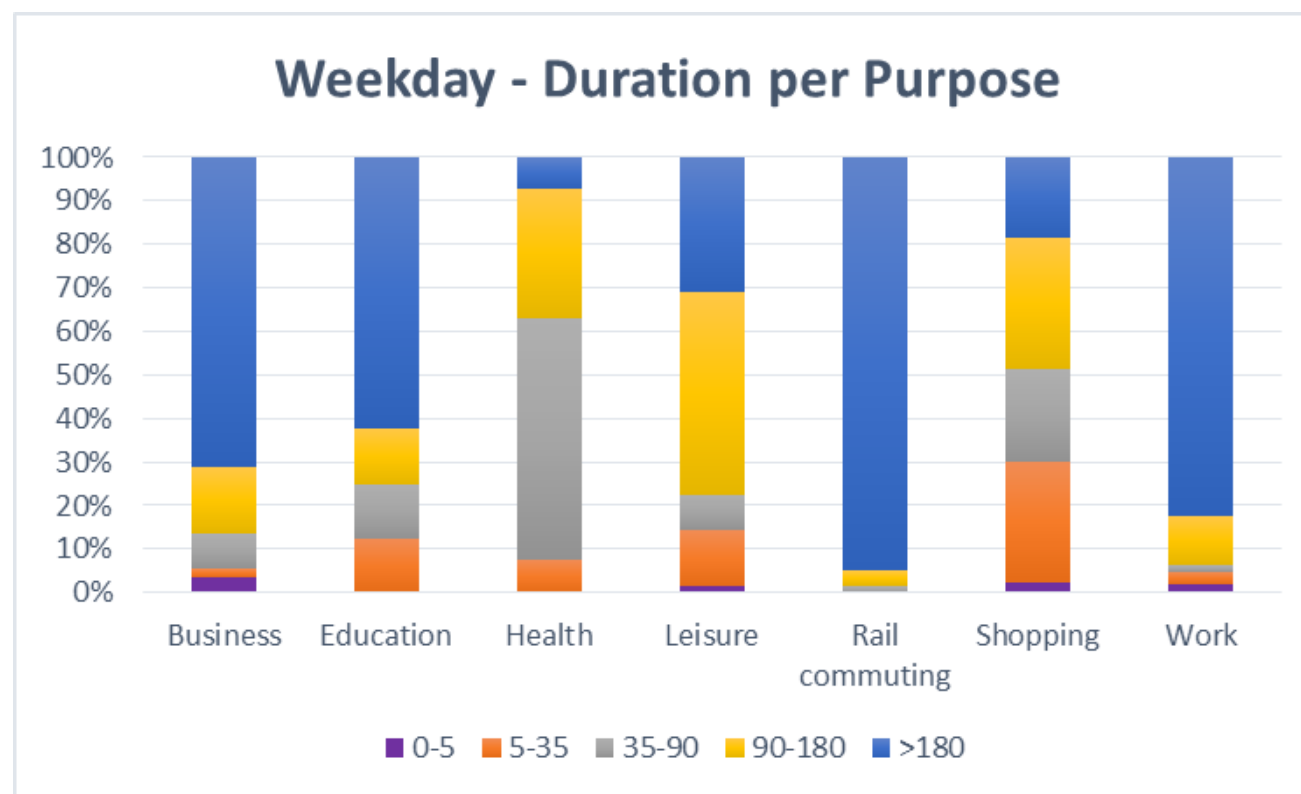


- 'Work' is the dominant journey purpose for all car parks – this is consistent with the parking duration results on the previous page
- The combination of employment activity ('work', 'business', 'rail commuting') makes up nearly 75% of all parking activity – it is highest for the station car parks but still forms a substantial component of all parking activity at other locations
- Gladstone Street car park sees the highest levels of rail commuter parking – this is attributed to its convenient location close to the station and simpler access route than the western station car park

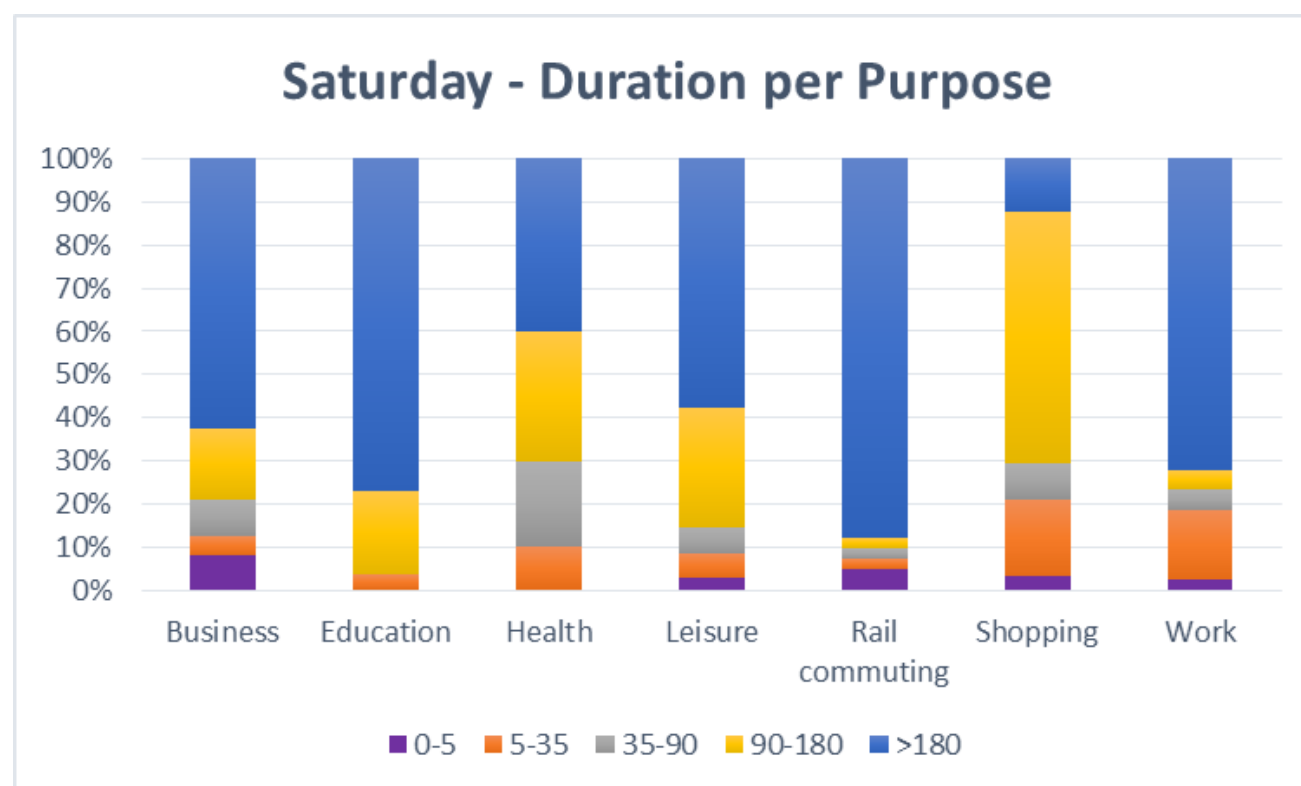


- As would be expected there is a very different pattern of activity on a Saturday – 'leisure' and 'shopping' are the primary journey purposes for all of the car parks and amount to approximately 75% of all parking activity
- The Station East and Gladstone Street car parks still show a noticeable volume of rail commuting despite it being the weekend

Interview Results – Duration and Purpose

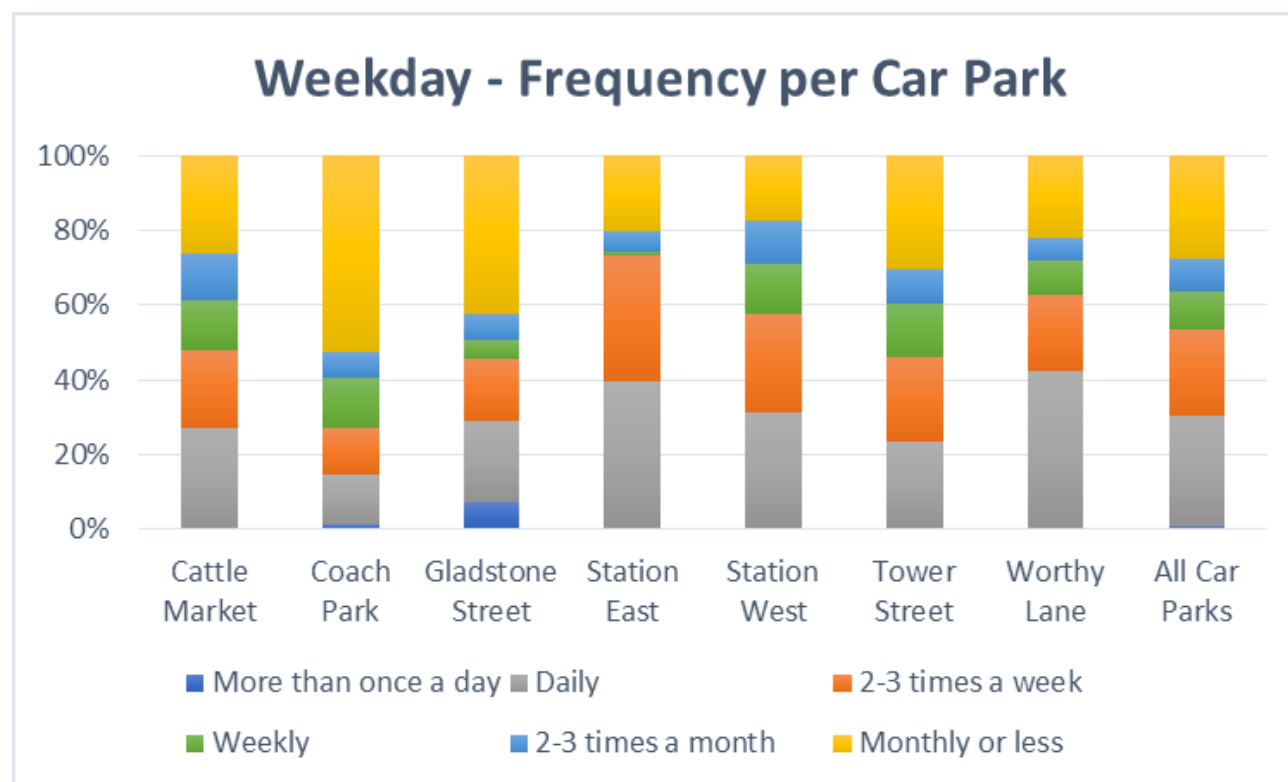


- Journey purpose and parking duration have been cross-tabulated for all interview responses across all car parks
- Business, commuting and work purposes are all predominantly long-stay (>3 hours)
- Other purposes (education, health, leisure, shopping) are typically shorter although durations greater than 90 minutes are still common and suggest lower levels of parking turnover than might be otherwise expected

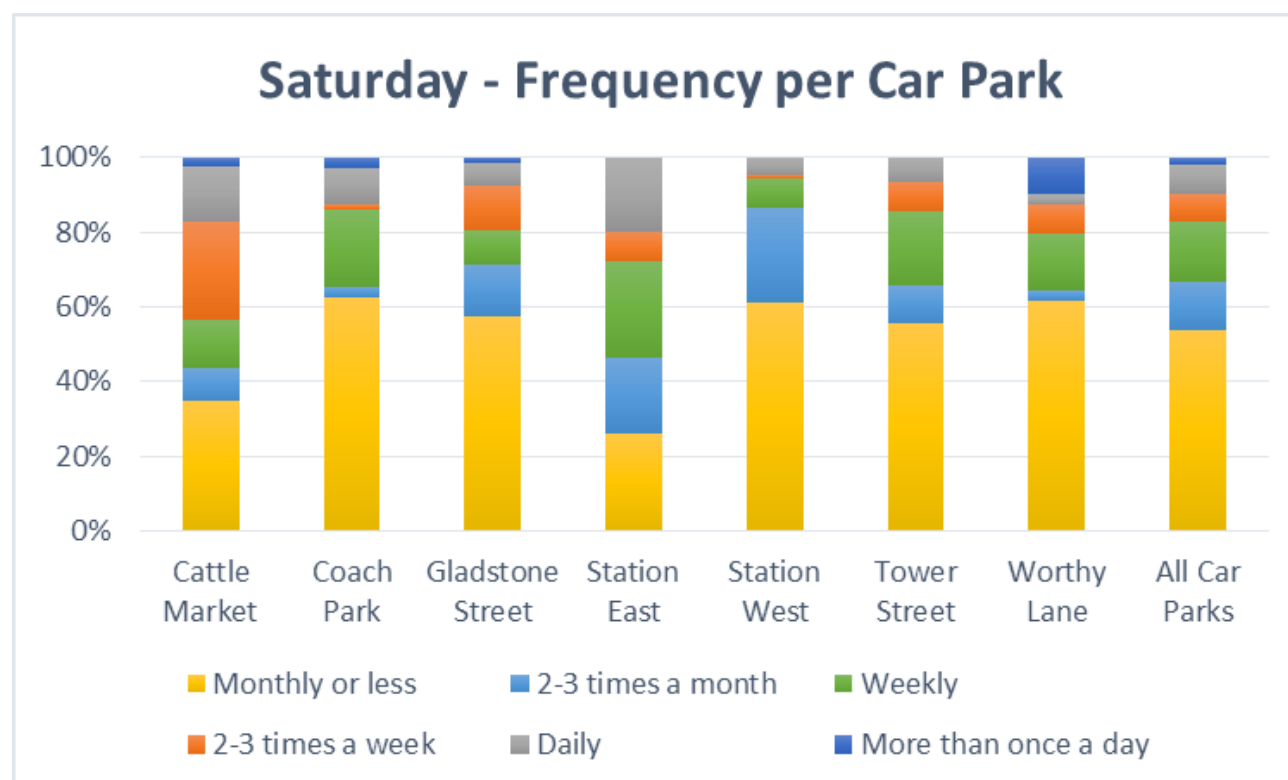


- There is a similar pattern to the weekday although shopping and leisure activity is often longer on a Saturday. This may reflect a different type of visit to the city at weekends that is more tourist based rather than functional errands-based shopping

Interview Results – Journey Frequency

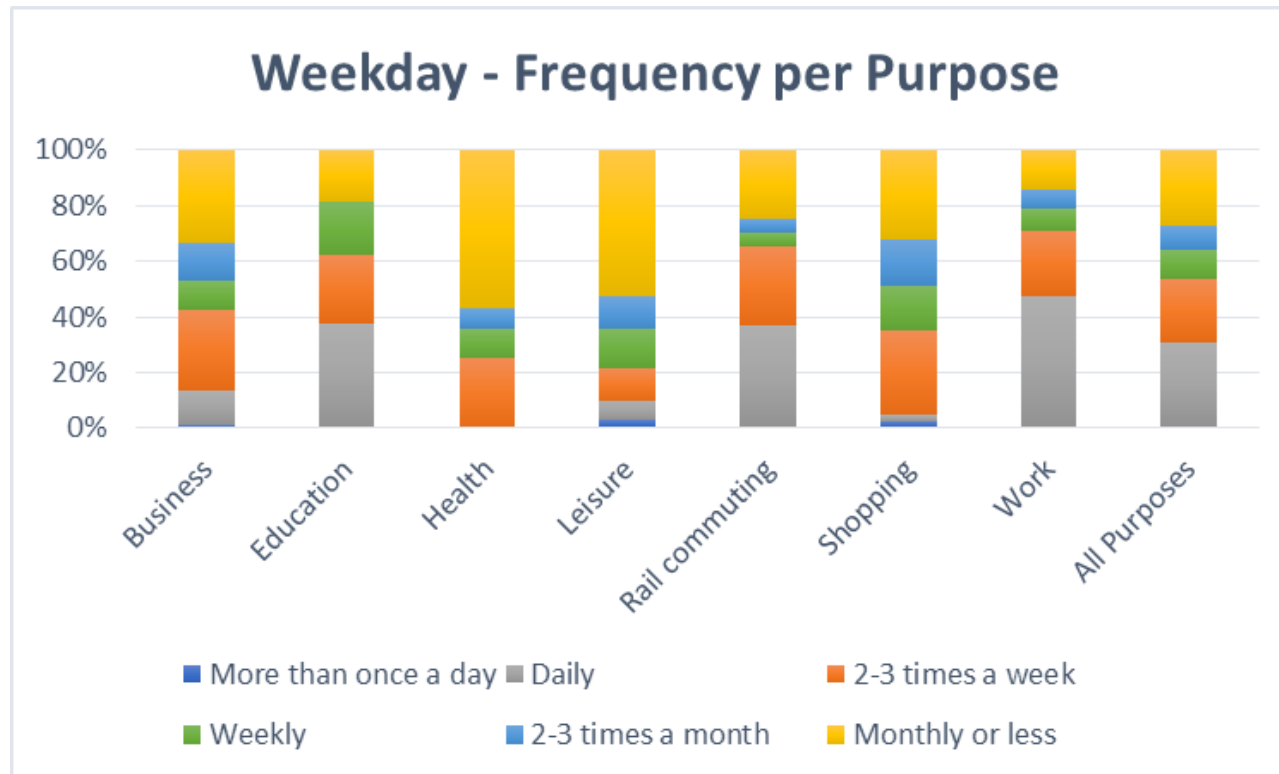


- Daily car park usage is generally most common across all car parks with the station car parks seeing the most frequent use
- Conversely, infrequent (less than monthly) car park use is also prevalent at all the car parks, particularly at Coach Park which is the only car park observed to have available capacity at peak times
- Overall there is a mix of journey frequencies that suggests a wider range of typical car park users than might be expected given the predominant employment-based journey purposes
- *It should be noted however that there is the possibility of some survey bias whereby infrequent car park users are more prepared to answer the interview questions as they are less rushed than regular workers/commuters*

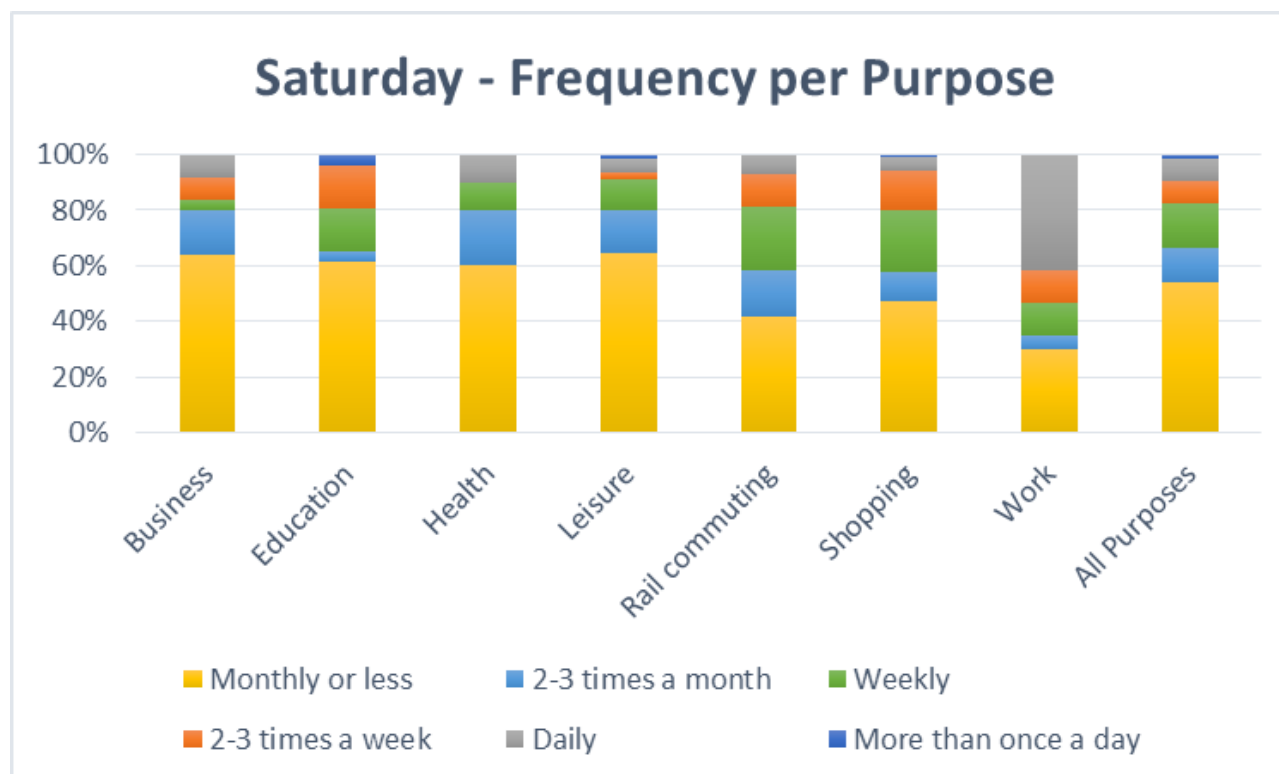


- On a Saturday there is a clear pattern of infrequent visits to all the car parks, the exception being Station East
- Across all car parks over 50% of all parking activity is being undertaken by people visiting less than once a month
- More frequent visitors (between weekly and monthly) account for under a third of parking activity with another c.10% being frequent (daily) users

Interview Results – Frequency and Purpose

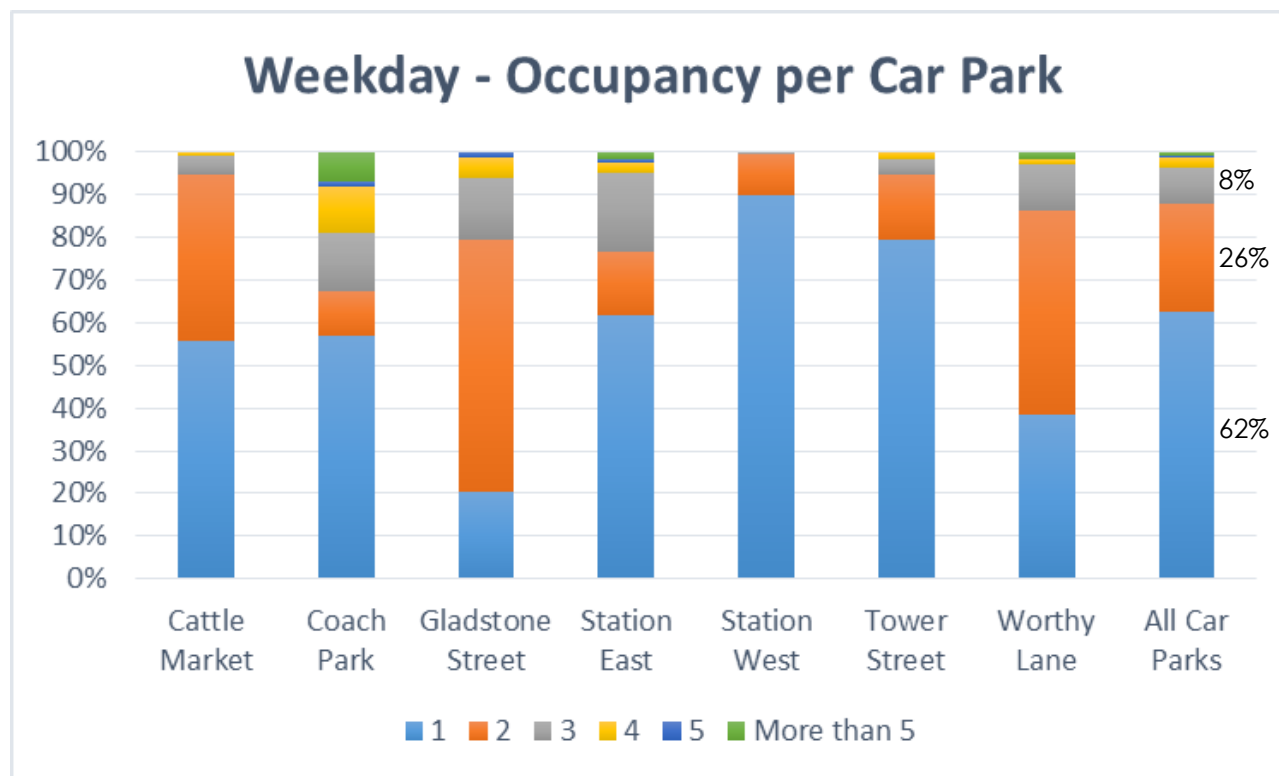


- Work, rail commuting and education are the most frequent journey purposes although the daily frequency is not as high as might be expected (eg only half of all work journey purposes are made on a daily basis)
- Conversely, non-employment purpose journeys are made less often and have a wider variety of frequencies

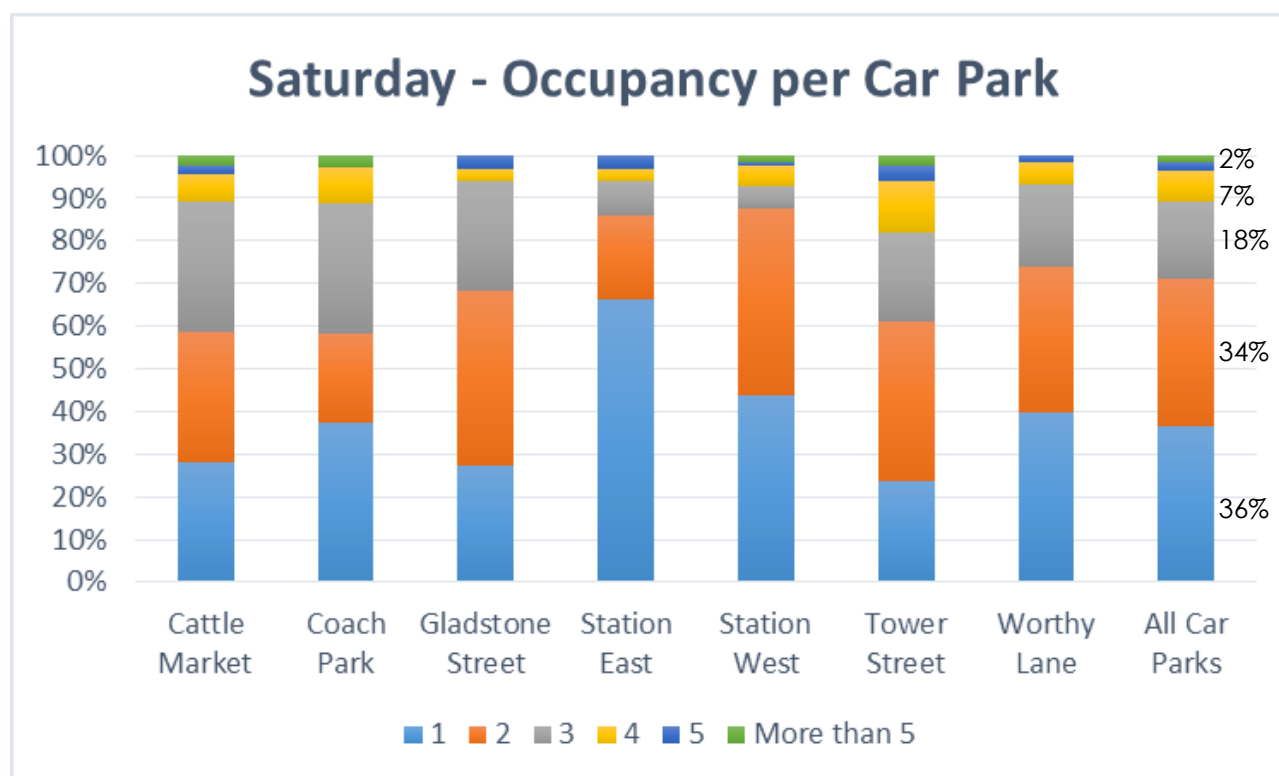


- On a Saturday there is a clear pattern of infrequent visits by all journey purposes
- Those respondents who gave work as their journey purpose were the only group who had a high daily journey frequency

Interview Results – Occupancy

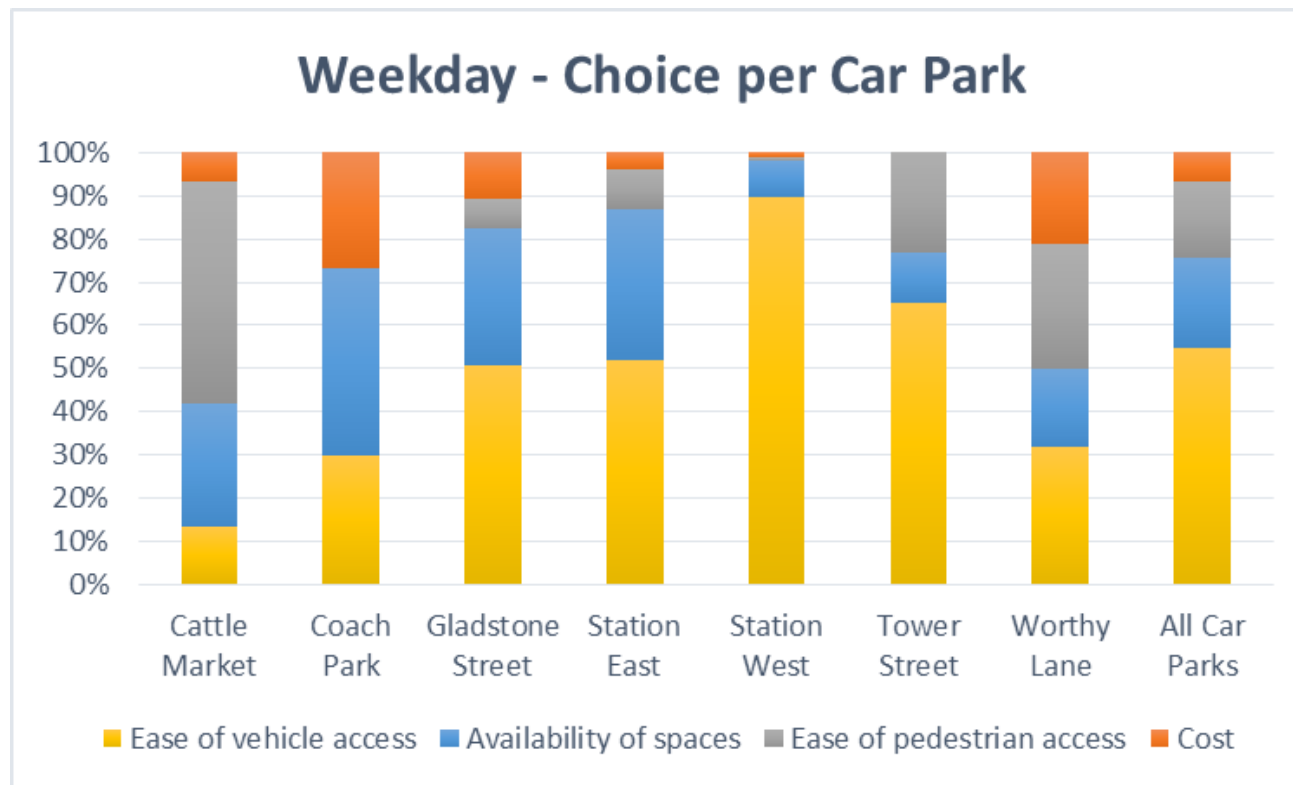


- The most common vehicle occupancies are one (driver only) and two (driver plus one passenger) – this accounts for nearly 90% of all interview responses
- Overall the weighted average vehicle occupancy is approximately 1.5 people per car
- As might be expected, the station car parks have the highest instances of single occupancy vehicles – attributed to predominantly rail commuting activity
- Tower Street also sees high single occupancy vehicles which is influenced by the strong 'work' journey purpose

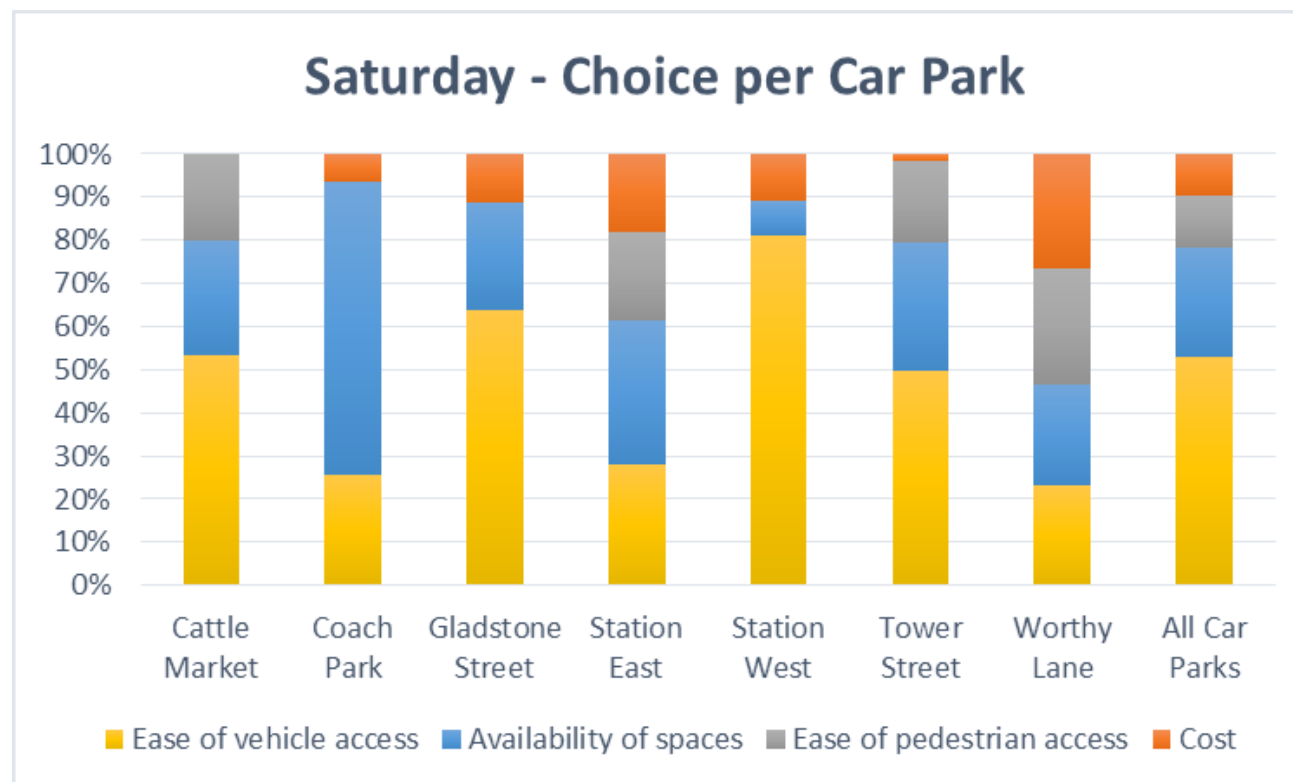


- There is a wider range of vehicle occupancies at the weekend although one (driver only) and two (driver plus one passenger) occupants still accounts for over two-thirds of interview responses
- Overall the weighted average vehicle occupancy is approximately 2.1 people per car
- As might be expected, the station car parks, particularly Station East, have the highest instances of single occupancy vehicles
- All the other car parks show a generally similar pattern of vehicle occupancy

Interview Results – Car park choice

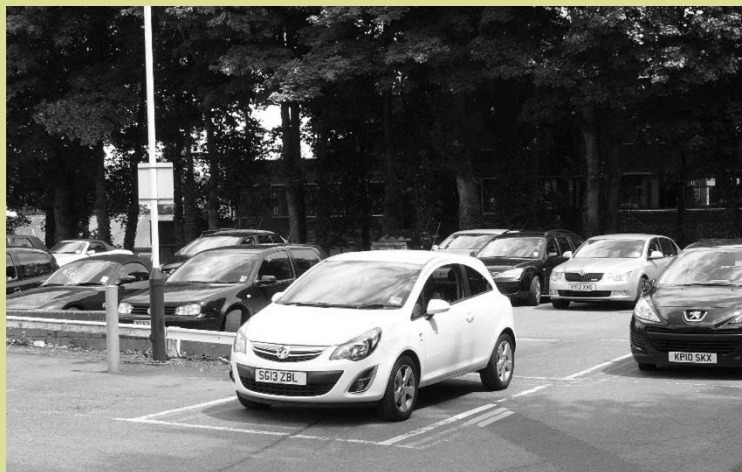


- For the car parks closest to the city centre, the most common reason given for car park choice was ease of vehicle access – Cattle Market (ease of pedestrian access) and Coach Park (availability of spaces) are the only exceptions
- Worthy Lane and Coach Park show approximately a quarter of respondents identifying cost as the main decision criteria – this is consistent with the current tariff structure which sees these locations priced slightly cheaper than other more central car parks



- A similar pattern of car park choice is observed for Saturday with a general increase in the ‘availability of spaces’ response at most car parks – unsurprising given the lower levels of utilisation compared to the weekday

Route Analysis - Weekday



Route Analysis Methodology

Key access routes

Analysing interview data on drivers' journey origins for each car park allows a pattern of movements within the city centre to be built up.

Six key car park access routes have been established (see right):

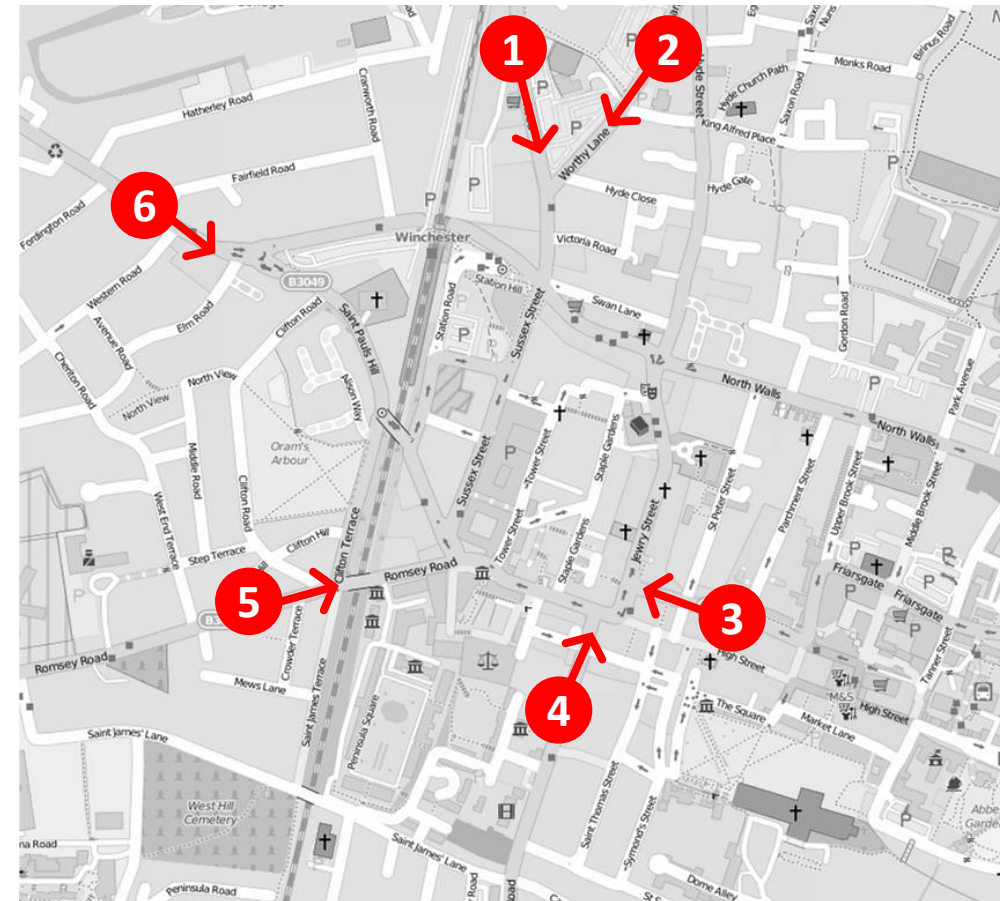
1. Andover Road (north);
2. Worthy Lane (north-east);
3. Alresford Road + Bar End Road (east);
4. St Cross Road (south);
5. Romsey Road (south-west); and
6. Stockbridge Road (West).

For each interview response, the most likely car park access route has been identified using the origin postcode and destination car park. Combining all interview responses for a particular car park gives an estimated distribution across the six routes in the form of access percentage splits.

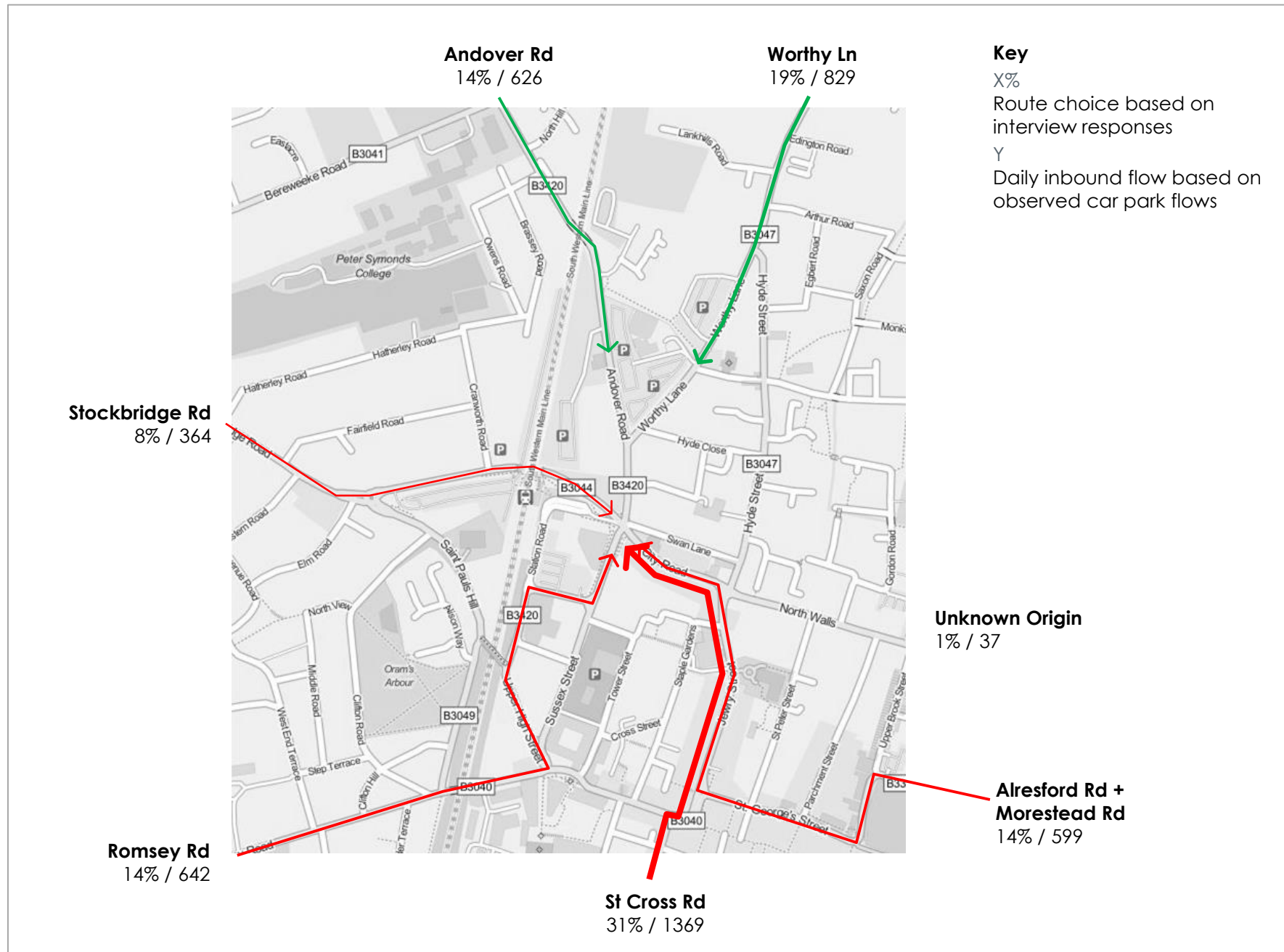
These access percentage splits for each car park have been factored up to total daily car park inbound flows. This gives an estimate of the distribution of movements in the study area to/from each car park.

Indicative access routes are shown in the subsequent diagrams with the arrow sizes being proportional to total movement.

Car park access routes

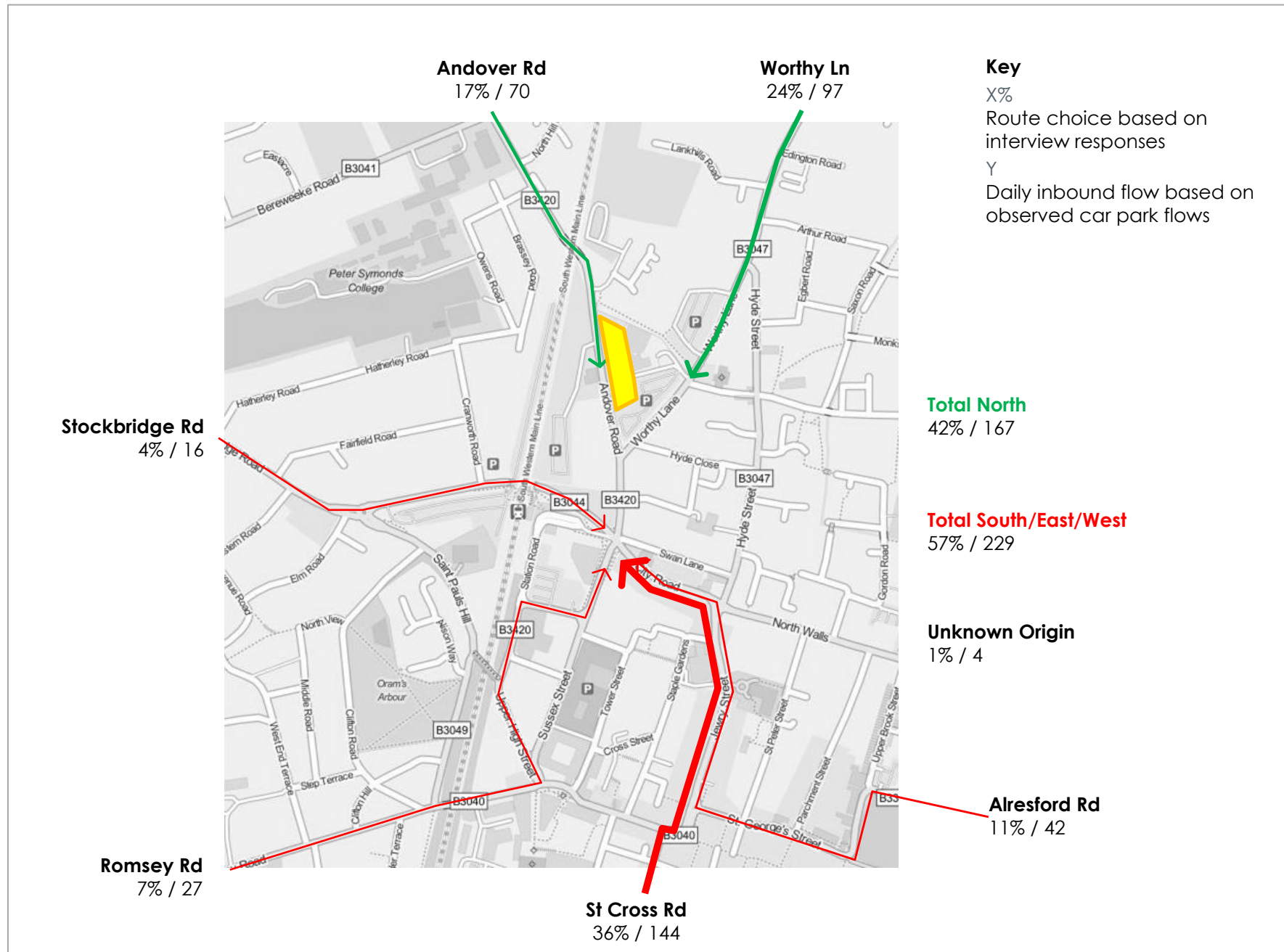


Route Analysis – Weekday All Car Parks



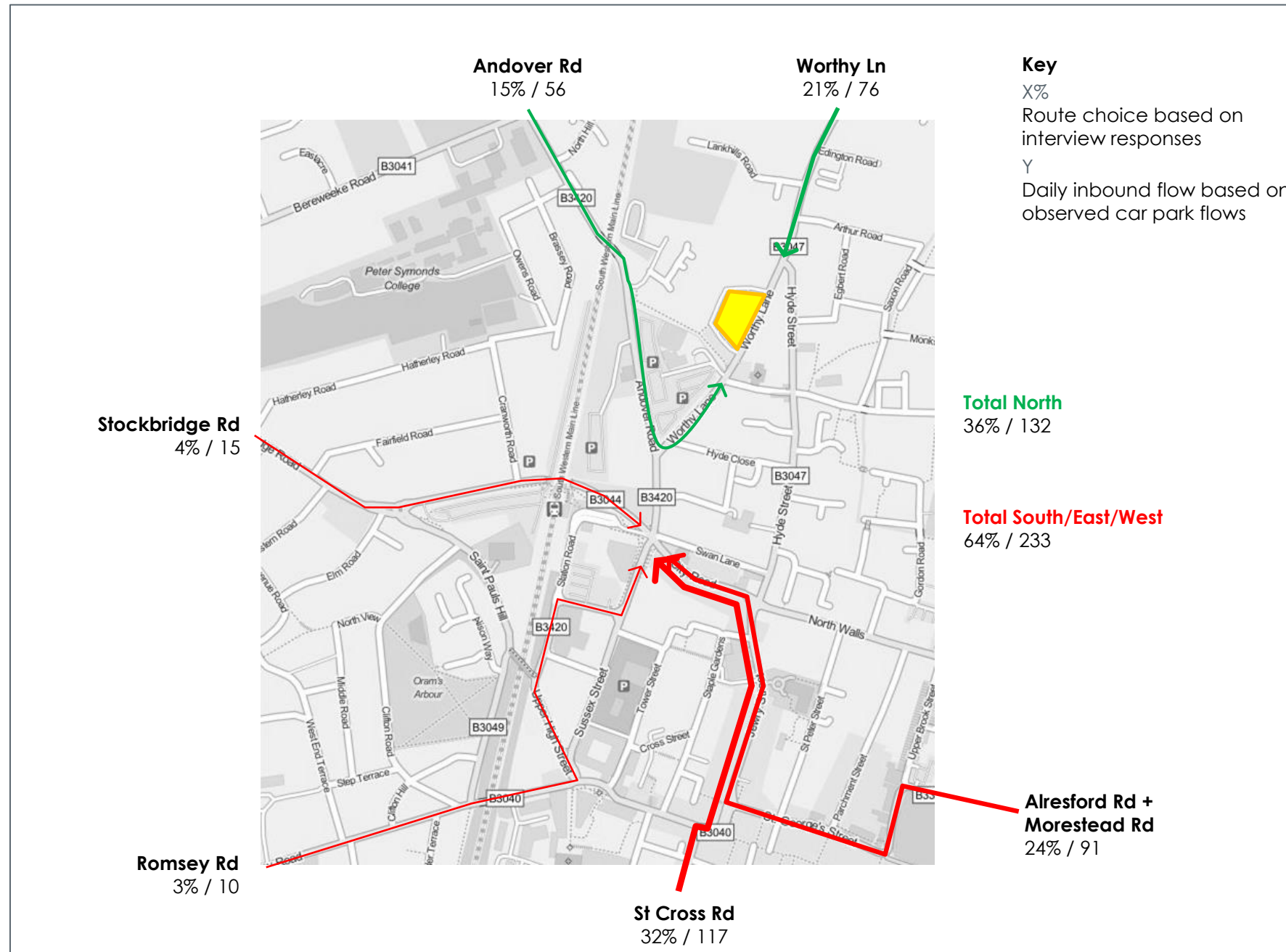
- At an aggregate level, there is a bias towards southern access via St Cross Road. Demand from the west (via Stockbridge Road) is relatively weak with a balance between the other directions.
- Estimated total daily car park flows range between 364 (Stockbridge Road) and 1369 (St Cross Road) – with other routes seeing between approximately 600 and 800 vehicles.

Route Analysis – Weekday Cattle Market



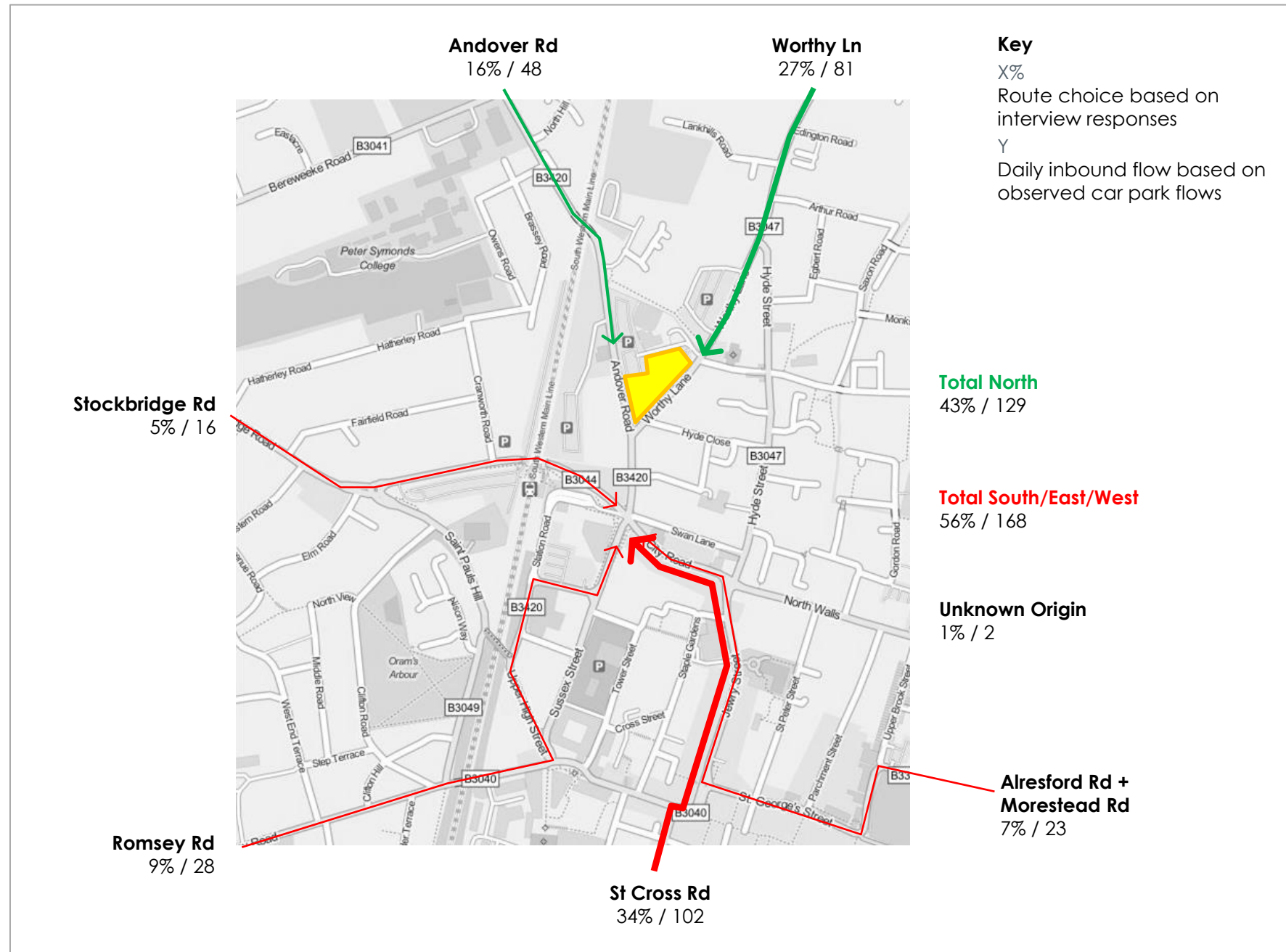
- Approximately 42% of drivers using the Cattle Market car park arrive from the north or north-east. Despite its location at the northern edge of the city centre, over half of users have travelled from the south and have passed through the city centre to reach it.

Route Analysis – Weekday Coach Car Park



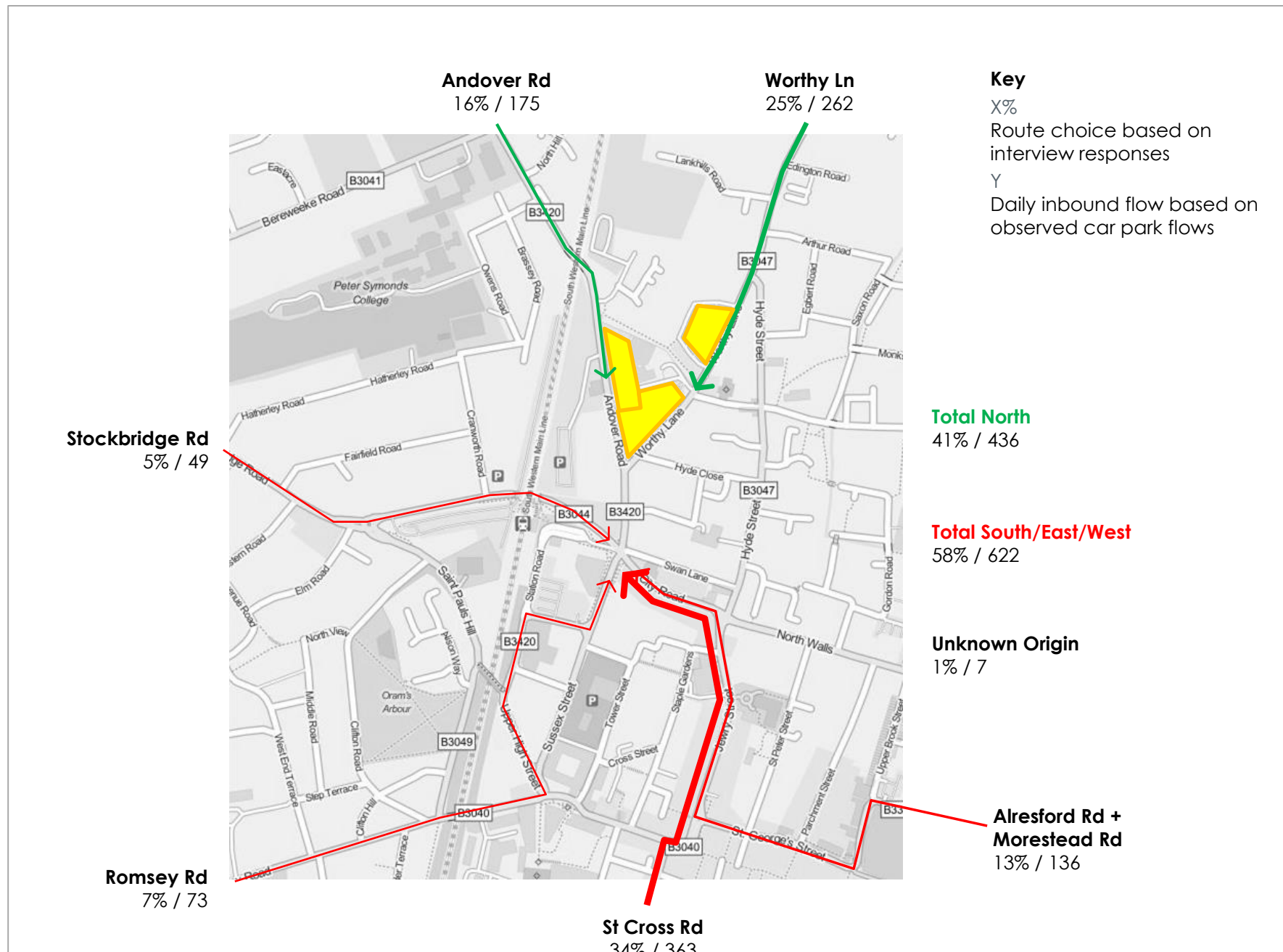
- Approximately 36% of drivers using the Coach Car Park arrive from the north or north-east. Despite its location at the northern edge of the city centre, over a half of users have travelled from the south or east and have passed through the city centre to reach it. This car park is the only one with any degree of weekday availability (page 11) which may partially explain this behaviour.

Route Analysis – Weekday Worthy Lane



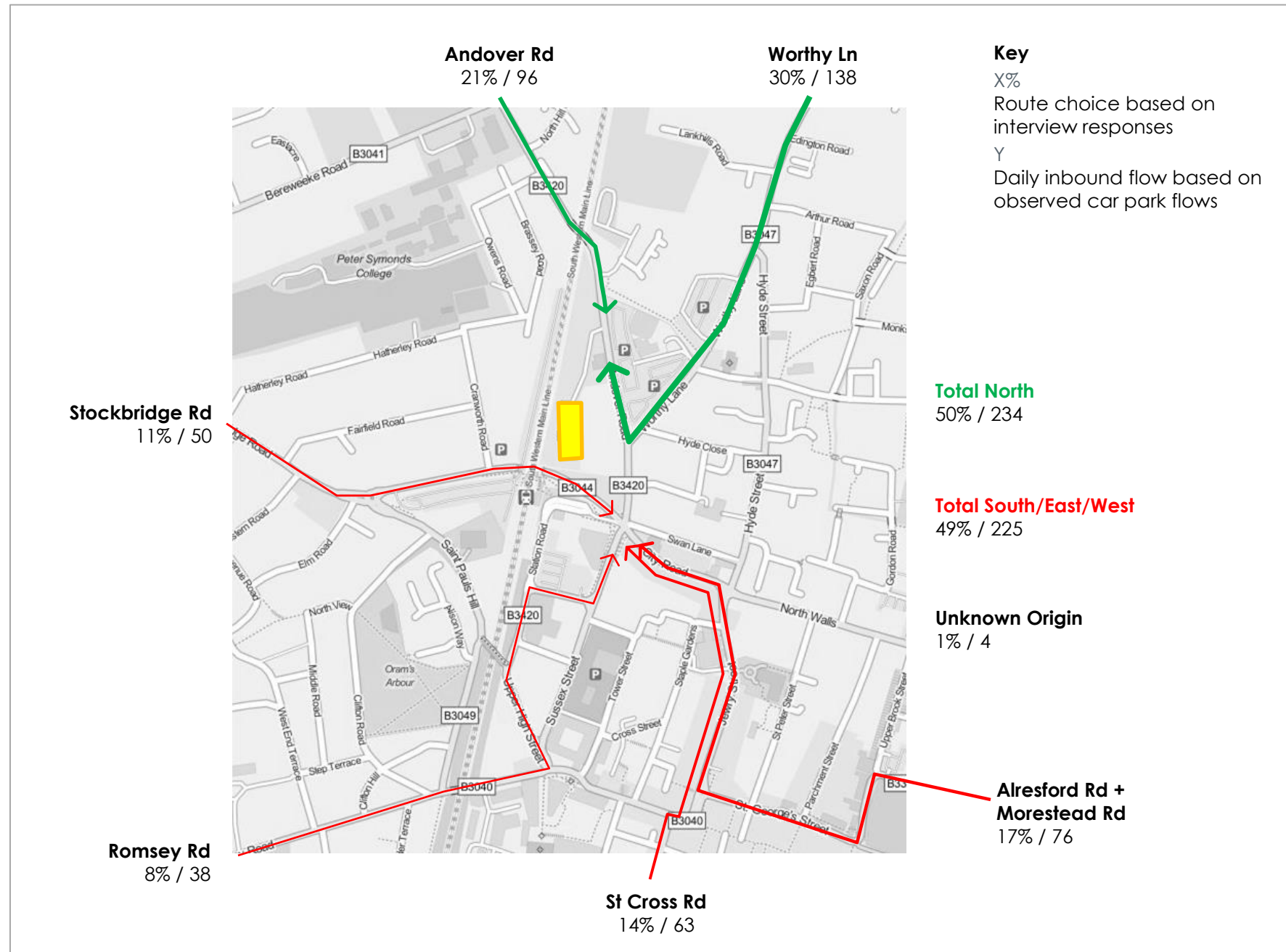
- Worthy Lane shows a similar pattern to Cattle Market - approximately 43% of drivers using the car park arrive from the north or north-east. Despite its location at the northern edge of the city centre, about a third of users have travelled from the south and have passed through the city centre to reach it.

Route Analysis – Weekday Cattle Market, Coach Park & Worthy Lane



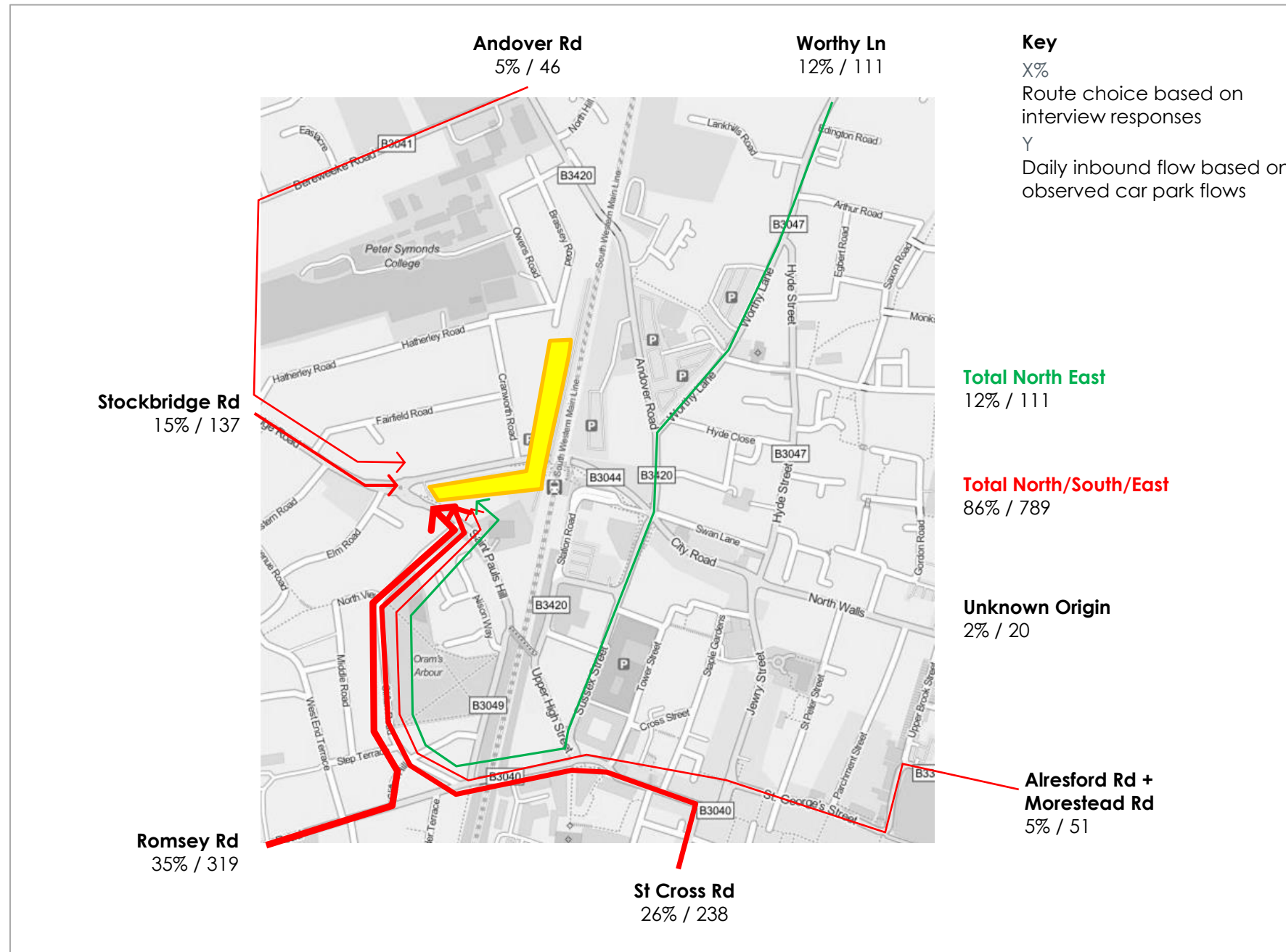
- The estimated access routes for Cattle Market, Worthy Lane and Coach Park have been combined to investigate the scale of movement through the City Road junction.
- Overall it is estimated that over 1,200 vehicles are travelling north through the City Road junction every day (northbound to access, southbound to egress).

Route Analysis – Weekday Station East



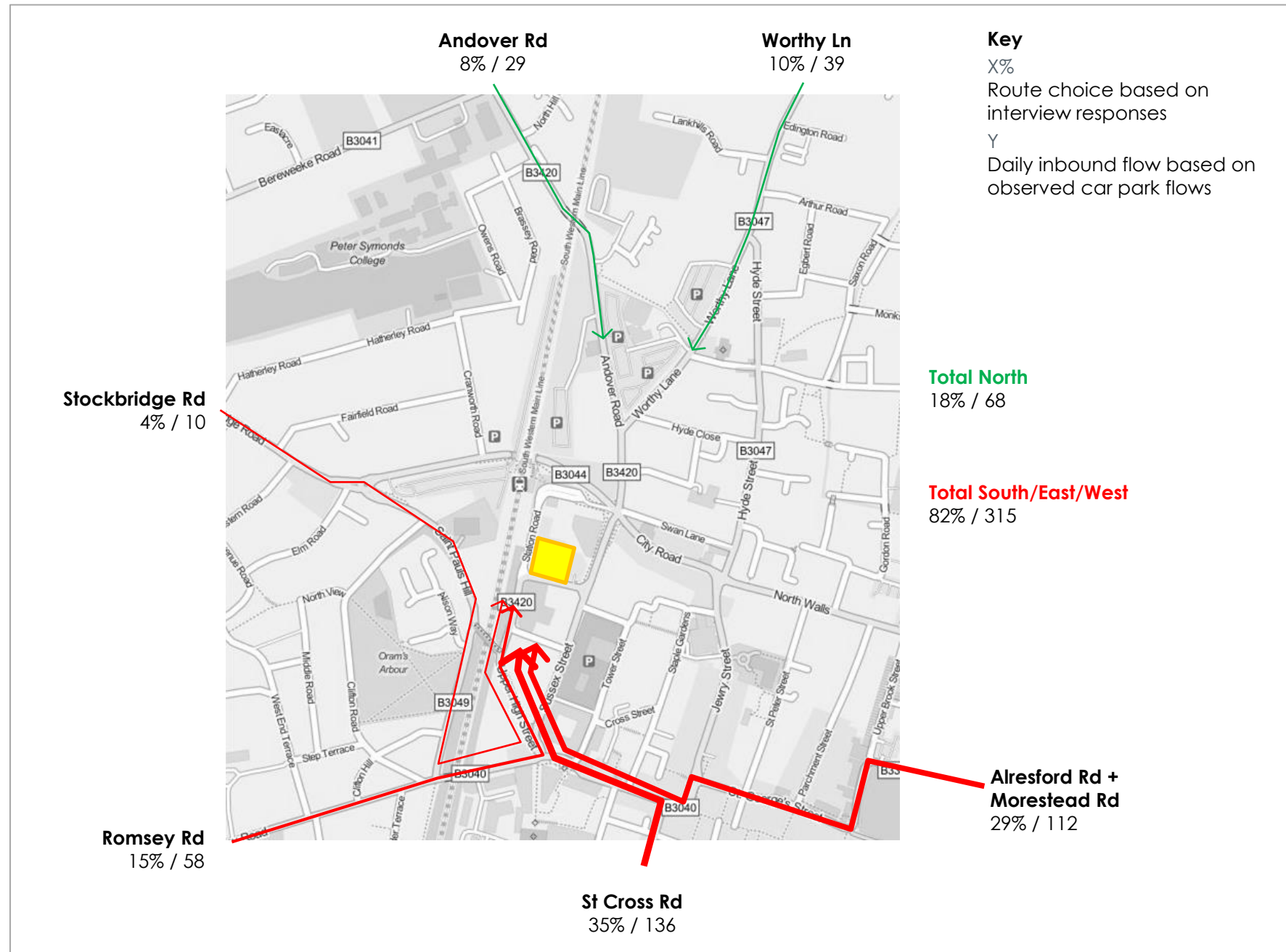
- Access routes to the car park on eastern side of the rail line (accessed off Andover Road) shows a balanced split between northern access and eastern/southern/western access. Given the rail station's extensive rural catchment, the distribution of other major settlements nearby and the location of motorway junctions this appears reasonable.

Route Analysis – Weekday Station West



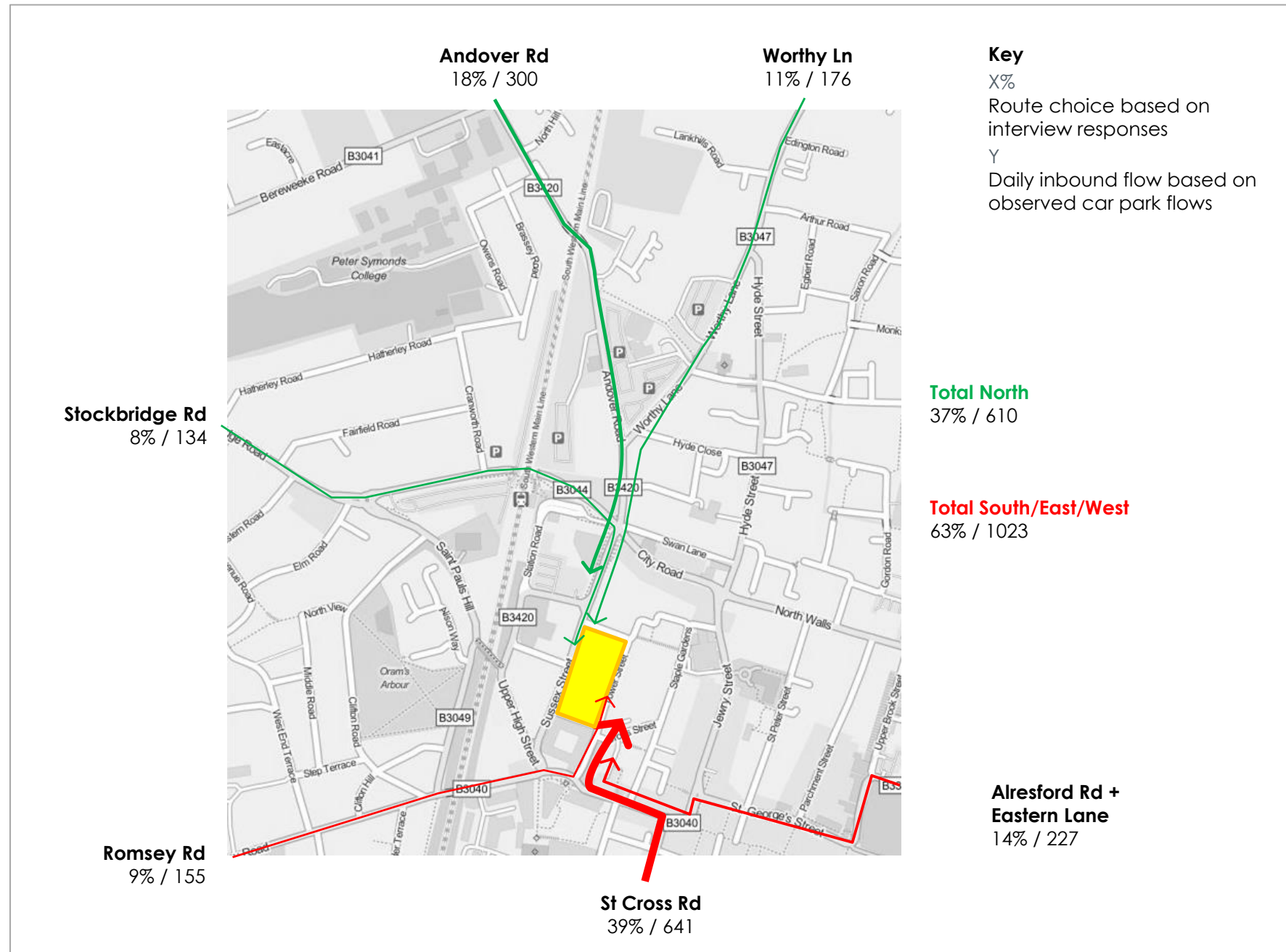
- Access routes to the car park on western side of the rail line (accessed off Stockbridge Road) show a different pattern to the eastern car park. Because of banned movements at the key City Road junction, routes to Stockbridge can require diversions away from the Andover Road / Sussex Street corridor that benefits some directions compared to others – this is particularly the case for Romsey Road.

Route Analysis – Weekday Gladstone St



- Similar to the Station West car park there is a strong bias to southern / western access routes to the car park. Based on the typical stay duration, the car park is used by a lot of rail commuters; many travelling from the north / north-east are likely to be choosing the Station East car park in preference as it intercepts them away from the city centre.

Route Analysis – Weekday Tower St

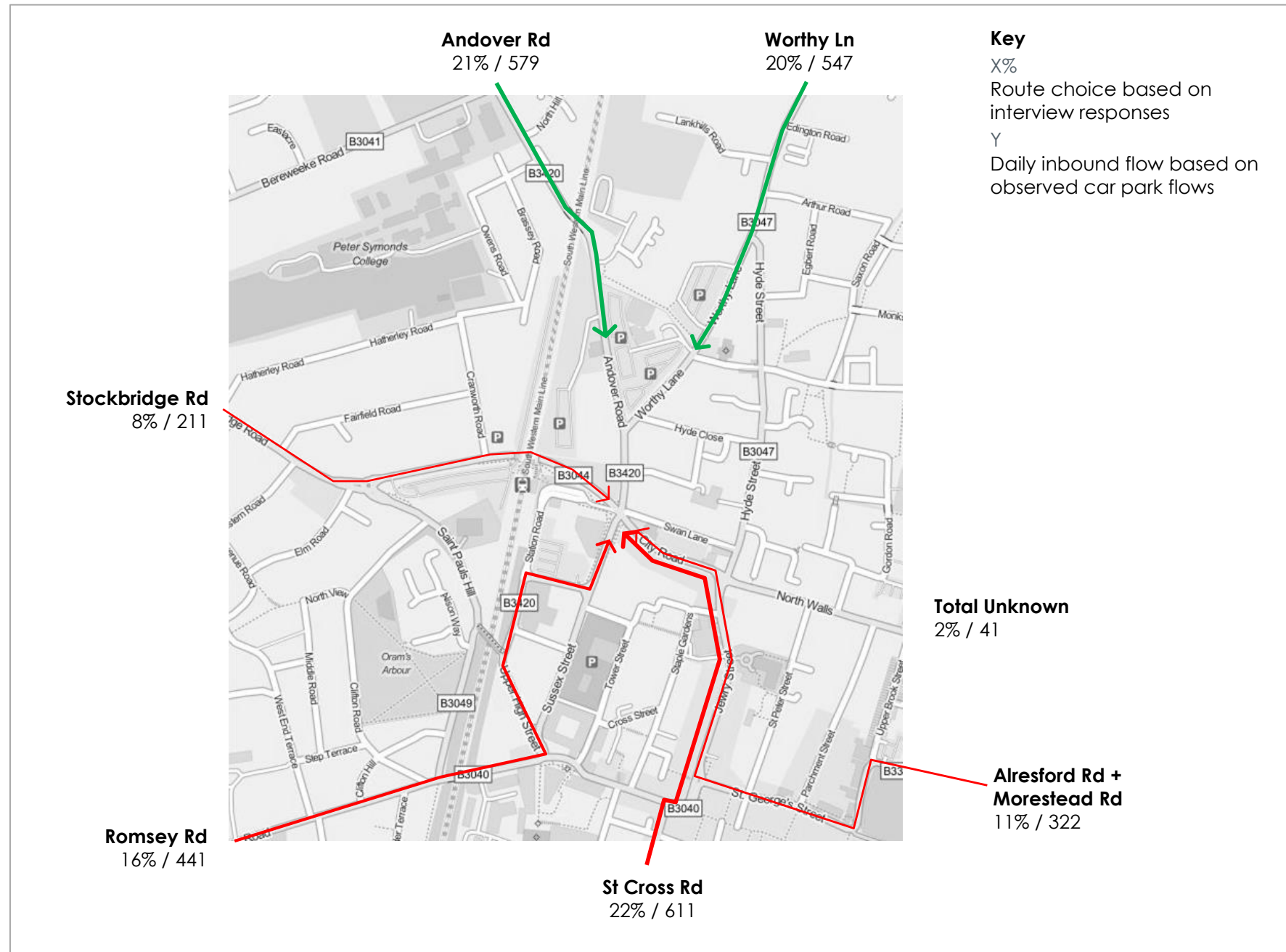


- The Tower Street access splits are generally consistent with the other non-rail car parks with a strong southerly bias and a spread across other directions.

Route Analysis - Saturday

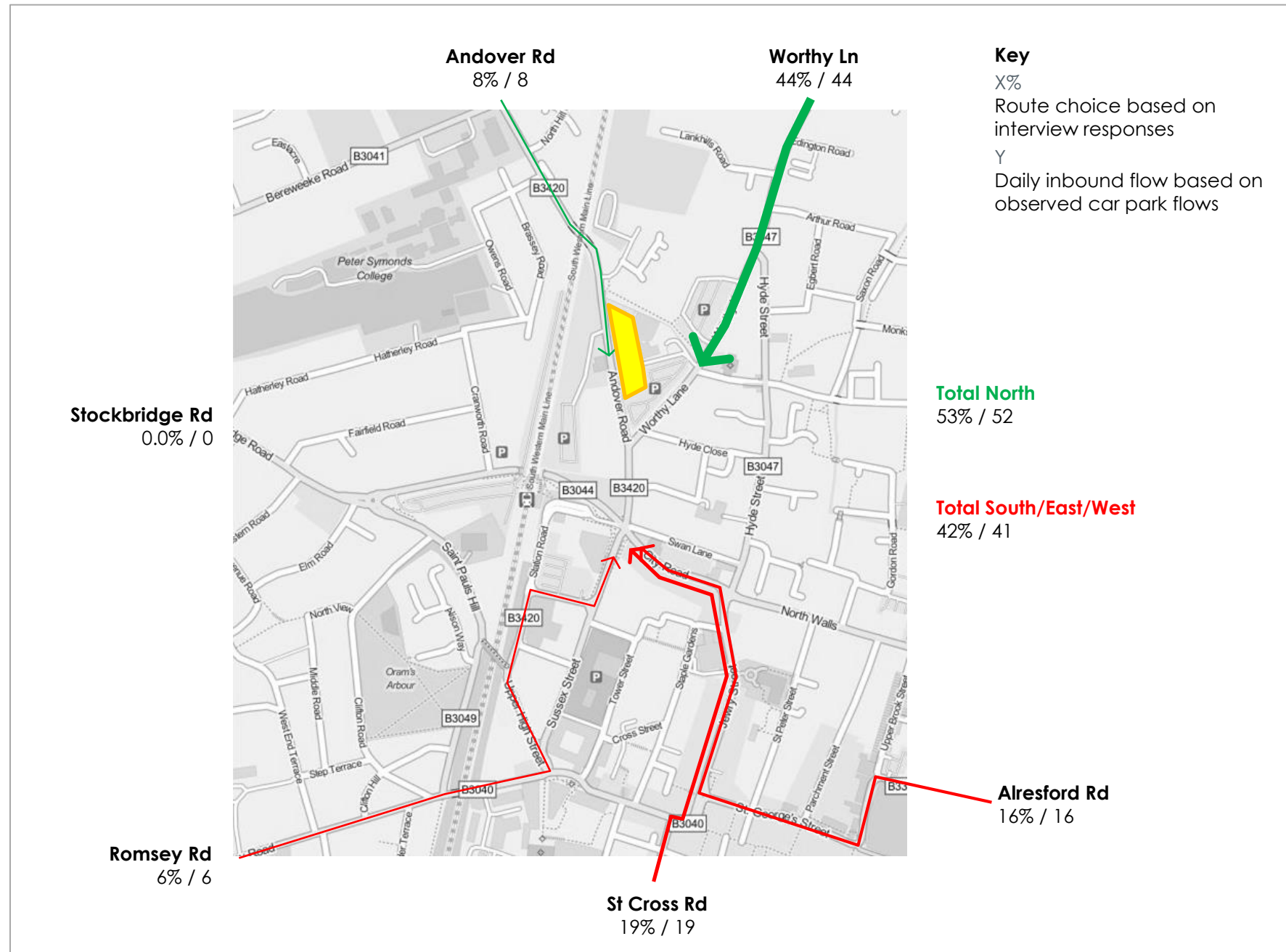


Route Analysis – Saturday All Car Parks



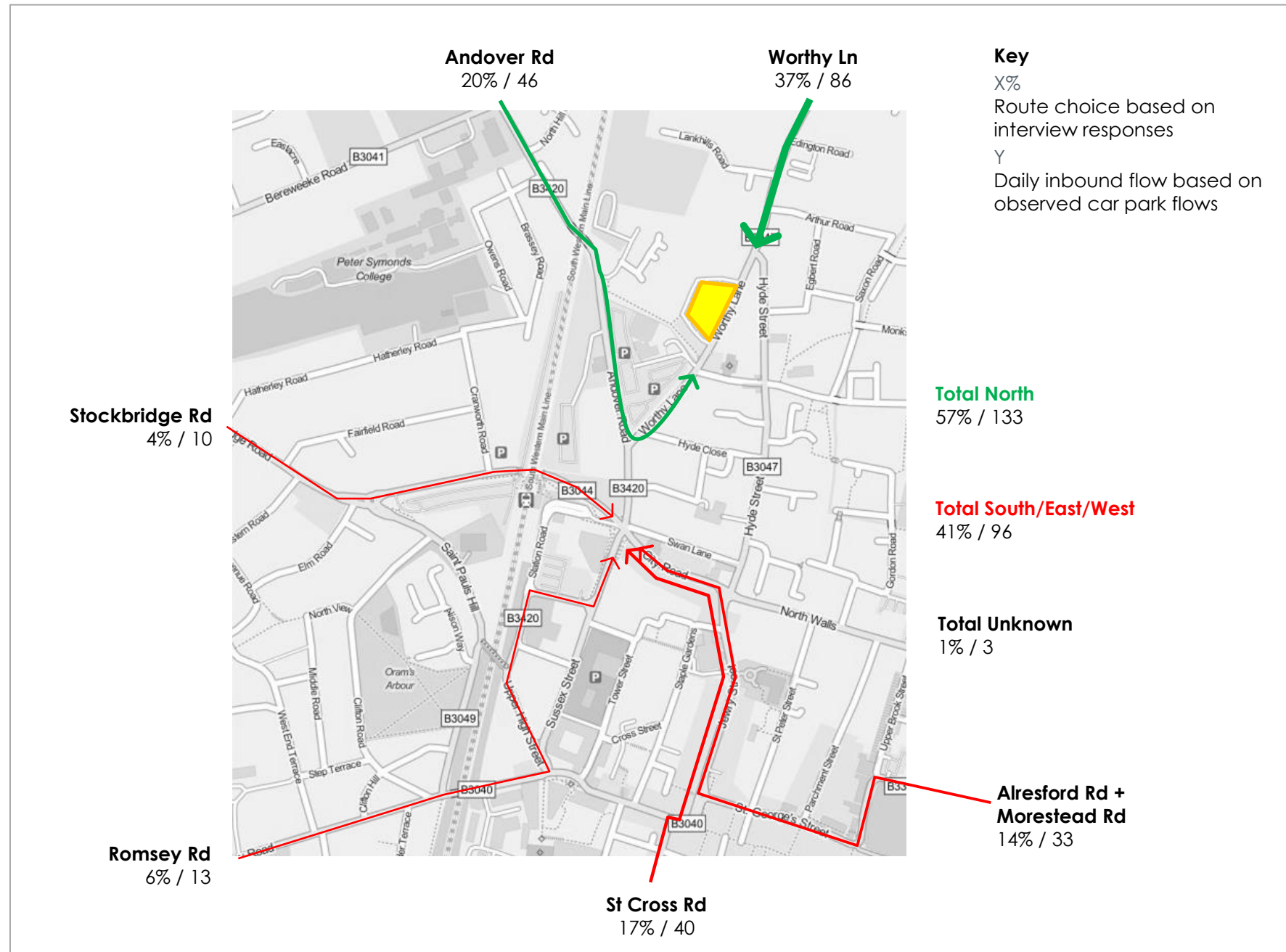
- Unlike weekdays where there is a bias towards southern access via St Cross Road, the Saturday data shows a broad balance across directions.
- Estimated total daily car park flows range between 211 (Stockbridge Road) and 611 (St Cross Road) – with other routes seeing between approximately 300 and 600 vehicles.

Route Analysis – Saturday Cattle Market



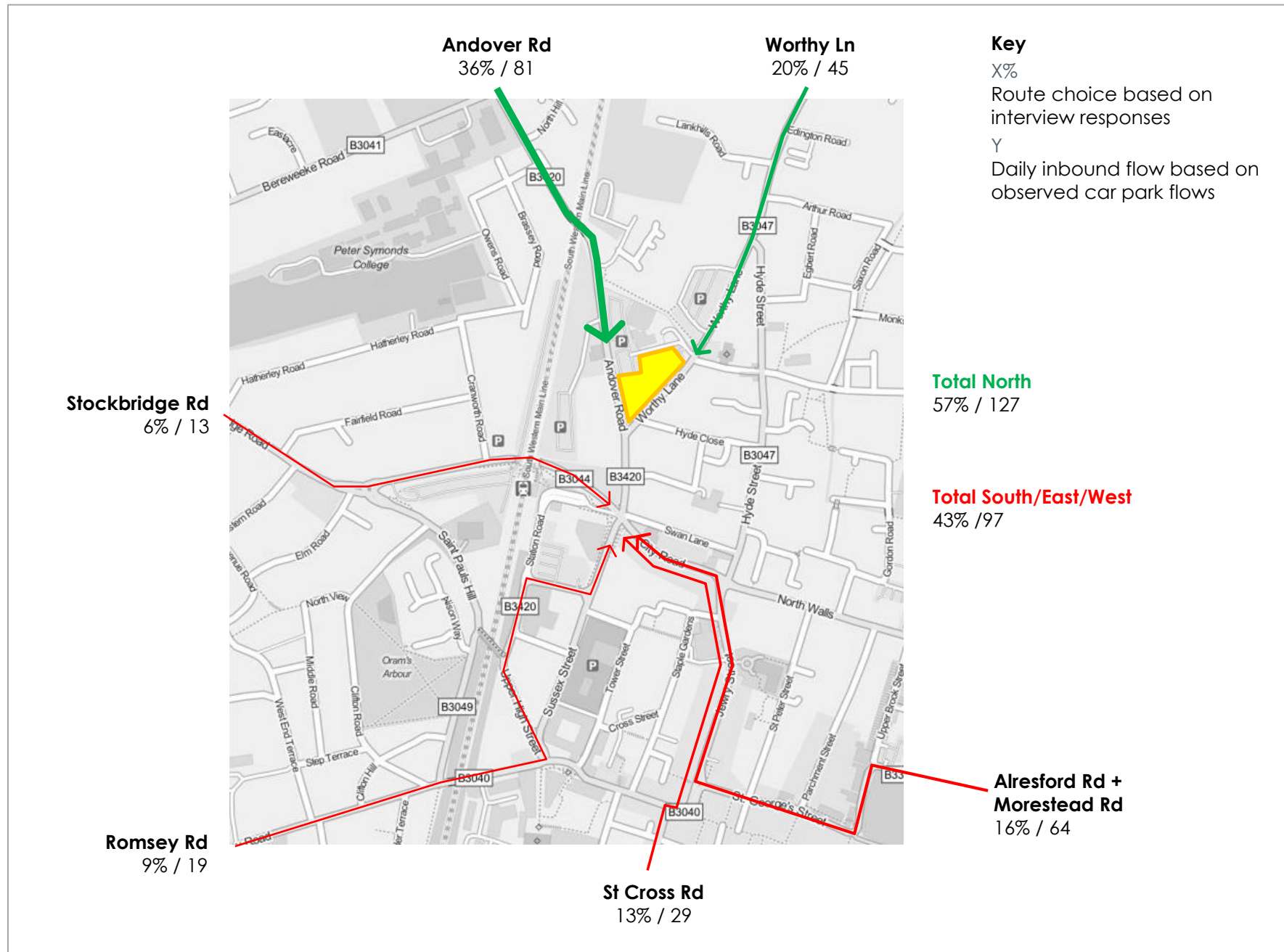
- The very low usage of Cattle Market car park on Saturday means the estimated access splits are liable to sample response bias. Overall there are just under 100 trips to the car park across the whole day.

Route Analysis – Saturday Coach Car Park



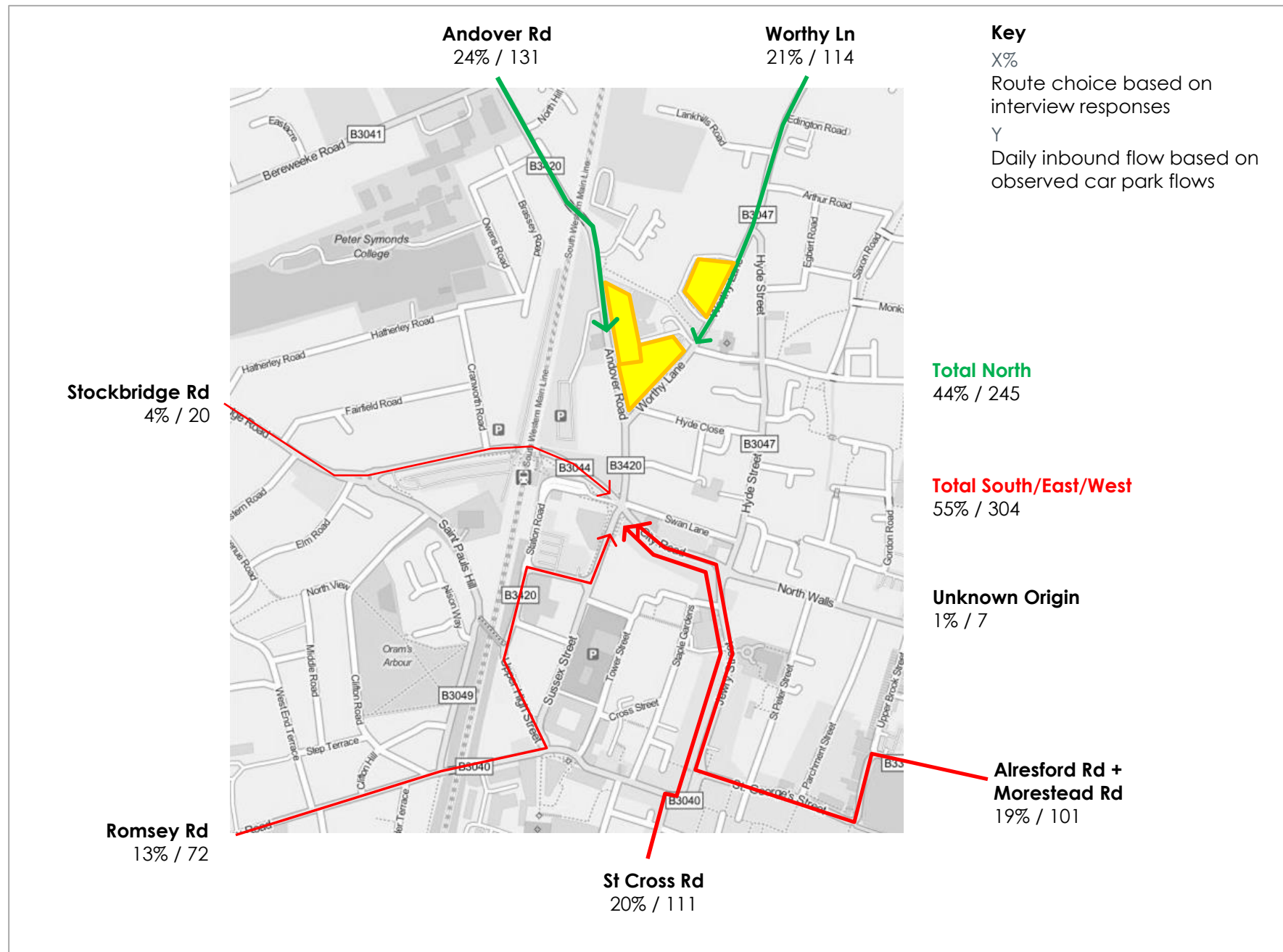
- Approximately 57% of drivers using the Coach Park car park arrive from the north or north-east. Despite its location at the northern edge of the city centre, nearly half of car park users have travelled from the south or east and have passed through the city centre to reach it.
- Whilst there are other car parks close to the city centre that have spaces, the interviews responses for car park choice (page 36) indicates that the availability of a parking space at Coach Park is an important consideration.

Route Analysis – Saturday Worthy Lane



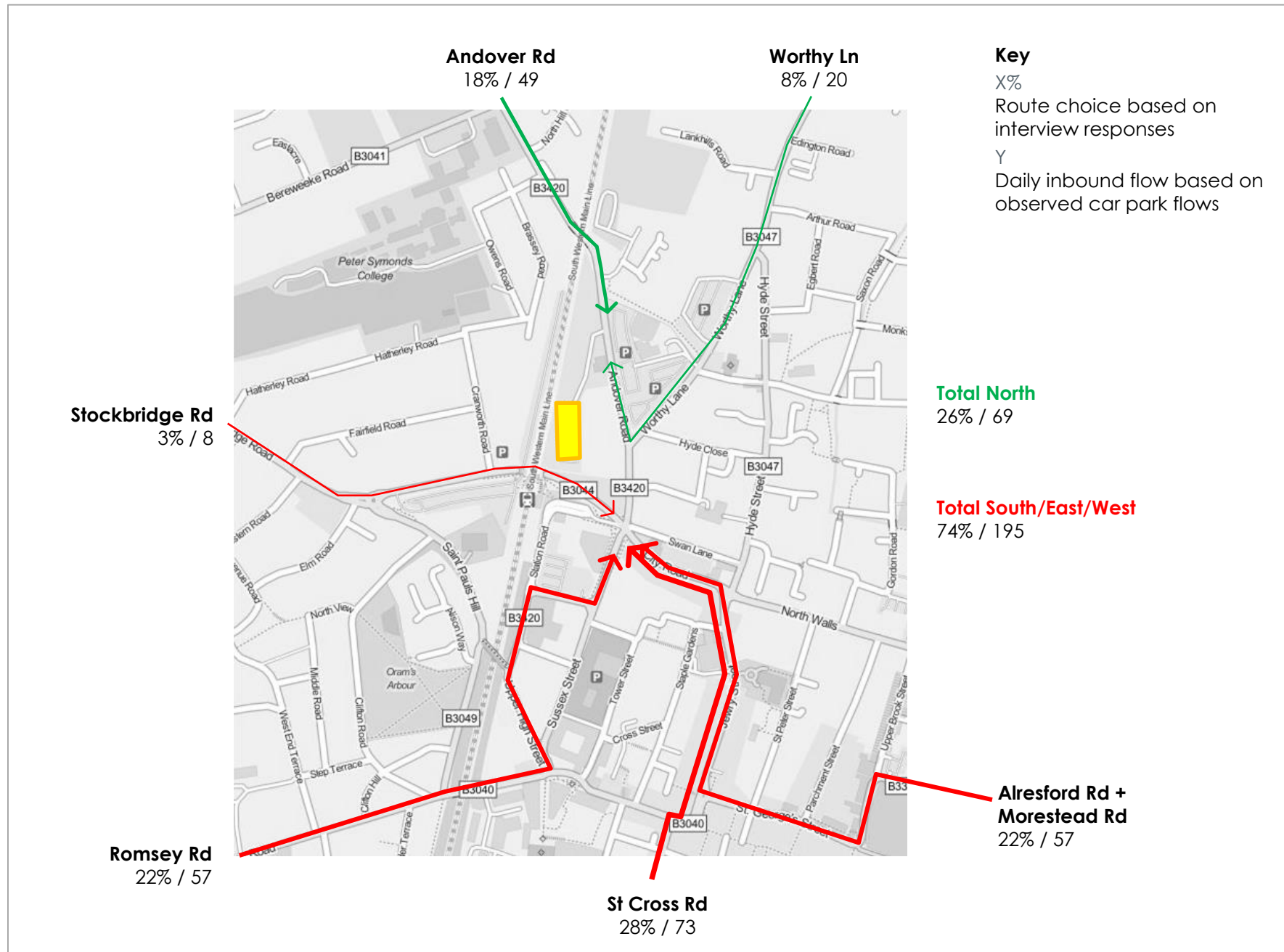
- Worthy Lane shows a similar pattern to Coach Park - approximately 57% of drivers using the car park arrive from the north or north-east. Despite its location at the northern edge of the city centre, over a third of users have travelled from the south and have passed through the city centre to reach it.

Route Analysis – Saturday Cattle Market, Coach & Worthy Lane



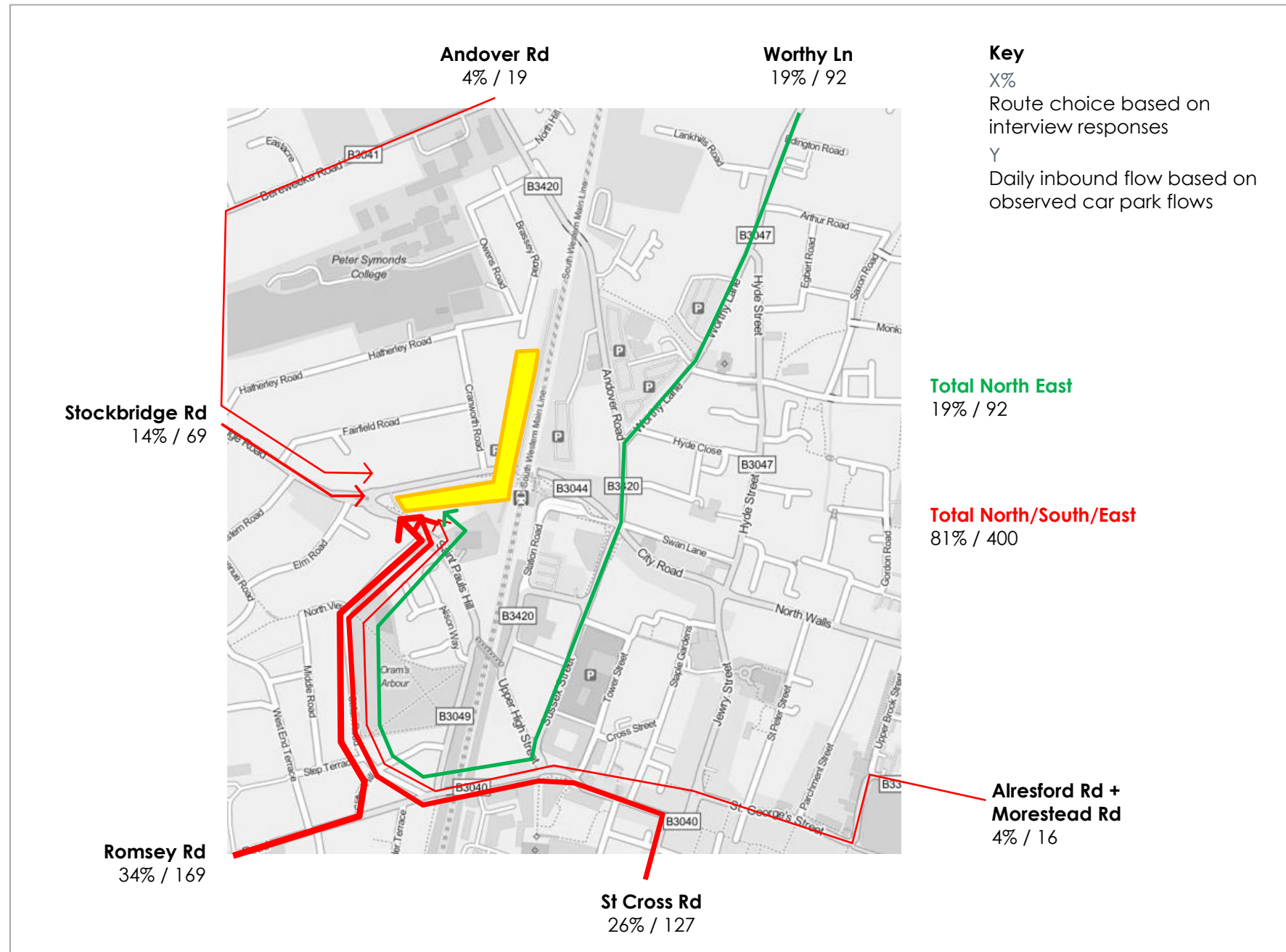
- The estimate access routes for Cattle Market, Worthy Lane and Coach Park have been combined to investigate the scale of movement through the City Road junction.
- Overall it is estimated that over 600 vehicles are travelling north through the City Road junction on a Saturday (northbound to access, southbound to egress). This is less than a weekday, and is attributed to parking spaces being available in other more southerly car parks, notably Tower Street.

Route Analysis – Saturday Station East



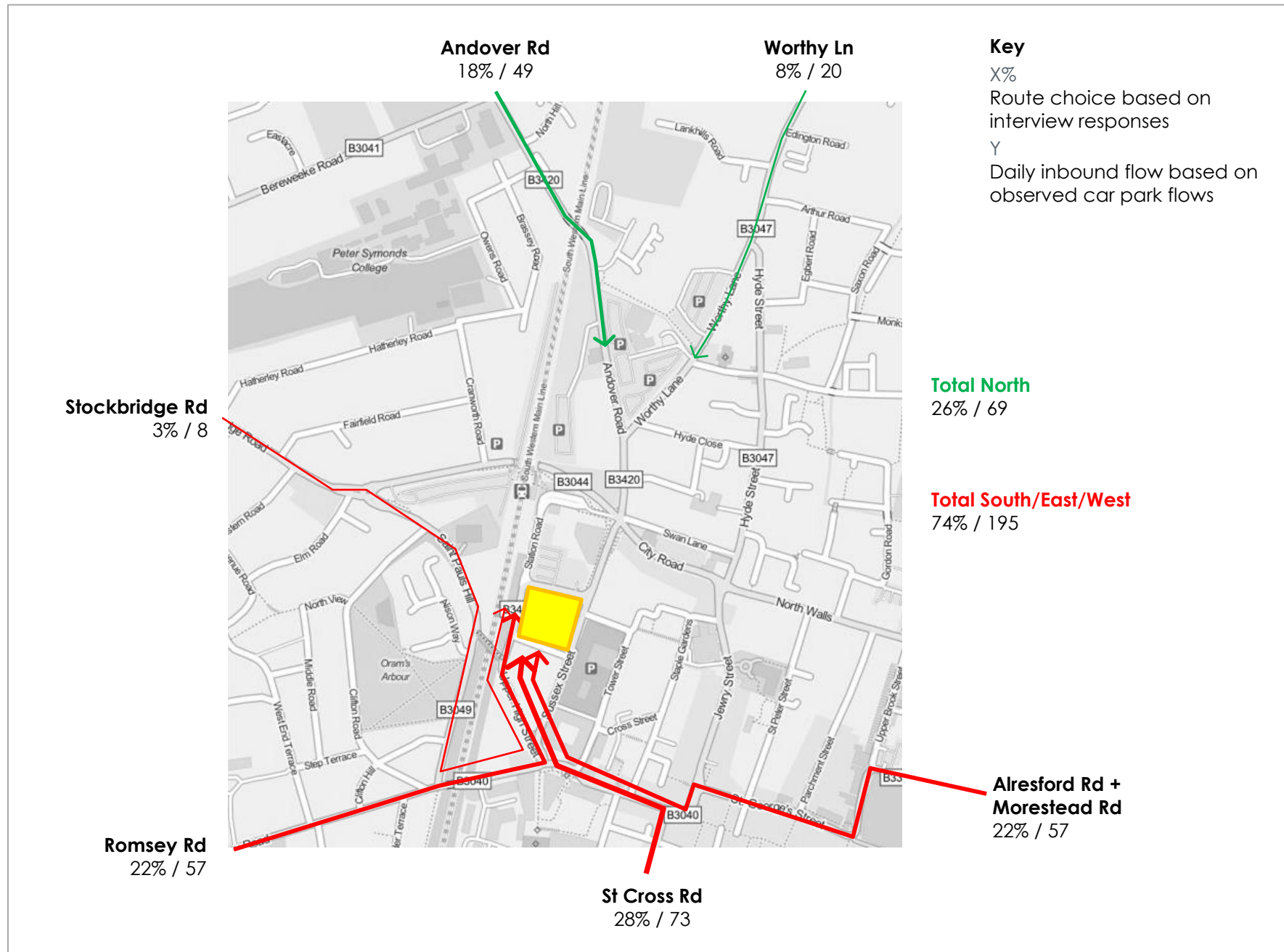
- Access routes to the car park on eastern side of the rail line (accessed off Andover Road) shows a strong bias towards eastern/southern/western access. This is different to the weekday data suggesting that the distribution of weekend leisure rail travellers is different to weekday commuters,

Route Analysis – Saturday Station West



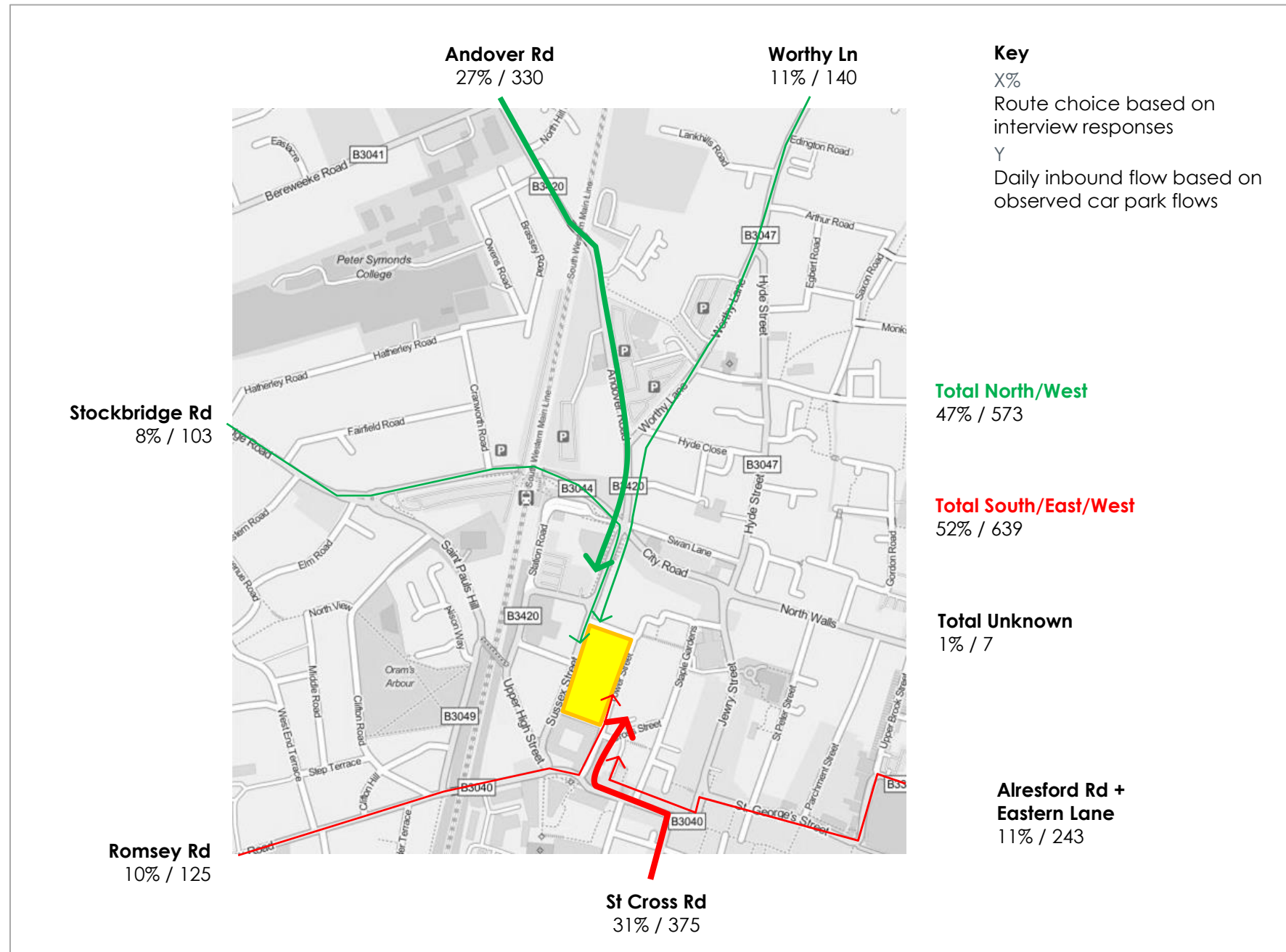
- Access routes to the car park on western side of the rail line (accessed off Stockbridge Road) show a different pattern to the eastern car park. Because of banned movements at the key City Road junction, routes to Stockbridge can require diversions away from the Andover Road / Sussex Street corridor that benefits some directions compared to others – this is particularly the case for Romsey Road.

Route Analysis – Saturday Gladstone St



- Similar to the Station West car park there is a strong bias to southern / western access routes to the car park. Based on the typical stay duration, a reasonably large proportion of people using the car park are likely to be rail travellers; many travelling from the north / north-east are likely to be choosing the Station East car park in preference as it intercepts them away from the city centre.

Route Analysis – Saturday Tower St



- The Tower Street access splits are generally consistent with the other non-rail car parks with a southerly bias via St Cross Road, a northerly bias via Andover Road and a spread of other directions.

| Quality Control | |
|-----------------|----------------------------|
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