

# Appendix 4

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AECOM Report



# Park Street Multi-Storey Car Park, Cambridge

## Technical Note: Advice regarding redevelopment of multi-storey car park

May 2015

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## List of Acronyms

CCC	Cambridge City Council
MSCP	Multi-Storey Car Park
P&D	Pay and Display
P&R	Park and Ride

# 1 Introduction

## 1.1 Brief

AECOM Infrastructure & Environment UK Limited has been commissioned by Bidwells LLP to provide transport planning advice in respect of the potential redevelopment of Park Street Multi-Storey Car Park (MSCP) in Cambridge.

Specifically, AECOM have been instructed to provide a qualitative appraisal of the likely short and long-term impacts of three redevelopment options, as detailed below, upon the existing highway and transport networks in Cambridge to inform Bidwells' report to Cambridge City Council.

- **OPTION ONE** A refurbished multi-storey car park – Retention of the car park in its current form, subject to a programme of repair and refurbishment and retaining the existing cycle parking and public conveniences facilities. It is understood that for this option the capacity of the refurbished car park will be in line with the current number of spaces (i.e. 390 spaces).
- **OPTION TWO** Demolition and reconstruction of the multi-storey car park - Demolition of the existing multi-storey car park, to be replaced with an improved new multi-storey car park and replacing the existing cycle parking and ground level accessible public conveniences with equivalent facilities within the original footprint of the site. It is understood that the capacity for this option will be a minimum of 250 public spaces (understood to be aspiration for circa 300-350 spaces).
- **OPTION THREE** Redevelopment of the site for a) residential, b) commercial or c) a mixed-use development, to include an underground public car park - Consider as separate sub-options the alternative ways for redeveloping the site for residential, commercial or a mixed-use to include a public car park, and replacing the existing cycle parking and ground level accessible public conveniences with equivalent facilities within the original footprint of the site. It is understood that the capacity for this option will be a minimum of 250 public spaces (understood to be aspiration for circa 250-300 spaces).

The appraisal has been informed by a review of the previous Bidwells' report 'Park Street Multi-Storey Car Park - Consultancy Report' dated May 2012 and undertaken with cognisance to car park usage data and public consultation feedback provided by Cambridge City Council.

The scope of this technical note is limited to a qualitative appraisal of the likely short and long-term impacts of the proposals upon the existing highway and transport networks in Cambridge associated with each redevelopment option. It is based upon existing observed parking demand within the City Centre and does not seek to forecast future changes in parking demand. The scope of this technical note does not incorporate a detailed assessment of network capacity or an assessment of the likely impact of each option upon car park revenues.

## 1.2 Park Street Multi-Storey Car Park

Park Street MSCP is located within the historic core of Cambridge City Centre and provides a total of 390 car parking spaces and 282 covered cycle parking spaces at ground floor level. Park Street is a no-through road for private vehicles and the street is only used to provide access to the Car Park. Park Street is accessed via Jesus Lane which links the site with the highway network north of the River Cam via Victoria Avenue and Maids Causeway/Newmarket Road to the east. Traffic controls within the historic core and the location of the River Cam means that Park Street MSCP can only be accessed from the north-west and north of the City by travelling via the A1303 Chesterton Road and Victoria Avenue.

Park Street MSCP is the closest and most convenient car park and is an important facility for independent retailers in the immediate area and for restaurants and pubs situated on Bridge Street and along Riverside, used by visitors for shopping, leisure facilities and for other City Centre services. Although there are various modes of public transport enabling access to the City Centre, including Park & Ride, Guided Bus and other bus routes, the car park is considered to be of importance given the shortage of alternative parking facilities in close proximity and the relatively large percentage of spaces the car park provides within the historic core.

## 2 Car Park Usage

### 2.1 Overview

Cambridge City Council (CCC) operates five Multi-Storey Car Parks (MSCPs) within the City Centre of which Park Street is the only car park located north of the Market Square within the historic core of the City. The only other car park located within the area loosely defined as the 'historic core' is the Grand Arcade MSCP. CCC also operates the Adam & Eve and Castle Hill surface Pay and Display (P&D) car parks within a 1.5 kilometre radius of Park Street. Table 2-1 identifies the alternative City Centre car parks available to drivers, their capacity, average weekly usage and relative distance from Park Street.

Car Park	City Centre 'Area'	Capacity (No. spaces)	Average Weekly Usage (Vehicles) 2014/15	Distance from Park Street (km)
Park Street	Historic Core	390	6,522	-
Grand Arcade	Historic Core	953	20,134	0.6km
Grafton East	Fitzroy-Burleigh	874	8,397	1.1km
Grafton West	Fitzroy-Burleigh	280	5,830	0.9km
Queen Anne Terrace	Fitzroy-Burleigh	570	6,436	1.5km
Adam & Eve P&D	Fitzroy-Burleigh	50	1,315	1.5km
Castle Hill P&D	Outside Centre	115	945	0.9km

Table 2-1. Cambridge City Centre Car Parks

Park Street MSCP comprises approximately 12% of the total spaces operated by CCC within the City Centre and circa 30% of the total spaces within the historic core itself. During the year 2014/15 Park Street comprised approximately 13% of the total average weekly usage of car parking capacity in the City Centre, consistent with its level of provision of car parking spaces. Park Street comprised approximately 25% of the total average weekly usage of car parking capacity within the historic core during the 2014/15 period, slightly lower than its level of provision of car parking spaces, relative to the Grand Arcade MSCP, which is the largest and most well used car park in Cambridge, reflecting its proximity to the prime shopping area in the City.

### 2.2 Car Park Occupancy

Car park occupancy figures provided by CCC for City Centre car parks have been analysed and the maximum weekday and weekend occupancy rates observed for each car park for the surveyed weeks during February, July, October and December 2014 are summarised in Tables 2-2 and 2-3 below.

Car Park	Capacity (No. spaces)	Maximum Weekday Occupancy (% of total capacity)			
		February 2014	July 2014	October 2014	December 2014
Park Street	390	57%	74%	53%	91%
Grand Arcade	953	75%	81%	91%	97%
Grafton East	874	34%	39%	34%	62%
Grafton West	280	60%	70%	78%	93%

Car Park	Capacity (No. spaces)	Maximum Weekday Occupancy (% of total capacity)			
		February 2014	July 2014	October 2014	December 2014
Queen Anne Terrace	570	62%	68%	68%	80%

Table 2-2. Maximum Weekday Car Park Occupancy Rates

Car Park	Capacity (No. spaces)	Maximum Weekend Occupancy (% of total capacity)			
		February 2014	July 2014	October 2014	December 2014
Park Street	390	92%	93%	90%	97%
Grand Arcade	953	83%	95%	95%	95%
Grafton East	874	73%	72%	90%	89%
Grafton West	280	91%	93%	90%	96%
Queen Anne Terrace	570	87%	84%	84%	80%

Table 2-3. Maximum Weekend Car Park Occupancy Rates

The observed occupancy data indicates that during a typical weekday Park Street and the remaining City Centre MSCPs are generally likely to have spare capacity at any point during the day. Grand Arcade tends to operate with the highest occupancy levels during a typical weekday, approaching capacity at peak times.

The observed occupancy data indicates that during a typical weekend Park Street, Grand Arcade and Grafton West MSCPs are likely to operate with the highest occupancy levels, approaching capacity at peak times. Grafton East and Queen Anne Terrace MSCPs are generally likely to have spare capacity during a typical weekend.

Occupancy profiles for a typical week during February, July, October and December 2014 for each of the MSCPs identified above are illustrated by Figures 2-1 to 2-5 below.

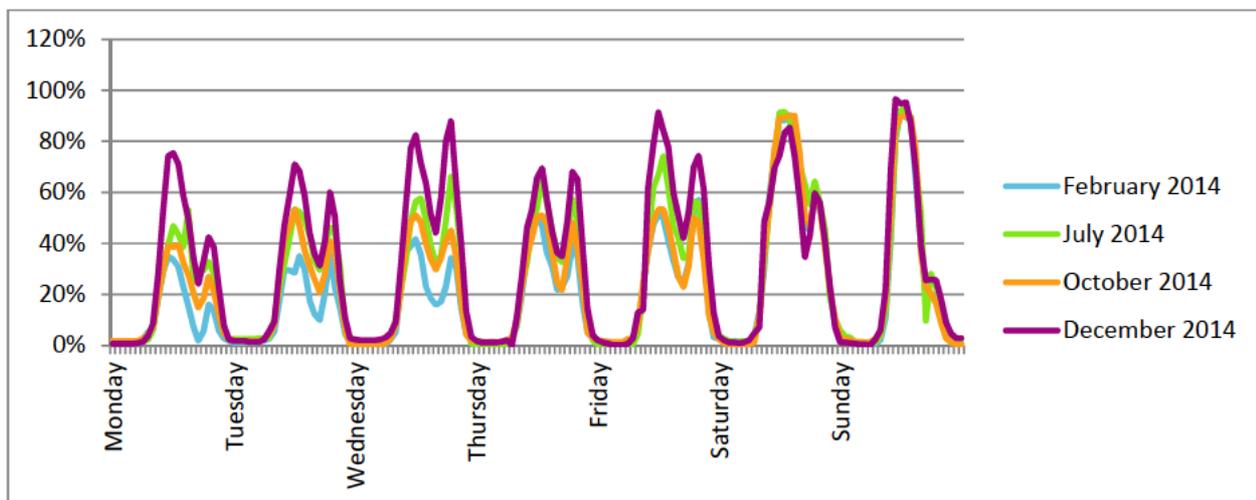


Figure 2-1. Park Street Occupancy Profile

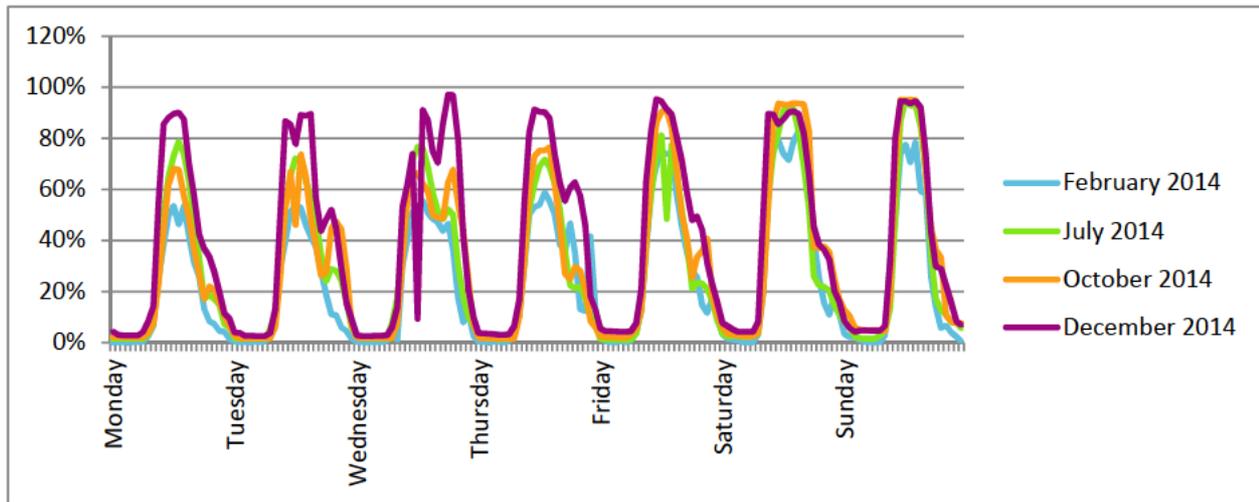


Figure 2-2. Grand Arcade Occupancy Profile

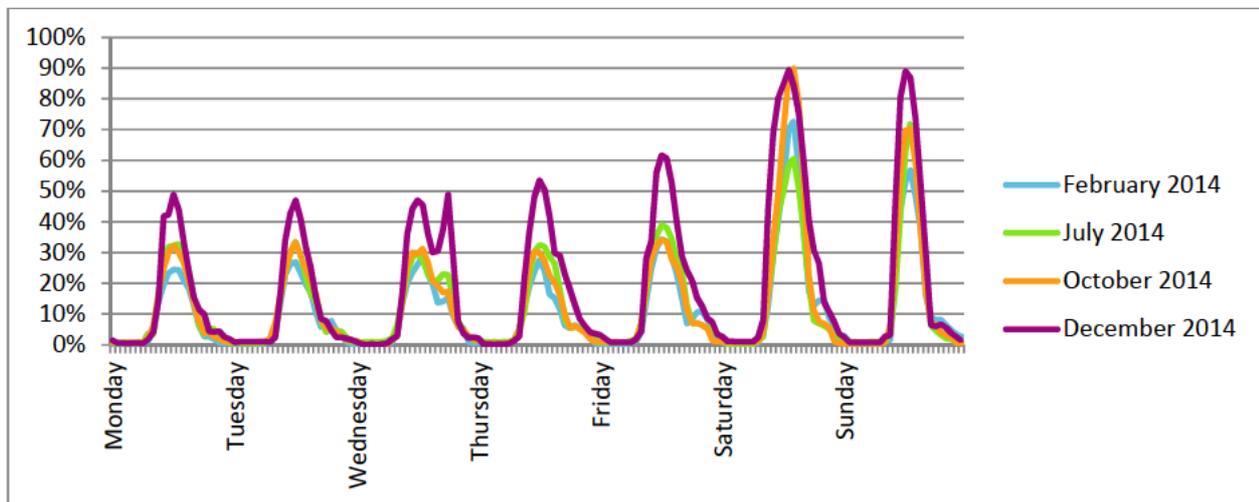


Figure 2-3. Grafton East Occupancy Profile

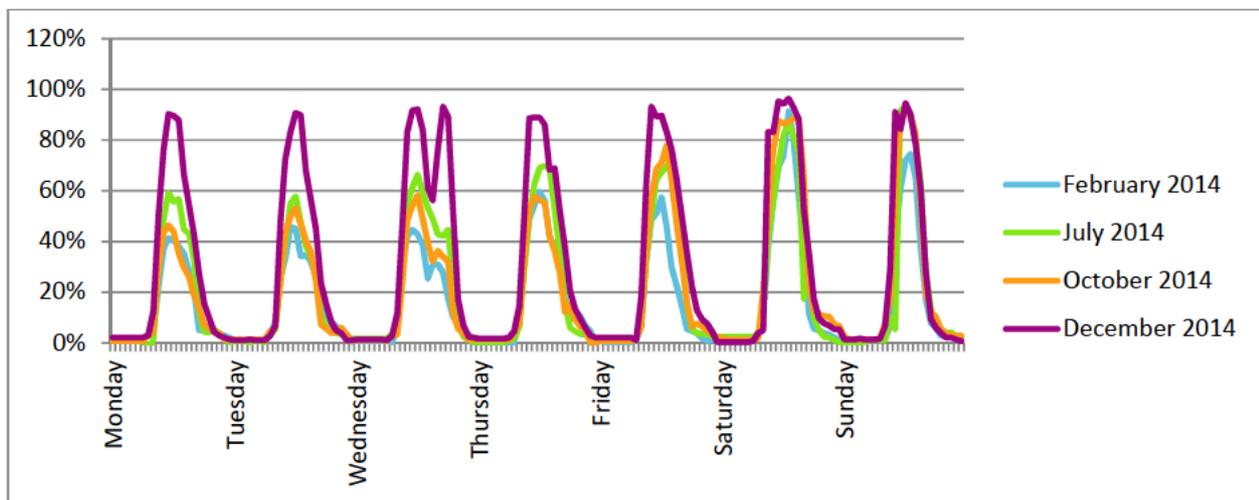


Figure 2-4. Grafton West Occupancy Profile

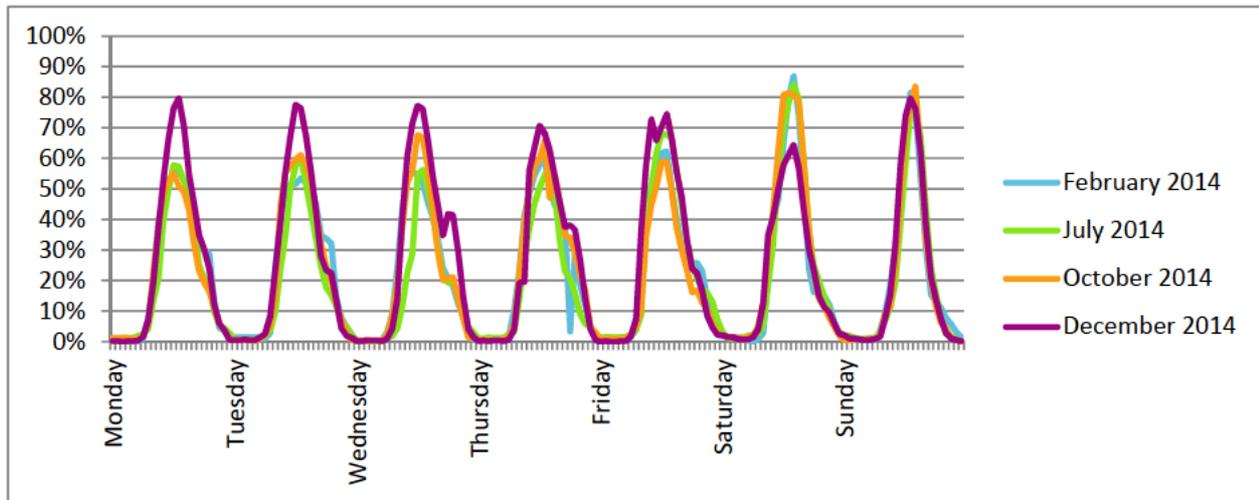


Figure 2-5. Queen Anne Terrace Occupancy Profile

### 2.3 Average Length of Stay

The average length of stay at each of the MSCPs has been obtained from the CCC usage data and is set out in Table 2-4 below.

Car Park	Short/Long Stay	Average Length of Stay (Minutes) 2014/15	Average Length of Stay (Minutes) 2013/14
Park Street	Short-Stay Parking	144	142
Grand Arcade	Short-Stay Parking	136	133
Grafton East	Short-Stay Parking	129	125
Grafton West	Short-Stay Parking	97	95
Queen Anne Terrace	Long-Stay Parking	191	189
All MSCPs	-	139	136

Table 2-4. Average Length of Stay

## 3 Sustainable Transport

### 3.1 Mode Choice

A very high percentage of Cambridge's population chooses sustainable travel modes over the private car when compared to the East of England and England statistics. The 2011 census data (Table 3-1) demonstrates that approximately 62% of the resident population in Cambridge chose methods of travel other than the private car, compared to 59% in 2001 (Table 3-2). Similarly, 44.5% of the daytime population in 2001 (Table 3-3) chose sustainable travel options. Comparative daytime population data for 2011 is not currently available.

When compared to the East of England and National figures, the Census data indicates that the provision of public transport links and cycle facilities within Cambridge and the general awareness and uptake of travel alternatives to the private car by the local population is strong within the City and surrounding area.

Mode	Market Ward	Cambridge District	East of England	England
Driving a car or van	19.5%	33.8%	65.4%	60.2%
Bus, train, motorcycle, taxi etc	14.1%	12.7%	13.3%	18.4%
Bicycle	30.4%	31.9%	3.7%	3.1%
On foot	33.5%	16.9%	10.7%	11.3%
Other	1.0%	0.6%	0.7%	0.7%

Table 3-1. 2011 Method of Travel to Work – Resident Population

Mode	Market Ward	Cambridge District	East of England	England
Driving a car or van	26.3%	41.0%	65.0%	60.5%
Bus, train, motorcycle, taxi etc	12.0%	15.0%	20.2%	24.9%
Bicycle	23.8%	28.3%	4.3%	3.1%
On foot	36.8%	15.3%	10.0%	11.0%
Other	1.1%	0.4%	0.5%	0.5%

Table 3-2. 2001 Method of Travel to Work – Resident Population

Mode	Market Ward	Cambridge District	East of England	England
Driving a car or van	39.1%	55.5%	68.6%	60.6%
Bus, train, motorcycle, taxi etc	26.9%	16.8%	15.5%	24.9%
Bicycle	21.7%	18.1%	4.7%	3.1%
On foot	12.1%	9.3%	10.9%	11.0%
Other	0.3%	0.3%	0.4%	0.4%

Table 3-3. 2001 Method of Travel to Work – Daytime Population

The opportunity for access to sustainable modes of transport is very high in Cambridge and provides both residents of and visitors to the City with a wealth of options as alternatives to the private car.

### 3.2 Walking and Cycling

Cycling is the number one choice for sustainable transport in Cambridge. Being a compact and flat city, cycling and walking are quick, cheap and pollution-free methods of travel. Cambridge has a network of dedicated cycle lanes throughout the city and has created a pleasant cycling environment with shared paths and a good level of facilities such as cycle parking and cycle training available through the Council.

### 3.3 Public Transport

#### 3.3.1 Park and Ride

Cambridge has five Park and Ride sites located around the City providing regular buses serving the City Centre as identified by Table 3-4 below.

Park & Ride Site	Maximum No. Car Parking Spaces
Babraham Road	1458
Madingley Road	930
Milton	792
Newmarket Road	Front 259 Back 614
Trumpington	1340

Table 3-4. Cambridge Park and Ride Sites

Weekly passenger information provided by CCC for the Park and Ride sites, representing a year on year comparison of passenger volumes for 2013 and 2014, has been analysed and is illustrated by Figure 3-1 below.

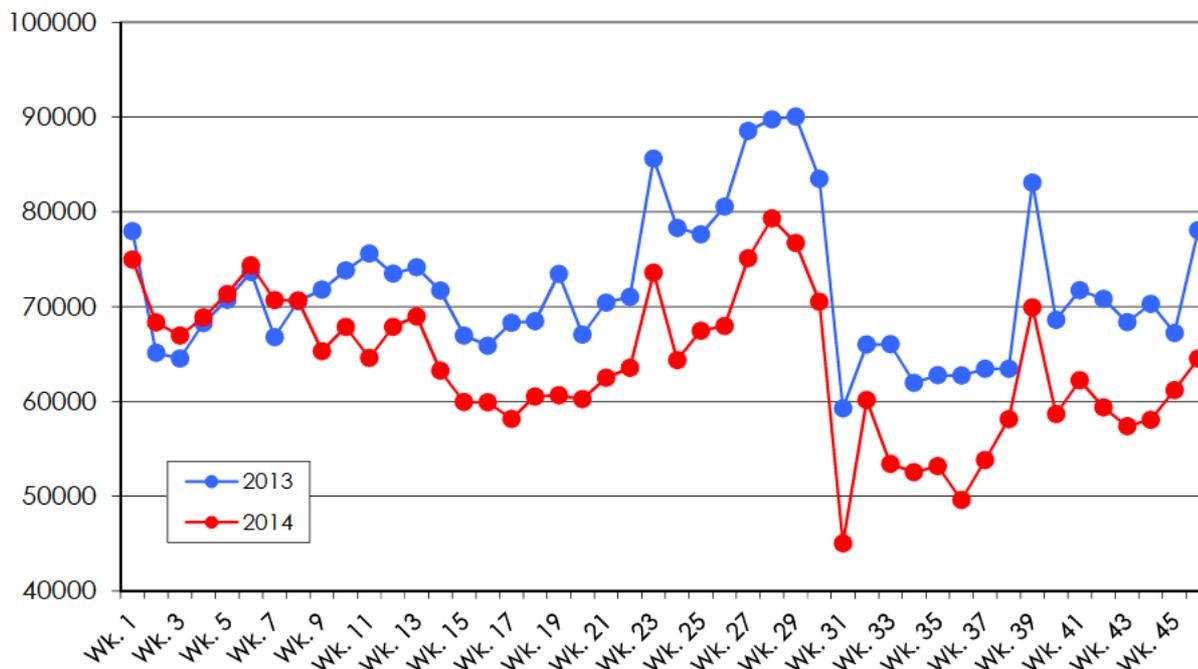


Figure 3-1. Cambridge Park and Ride - Year on Year Passengers

Figure 4-1 illustrates that passenger volumes on the Cambridge Park and Ride services appear to have fallen by an average of circa 8000 passengers per week for 2014 when compared to 2013. Cambridgeshire County Council introduced a £1 parking charge for Park & Ride car parks during 2014 and a corresponding 15% fall in passenger numbers has been widely reported.

The observed passenger data indicates that the existing Park and Ride services are currently operating with spare capacity.

### **3.3.2 The Busway**

The Cambridgeshire Guided Busway connects Cambridge to Huntingdon and St Ives. The Busway operates regular buses serving the City Centre from the north-west of the City. The Busway is served by three Park & Ride sites at Trumpington (see above), St Ives (500 spaces) and Longstanton (350 spaces). Car parking charges are due to be introduced at the Busway Park & Ride Sites from 14 May 2015, consistent with the charge already applied to Cambridge Park & Ride sites.

### **3.3.3 Bus Services**

Drummer Street Bus Station is located approximately 800m walking distance from Park Street and provides access to a range of regular bus services including the Cambridge Citi routes operated by Stagecoach. The provision of public transport services in Cambridge is very high and provides a viable alternative for both residents of and visitors to the City as an alternative to the private car.

## 4 Public Consultation Feedback

### 4.1 Overview

A public consultation exercise was undertaken by Cambridge City Council (CCC) between 18 August and 19 September 2014 regarding the future of Park Street Car Park. The consultation was conducted using an online survey, exhibitions, and printed questionnaires. A second online survey was carried out with members of the Cambridge Business Improvement District (CBID) to understand business perceptions in Cambridge of the impact of the proposed options.

CCC identified the key findings from the consultation as being that:

- A clear majority of responses preferred the option to replace the car park with a new underground car park with a mixed residential and/or commercial development above ground.

CCC identified the key findings from the analysis of respondent feedback as being:

- Important concerns exist, particularly from some businesses over the potential economic impact to them of a wholesale redevelopment of the site.
- Interim parking arrangements while works are undertaken for both car and cycle users will be a critical factor during any development or refurbishment period.
- The cycle parking facility is highly valued and there is a desire to increase its size.
- There is a desire to at least maintain, and ideally increase, the number of car parking spaces;
- There is also a desire to reduce the number of car park spaces or remove the car park entirely;
- The project offers the opportunity to improve the architecture/visual attractiveness of the area.

With respect to the scope of this appraisal the key finding is the confirmation that the provision of interim parking arrangements whilst works are undertaken is a concern for respondents to the survey.

### 4.2 Summary of Public Consultation Survey Responses

#### 4.2.1 How often do you visit Park Street Car Park?

Answer Options	Response Percent	Response Count
More than once a week	17.7%	145
Less than once a week	61.1%	499
Never	21.2%	173

#### 4.2.2 When you visit Park Street Car Park where are you travelling from?

Answer Options	Response Percent	Response Count
Within Cambridge city	47.0%	296
Within Cambridgeshire	45.2%	285
Outside Cambridgeshire	7.8%	49

#### 4.2.3 When you park in Park Street Car Park what is the purpose of your visit?

Answer Options	Response Percent	Response Count
Work/Study	18.6%	117
Shopping	32.4%	204
Leisure/Other	49.0%	308

#### 4.2.4 Which option for Park Street Car Park do you prefer?

Answer Options	Response Percent	Response Count
Repair existing car park	26.2%	195
Build a new above ground car park	18.6%	138
Build a new underground car park with residential/commercial development above	55.2%	410

#### 4.2.5 If a new underground car park is built, would you prefer to see this combined with residential, commercial or mixed-use development?

Answer Options	Response Percent	Response Count
New underground car park with residential development above	24.5%	182
New underground car park with commercial development above	18.4%	137
New underground car park with mixed-use development above	57.1%	424

The headline results from the public consultation set out in Section 4.2 indicate that the majority of respondents (61.1%) visit the Park Street MSCP less than once per week on average, are generally local to the City itself (47.0%) or within Cambridgeshire (45.2%) and are likely to use the car park for short-stay visits associated with shopping (32.4%) and other leisure activities (49.0%). The respondents identify a general preference for Option 3, comprising a redevelopment of the site to accommodate an underground car park associated with a mixed-use development above.

### 4.3 Summary of Business Consultation Survey Responses

#### 4.3.1 What percentage of your customers visit Park Street Car Park?

Answer Options	Response Percent
Up to (but no more than) 33%	46.0%
Up to (but no more than) 66%	21.0%
Over 66%	13.0%
Unsure	21.0%

#### 4.3.2 How important is it to your business that alternate parking provision is identified during the disruption period?

Answer Options	Response Percent
Not important	15.9%
Quite important	25.4%
Very important	58.7%

The headline results from the business consultation set out in Section 4.3 indicate that the majority of respondents (46.0%) perceive up to a third of their customers to be users of Park Street MSCP, 21.0% up to two thirds of their customers and 13.0% greater than two thirds of their customers. The majority of respondents (58.7%) consider that the provision of alternative parking for users of Park Street MSCP is likely to be important to their business during the disruption period.

## 5 Transport Impact of Redevelopment Options

### 5.1 Closure of Park Street MSCP for Redevelopment

Park Street MSCP is a well used short-term car park in the heart of the Historic Centre of Cambridge, serving access to shopping and leisure facilities within the historic core, and has a notable evening and weekend patronage.

Based upon the available data, a temporary closure of the car park for redevelopment is likely to displace in the region of 1,000 vehicles per day on average. These displaced drivers will need to find parking accommodation elsewhere, choose another mode of transport into the city or else choose to visit another centre. It is considered that the temporary loss of car parking at Park Street MSCP would result in a significant depletion in parking provision in Cambridge City Centre.

The potential impact in terms of traffic and transport with regard to the temporary closure of Park Street MSCP for redevelopment could be significant. Cambridge City Council own and operate car parks comprising approximately 3,232 car parking spaces centrally. This is considered to be a relatively low provision when viewed against the level of shopping, leisure and educational facilities in the centre of the City. The low parking provision is offset to some extent by high usage of sustainable travel modes including excellent Park & Ride facilities, good public transport services and cycle /pedestrian networks. However, it is recognised that a certain level of parking must be provided to ensure trips that need to be undertaken by car are facilitated, and to allow individual choice.

Analysis of the occupancy data provided illustrates that during the typical working week there is likely to be some capacity in the nearest alternative car parks within the City Centre to accommodate the anticipated displacement should Park Street be closed for redevelopment. At weekends City Centre MSCPs are observed to operate at close to capacity and additional demand has potential to create a knock on impact in congestion in adjacent car parks and on the surrounding highway network.

In the event of a temporary closure of Park Street, or a reduction in capacity as a result of redevelopment, it is reasonable to assume that the majority of displaced traffic will be likely to choose to use the nearest and most convenient alternative car park, based upon driver origin and destination requirements.

In view of its proximity to the prime shopping areas and historic core, Grand Arcade MSCP, which is located approximately 800m walking distance from Park Street, is considered to be the most likely choice for displaced drivers, particularly those entering the City from the south. Alternatively Grafton West MSCP, which is located approximately 1km walking distance east of Park Street, or Castle Hill P&D, located approximately 1km walking distance west of Park Street, may be attractive options to drivers entering the City from those directions and the north.

Vehicles displaced by the temporary closure and/or redevelopment of Park Street MSCP and travelling from the north of the City to access the Grand Arcade MSCP will be directed towards the site via the A1134 Queens Road and The Fen Causeway to the west of the City Centre or the A603 East Road, Gonville Place and Lensfield Road to the east. The direct impact is that this is likely to result in additional trips on the road network on the south side of the City Centre.

The road network to the south of the City Centre is already observed to be congested at peak times. It is difficult to gauge the actual impact of the displacement of Park Street users to the alternative car parks without thorough analysis of observed traffic data and origin / destination surveys, however it is considered reasonable to assume there is likely to be a negative impact on parking capacity at Grand Arcade and adjacent City Centre car parks which in turn could cause queuing and congestion in the immediate locality with a knock-on effect throughout the network.

Usage data suggests that Grafton West, Grafton East and Queen Anne Terrace MSCPs would likely be able to accommodate the displaced vehicles that would typically use Park Street during the weekday and at weekends. As such it is considered that between Grand Arcade, both Grafton car parks and the Queen Anne Terrace car park sufficient spare capacity is expected to be available to accommodate all of the parking demand. It is noted however that drivers are likely to favour alternative parking options that are most convenient to their specific origin, destination and trip purpose circumstances.

It is therefore considered unlikely that visitors choosing short stay visits to the historic core would seek to make use of Grafton West, Grafton East or Queen Anne Terrace MSCPs or the available Castle Hill and Adam & Eve P&D car parks in preference to Grand Arcade, given the perception of their relative distance to the prime shopping and City Centre areas.

Although there is a good provision for bus based public transport at a local level and accessibility to sustainable transport options within the City, it is considered unlikely that there would be a significant modal shift to bus and/or alternative transport modes by shoppers and short-stay visitors, who are more likely to use a private car for convenience and for onward travel.

All of the Park & Ride buses stop at Drummer Street which is approximately 500m from the historic core. Whilst it is considered that there may be some potential to encourage Park Street patrons to use the Park & Ride for longer trips to the City Centre, of say 2-3 hours, it is unlikely that those who wish to have only a 1-2 hour stay in Cambridge will consider Park & Ride a viable option for their journey as the perception of changing mode to Park & Ride is likely to be that it will add more time and cost to the trip.

Whilst it is reasonable to assume that some drivers would consider making their trips by alternative modes or would at least be more likely to be influenced to use Park & Ride and/or The Busway as an alternative to the private car if parking provision in the historic core was reduced, given the type of patrons using Park Street i.e. predominantly short term leisure users and based on the length of stay information, it is unlikely that any modal shift would occur in high enough numbers to be perceptible in daily fluctuations of traffic, i.e. there would be no noticeable reduction in car journeys as a result of a modal shift to park and ride, bus services or bicycles.

## **5.2 Option One**

### **5.2.1 Short-term Impact**

The short-term impact of the temporary closure of Park Street MSCP for redevelopment will require the displacement of existing patrons of the site to other City Centre car parks. The likely short-term impacts of the refurbishment are likely to be as described in Section 5.1 above.

### **5.2.2 Long-term impact**

Option One assumes that the long-term capacity of Park Street MSCP will be consistent with the existing capacity of 390 spaces. As such it is considered that the long-term impacts of the refurbishment are likely to be negligible in transport terms.

## **5.3 Option Two**

### **5.3.1 Short-term Impact**

The short-term impact of the temporary closure of Park Street MSCP for redevelopment will require the displacement of existing patrons of the site to other City Centre car parks. The likely short-term impacts of the redevelopment of the site to provide a new MSCP are likely to be as described in Section 5.1 above.

### **5.3.2 Long-term impact**

A reduction to 300-350 parking spaces as part of the redevelopment of a new Park Street MSCP would be expected to have a slight impact upon parking capacity. This level of parking provision would be expected to meet the existing weekday demand and although there would be fewer spaces available, the demand would be largely satiated, with the exception of peak periods such as the run-up to Christmas. At weekends the likely demand for spaces is anticipated to exceed supply at peak times (circa 12:00-16:00 Saturdays and 11:00-15:00 Sundays) and could be anticipated to result in queuing / congestion at the car park and/or the displacement of excess vehicles to other car parks within the City Centre.

The occupancy figures indicate that if Park Street MSCP were to accommodate 300-350 parking spaces the average maximum weekday occupancy (over February, July and October) would be up to 80% of forecast capacity and on weekends up to 119% of forecast capacity. Although 300 spaces would not fully accommodate the busiest time periods such as at weekends and in the run-up to Christmas, it is considered that this level of car parking will cater for the majority of existing weekday demand which will allow the surrounding area and businesses to continue to benefit from the custom of car park patrons and pedestrian through traffic.

It is considered likely that the shortfall of spaces at the busiest weekend periods will result in displacement to other car parks and this has the potential to increase congestion on the approach roads to the Grand Arcade and highways to the south of the City Centre.

It is considered unlikely that the reduction in car parking spaces will cause a modal shift in transport terms.

## **5.4 Option Three**

### **5.4.1 Short-term Impact**

The short-term impact of the temporary closure of Park Street MSCP for redevelopment will require the displacement of existing patrons of the site to other City Centre car parks. The likely short-term impacts of the redevelopment of the site to provide a residential, commercial or mixed use development in association with underground public car park are likely to be as described in Section 5.1 above.

### **5.4.2 Long-term impact**

A reduction to 250-300 parking spaces as part of a residential, commercial or mixed use redevelopment of the Park Street MSCP would be expected to have a significant impact upon parking capacity. This level of parking would be expected to meet most of the existing weekday demand, however reflecting the reduction in spaces available, demand is anticipated to be very close to capacity and likely to be exceeded at peak times such as the run-up to Christmas. At weekends the likely demand for spaces is anticipated to exceed supply at peak times (circa 11:00-16:00) and could be anticipated to result in queuing / congestion at the car park and/or the displacement of excess vehicles to other car parks within the City Centre.

The occupancy figures indicate that if Park Street MSCP were to accommodate 250-300 parking spaces the average maximum weekday occupancy (over February, July and October) would be up to 96% of forecast capacity and on weekends up to 143% of forecast capacity. Although 250 spaces would not fully accommodate the busiest time periods such as at weekends and in the run-up to Christmas, it is considered that this level of car parking will cater for the majority of existing weekday demand which will allow the surrounding area and businesses to continue to benefit from the custom of car park patrons and pedestrian through traffic.

It is considered likely that the shortfall of spaces at the busiest weekend periods will result in a displacement to other car parks and this has the potential to increase congestion on the approach roads to the Grand Arcade and highways to the south of the City Centre.

It is considered unlikely that the reduction in car parking spaces will cause a modal shift in transport terms.

## **5.5 Summary and Conclusion**

This technical note has considered a qualitative appraisal of the likely short and long-term impacts of the proposals for redevelopment of the Park Street MSCP upon the existing highway and transport networks in Cambridge associated with each of the redevelopment options outlined in Section 1.1. The appraisal is based upon an assessment of car park occupancy figures provided by Cambridge City Council, the accessibility of sustainable travel alternatives and the responses to public and business consultation undertaken by Cambridge City Council into the future of Park Street MSCP.

The appraisal identifies that the redevelopment of the Park Street MSCP is likely to lead to a displacement of existing patrons to other City Centre car parks in the short-term in all three options. It is anticipated that sufficient capacity exists to accommodate displaced parking in the short-term across other City Centre car parks however it is noted that drivers are likely to have a preference for Grand Arcade MSCP, given the perception of its relative proximity to the prime shopping and City Centre areas. The road network to the south of the City Centre is already observed to be congested at peak times and it is considered reasonable to assume there is likely to be a negative short-term impact on parking capacity at Grand Arcade and adjacent City Centre car parks associated with the redevelopment of Park Street MSCP which in turn could cause queuing and congestion in the immediate locality with a knock-on effect throughout the network. It is considered unlikely that the temporary reduction in car parking spaces will cause a short-term modal shift in transport terms.

The appraisal identifies that each of the long-term options for Park Street MSCP are likely to be sufficient to accommodate the majority of existing weekday demand and will allow the surrounding area and businesses to continue to benefit from the custom of car park patrons and pedestrian through traffic. Option 1 is likely to have a negligible long-term impact upon the highway network as it restores the existing capacity of the car park. The appraisal identifies that a reduction in capacity associated with Options 2 and 3 would not fully accommodate parking demand at the busiest time periods such as at weekends or in the run-up to Christmas and will likely result in a displacement to other car parks with the potential to increase congestion on the approach roads to the Grand Arcade MSCP and highway network to the south of the City Centre. It is considered unlikely that the long-term reduction in car parking spaces associated with Options 2 and 3 will result in a modal shift in transport terms.

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