ESTIMATED REVENUE FROM DISABLED CAR PARKING SPACES

Task: Estimate the amount of BDC Car Parking revenue generated by Blue Badge Holders

Approach: Data does not currently exist in the BDC car parking systems to measure the amount of revenue generated by Blue Badge Holders using pay & display car parks (Bromsgrove District Council does not currently record how many pay & display tickets are purchased by disabled car park users making use of the free extra hour of parking), therefore a method is needed to estimate the usage based on the available data.

The absolute maximum revenue that could be generated from disabled bays if they were filled continuously during opening hours (assuming each user purchased the maximum ticket and 65% subsequently used the additional free hour[1]) would be approximately £250,000. However, the actual revenue generated is likely to be significantly less than this figure, since the spaces are not always filled. By estimating the usage of disabled bays, it is possible to provide a more realistic figure for the actual revenue generated, which we have calculated to be in the range £23,000 - £46,000 based on four calculation methodologies[2].

There are a range of methods that have been employed to provide this estimation. Each method has its own strengths and weaknesses so this report presents a multi-methodology approach – utilising a range of different methods to provide a range for the estimated revenue generation.

The four methods described below have made use of available data sets including: total revenue generated by ticket sales across the nine car parks (provided by BDC Finance); site surveys conducted in January / February 2012 which provided data on the actual level of usage in the car parks (i.e. how many spaces were filled at various times of the day); data from Smartcard (used by blue badge holders parking in pay on foot car parks); and the site survey conducted by the Bromsgrove Labour Group.

For each of the methods used:

- The methodology is described step-by-step;
- The outcome (estimated revenue from Blue Badge Holders using BDC car parks in a 12 month period) is stated; and
- The assumptions on which the method is based are summarised.

The outcomes from all methods are summarised in table 1 on page 8. All outcomes are rounded to the nearest £1000, but this should not be taken as a degree of accuracy, since all results are estimates.

All estimates included the following BDC car parks[3]:

[1] According to the Blue Badge Car Park Users Survey conducted by Bromsgrove District Council in 2012, 65% of respondents use the additional hour.

[2] It should be noted that this is an estimate based on small samples and therefore the range may be wider than the figures shown.

[3] The free extra hour of parking for blue badge holders does not apply at Bromsgrove Station car park (as the only ticket available for purchase is an all-day ticket) or the Dolphin Centre car park (for permit holders only), therefore these two car parks are not included in the calculations or outcomes in this report.

- Churchfields
- New Road
- Recreation Road North
- School Drive
- Windsor Street
- Hanover Street
- Parkside
- Recreation Road South
- Stourbridge Road

For methods 1 to 3 each car park, has been considered individually taking into account the various lengths of ticket available for purchase (e.g. up to three hours in Churchfields, 3 in Windsor Street etc), the number of spaces (disabled and standard), the price of ticket, and the different opening hours.

METHOD 1 (USAGE BASED ON SITE SURVEYS)

STEP BY STEP METHODOLOGY

For each of the seven pay and display car parks included in the site surveys

- **Step 1:** Firstly, we worked out how much the council would make if each disabled space in that car park was constantly filled (during car park opening hours) by someone purchasing the average ticket (one hour) and staying for an extra hour free.
- **Step 2:** We know that these spaces are *not* constantly full, so to work out how much revenue is actually generated by these spaces, data from the car park site surveys[4] conducted by Bromsgrove District Council was used to work out the average percentage of the time disabled spaces in each car park were filled when the survey took place. This percentage was then applied to the total figure produced by step 1 (above) to provide an estimated revenue from disabled spaces per car park.
- **Step 3:** The next step was to work out the estimated revenue for disabled spaces (from step 2) as a proportion of the total actual revenue from that car park (as provided by finance). For example, so we can say that roughly 2.5% of the revenue generated from New Road car park was from disabled spaces.
- **Step 4:** Step three was repeated for each of the seven car parks for which usage data was available, and the combined figures were used to work out the average proportion of total revenue that is likely to have come from disabled spaces for these car parks.
- **Step 5:** This average proportion could then be applied to the total revenue from the two pay on foot car parks (which were not included in the site survey) to provide a total revenue estimate for all nine BDC car parks.

OUTCOME

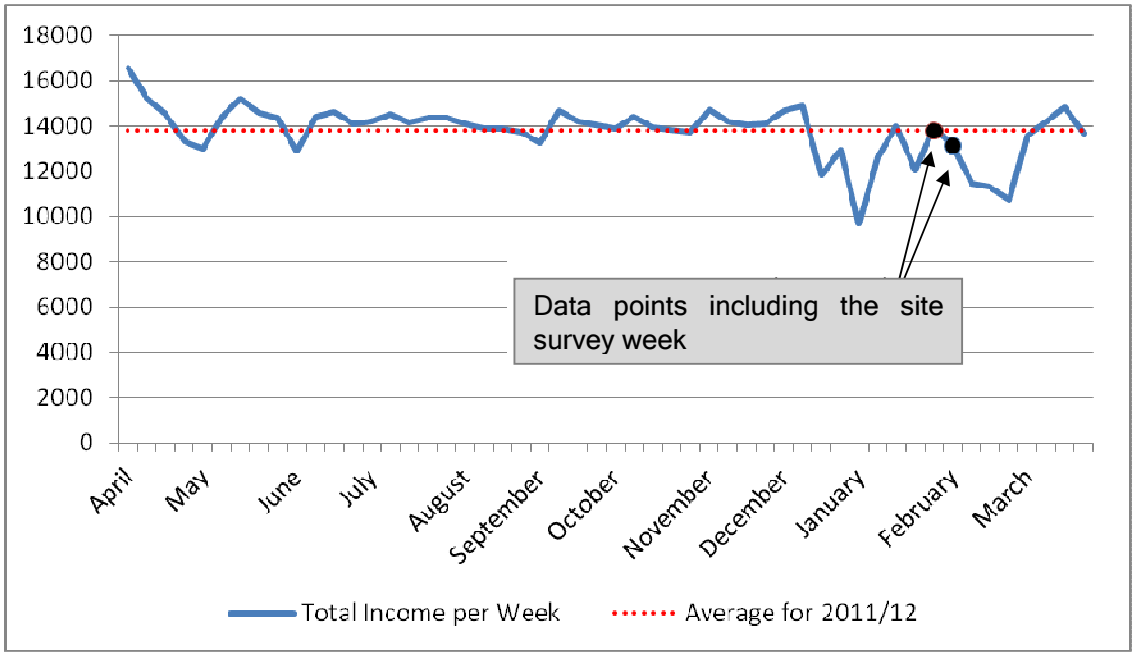
The above method indicates that revenue from disabled spaces accounted for 2-3.5% of total revenue from these car parks in a year, or £32,000 to £46,000.

ASSUMPTIONS

- Site survey data collected from the seven pay & display car parks has been used to estimate usage levels in the two pay on foot car parks (which were not covered in the Bromsgrove District Council site survey). This method assumes that the usage levels in all nine car parks will be similar. We recognise that this may be an underestimation of usage levels as Recreation Road South and Churchfields are the two largest car parks in Bromsgrove, generating the most revenue.
- It has been assumed that the data from the week long site survey is representative of the usage habits of all car park users throughout the course of a year. Figure 1 demonstrates that overall usage levels in this week are broadly in line with the annual average:

[4] A total of 330 separate site visits were made to the seven pay & display car parks between 08:00 and 17:00 hrs over a seven day period (27th January to 2nd February 2012).

Figure 1: Weekly Revenue from Ticket Sales in the Seven Pay & Display Car Parks included in the Site Survey, with average for 2011/12. Data points spanning the site survey week (27th Jan to 2nd Feb) are indicated



Based on the average revenue from the two weekly figures spanning the survey dates, when the survey was conducted, ticket sales were within 5% of the annual average.

METHOD 2 (USAGE BASED ON SMARTCARD DATA)

STEP BY STEP METHODOLOGY

- **Step 1:** In order to utilise the free hour of parking in the two pay on foot car parks in Bromsgrove, blue badge holders must use a Smartcard at the payment machines. This data is recorded throughout the year and so we can see exactly how much revenue is generated in these two car parks. The actual revenue generated by Smartcard users for a 12 month period (February 2011 to January 2012) was expressed as a proportion of the total revenue from both Churchfields Multi-Storey and Recreation Road South to provide a "usage" percentage for these two car parks
    - So, in Churchfields, 4.33% of the total revenue from ticket sales came from Smartcard users, and in Recreation Road South, it was 1.58%.
- **Step 2:** These proportions were then applied to the total revenue generated in the seven pay & display car parks to provide an outcome for all car parks as a whole
    - So it was assumed based on the actual data from step 1 that for each pay and display car park, between 1.58% and 4.33% of total ticket sales were generated by blue badge holders.
- **Step 3:** The totals for all nine car parks (using the actual figures from pay on foot car parks, and the estimated figures from step 2 for the pay & display) were then added together to provide an upper and lower limit for all nine car parks.

OUTCOME

The above method indicates that the revenue from disabled spaces in a 12 month period (February 2011 to January 2012) is likely to be between £23,000 and £40,000.

ASSUMPTIONS

- Smartcard data from the two pay on foot car parks has been used to estimate usage levels in the seven pay & display car parks (for which Smartcard data is not available). This method assumes that the usage levels in all nine car parks will be similar. We recognise that this may be an overestimation of usage levels as:
    - Recreation Road South and Churchfields are the two largest in the town, with many more spaces than any of the pay & display car parks
    - Both pay on foot car parks are located right next to Asda, unlike any of the pay & display car parks
    - Churchfields multi-storey is used by the shopmobility scheme and so is likely to be used by more blue badge holders than any other car park.

METHOD 3 (USAGE BASED ON SMARTCARD AND SITE SURVEYS COMBINED)

STEP BY STEP METHODOLOGY

Method four combines methods two and three to provide an estimation based on as much actual data as possible.

- **Step 1:** As in method two, using data from the site surveys conducted in January / February 2012, the average percentage of the time that the disabled spaces were filled was combined with the average length of ticket purchased to estimate the amount of revenue generated from ticket sales in each pay & display car park in a twelve month period. This provides a pay & display car parks total.
- **Step 2:** As in method three, the exact revenue generated from blue badge holders (as recorded under Smartcard use) was provided, giving us a pay on foot car parks total.
- **Step 3:** The pay on foot and pay & display totals were added together to provide the most accurate estimation possible for the total revenue from all nine car parks. The estimate is still presented as a range, as the pay & display figures are still calculated based on an average ticket purchase, so the range provided is one standard deviation either side of the mean.

OUTCOME

The above method indicates that revenue from disabled spaces accounted for 2-3% of total revenue from these car parks in a year, or £30,000 to £40,000.

ASSUMPTIONS

- It has been assumed that the data from the week long site survey is representative of the usage habits of all car park users throughout the course of a year (see figure 1).
- This method improves upon methods 2 and 3 because it calculates each car parks usage level individually removing the need to make the assumption that usage levels are similar across all car parks.

METHOD 4 (USAGE BASED ON BROMSGROVE LABOUR GROUP SITE SURVEYS)

STEP BY STEP METHODOLOGY

- **Step 1:** A site survey carried out by the Bromsgrove Labour Group in January 2012[5] found that *"the likely disabled user % and thus loss in revenue from disabled parkers based …is … in the range of 3.5 – 5.5 %"*
- **Step 2:** These percentages were applied to the actual revenue from all nine car parks over a 12 month period to provide an estimate for the total revenue generated by blue badge holders for all Bromsgrove car parks. This provides an outcome of 3.5-5.5% of total revenue from these car parks in a year, or £48,000 to £75,000.
- **Step 3:** Due to the way in which site survey data is presented, it is not possible to accurately incorporate an adjustment into the above estimation to account for blue badge holders parking for an extra free hour. However, based on the fact that the average ticket purchased in any BDC car park is one hour, and blue badge holders are able to park for free for an additional hour, we don't believe that an adjustment of this nature would reduce the outcome by any more than 50%.

OUTCOME

The above method indicates that revenue from disabled spaces accounted for 3.5-5.5% of total revenue from these car parks in a year, or £48,000 to £75,000 – approximately adjusted to account for the free hour used by Blue Badge holders, this outcome would reduce to £24,000 to £38,000 (equivalent to 1.8% - 2.8% of total revenue)

ASSUMPTIONS

- This method assumes that the site survey is representative of usage levels across the year (as in method 2, figure 1).

[5] A total of 16 site visits were made to three car parks between 09:00 and 16:00 hrs over a ten day period, 7th to 16th January 2012

SUMMARY

The absolute maximum revenue that could be generated from disabled bays in Bromsgrove Town Centre is £250,000, assuming that all bays are continuously filled. However, we know that the disabled spaces are not constantly full so we have provided four methods to estimate the likely usage rates of disabled parking bays in order to establish a more realistic revenue figure. The outcomes for each method are summarised in table 1.

Table 1: Summary of the outcomes from the four methods

Method of determining the proportion of ticket sales that come from Disabled Parking Bays	**Results**	
	Percentage	**Equivalent in 2011/12 Actual Ticket Sales**
Method 1 (based on the usage levels found in car park site surveys carried out in pay & display car parks, January / February 2012)	2-3.5% of total revenue	£32,000 - £46,000
Method 2 (based on actual revenue generated in pay on foot car parks from those using Smartcards)	1.8-3% of total revenue	£23,000 - £40,000
Method 3 (based on usage levels from pay & display car parks site surveys, and actual usage levels from pay on foot).	2-3% of total revenue	£30,000 - £40,000
Method 4 (based site surveys conducted by the Bromsgrove Labour Group)	1.8 – 2.8% of total revenue	£24,000 - £38,000

CONCLUSION

The results of the four estimation methods suggest a range of between £23,000 and £46,000 for the revenue generated from disabled parking bays. However, since these are estimates we would recommend using a higher figure of £50,000 for budgeting purposes.