



## **Report to Cabinet**

**Subject**      **Car Park Charging - Comparison of costs for three methods of collection of car parking charges.**

**Date**          **7th November 2005**

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### **1. Purpose of the Report**

To obtain Cabinet approval for the method of collection of car park charges in order that the appropriate funds can be requested in accordance with the Council's financial procedures.

### **2. Background**

At the Cabinet meeting of 18<sup>th</sup> August 2005 it was decided that approval be granted for the introduction of charging in the Council's town centre car parks (excluding Netherfield) from January 2007.

However, the Cabinet deferred a decision on the method of collecting the charge, requiring a comparison of the most widely used mechanical methods of collection.

This report examines the three most common methods of collection and makes a proposal on the most economical, easily installed and easily maintained system.

The scope of comparison has been limited to the mechanical collection methods and consideration has not been given to any manual collection system at this time. The following three systems were considered:-

- **Pay on Foot**

The entrance and exit of the car park are controlled by a barrier system on entry to the car park. The customer is issued a ticket (with magnetic information strip), and upon returning to the car park, the customer feeds the ticket into a pay station that then requests the correct amount and re issues the ticket on payment. The customer has around ten minutes to exit the car park using the ticket at the exit barrier.

- **Pay on Exit**

The entrance and exit of the car park are controlled by a barrier system. On entry to the car park the customer is issued a ticket (with magnetic information strip), on exiting the car park, the customer feeds the ticket into the integrated pay station/exit barrier which requests the correct amount. On payment, the barrier raises and the customer exits the car park. (A variation of this system uses cameras and number plate recognition software to notify the customer of the appropriate charge.)

- **Pay and Display**

Ticket machines are positioned strategically within the car park. Having first located a parking space, the customer inserts the correct change and a ticket is produced advising of the amount paid and the latest time the customer should leave the car park by. The customer is required to display the ticket in the vehicle. The car parks are patrolled by enforcement officers who check the validity of the ticket.

### **3. Advantages & Disadvantages of the Systems**

Each of the systems evaluated require civil engineering works and for the barrier systems, new car park layouts may need to be designed. The following are the general issues associated with barrier systems and pay and display. Appendix 1 shows a range of issues in more detail.

#### **3.1 Barrier Systems (both types)**

##### **a) Layout of Entry and Exit Lanes**

Work is required to the entry and exit lanes to separate them and provide a suitable lane width. Where the lanes are too narrow widening may be required at the loss of parking spaces. Proposed new layouts must also include disabled and pedestrian access where necessary. This could result in motorcycles accessing and departing the car parks without paying.

On two of the car parks substantial civil engineering works to retaining walls and entrance ramps would be required to accommodate access requirements.

##### **b) Specification of Equipment**

Provide for collection of variable tariffs dependant on time stayed. This method of collection does not assist in enabling more short stay space availability as customers pay an

amount based on time spent. The local business sector requested faster turn-around of customers. Allowing access for properties with rights of way across car parks is another problem although a possible solution is to have pay stations which also read permits (card reader type).

Other requirements of a barrier system are the need to display suitable "FULL" warnings at the entrance to the car park. On many of our car parks, customers would either have to reverse onto the highway or wait at the barrier until a space is available.

Either way, the Highway authority will view this as obstruction.

It would also be a requirement to display tariffs and regulations at the entry point and advise customers of contact points at the exit points in case of barrier failure/breakdowns. We would then need to have sufficient support staff available 24 hours, 7 days per week (including public holidays) to respond.

We would need to ensure a power supply to Pay stations and barrier equipment. Barriers are susceptible to vandalism and accidental damage. Major revenue losses may occur if barrier arms need replacing regularly at a cost of approx £3,000 per occasion. So the equipment needs to be of a durable and vandal resistant design.

### **c) Enforcement**

The use of a barrier system would present two areas of concern that I have been unable to resolve around enforcement namely:-

- 1) No method of providing free disabled parking
- 2) If system is designed to let people with legitimate access to an adjacent property into the car park, how do we then prevent them occupying spaces in the car park?

### **d) Staffing Levels**

In non-staffed car parks barrier equipment is more vulnerable to damage. Also its proximity to moving vehicles makes it liable to accident damage. With barrier equipment the swift remedy of any mechanical breakdown is essential to avoid customers becoming trapped in / prevented from entering the car park or in the case of removed or open barriers leaving the car park without paying.

The layout of our car parks gives the potential for only one entry and exit lane from the majority of sites so this does not allow for alternative methods of collection upon equipment failure or damage other than manual collection, which of course, has it's own administrative, financial and security problems

In consequence staffing levels are likely to have to be increased significantly to provide a quick and efficient response. Training in the general repair of the equipment would also be advantageous but this will be costly.

#### **e) Interface with Highway Network**

As mentioned previously, the majority of our car parks exit directly onto the Public Highway, The Highway Authority's consent will be required for the proposed alterations to the entry and exit lanes. If the Highway authority applies current good practice then they should require us to provide some queuing facility for the entry point and merging facilities at the exit point back onto the highway. The cost of this would be significant and in addition to the costs indicated in this report. A further loss of car park spaces to accommodate such a requirement will further reduce income.

#### **f) Other**

As a number of the car parks host recycling facilities, we would need to consider re-sighting these or removing the facility as a barrier system restricts customer access.

### **3.2 Pay and Display**

#### **a) Layout**

Works required to install sufficient ticket machines at each car park, includes some minor civil engineering work. In some car parks we may lose up to 2 parking spaces.

#### **b) Specification of Equipment**

Pay and display machines can of course be attacked. If there is more than one machine in each car park then there would be no reason for revenue loss unless there were a series of attacks. Low maintenance costs associated with this type of machine. Attendants can rectify significant amount of faults and car parks with more than one machine do not usually require weekend or out of hours cover.

Often these machines are solar powered/battery operated that avoids the need for a power supply and the costs associated with excavation.

No need to re-design car parks and residents/shops with access through existing car parks are easily catered for.

#### **c) Enforcement**

The Council could employ enforcement officers either directly or through a contractual arrangement/partnership to enforce car parking regulations. Pay on foot also accommodates free disabled parking in designated bays and parking permit holders easily.

#### **d) Staffing**

The Cabinet has already agreed that off street car parking enforcement should be tied in with the proposed arrangements for on street parking enforcement around the County from January 2007. The Council's current car park inspector would be responsible for maintaining the ticket machines (replacing tickets and minor repairs) as well as inspecting the car park for other maintenance works. In addition they will monitor the enforcement contract and randomly inspect tickets obtained as part of the monitoring controls proposed.

#### **e) Interface with Highways Network**

No problems envisaged although we do need the Highway Authority to approve our car parking proposals and changes to our parking orders.

#### **f) Other**

Recycling facilities can be accommodated as can any other event/display proposed in our car parks.

#### **g) Signage and Markings**

On all proposals, works are necessary to replace existing signage, update road markings and advise customers of new parking orders.

### **4. Proposal**

Appendix 2 shows the estimated capital costs of installation for the 3 methods of collecting car park charges that range from £155,000 to £630,000. I have also shown a likely annual maintenance budget based

on replacement of one machine and barrier system in appendix 1 although at this stage it is difficult to judge the likely replacement or repair costs associated with this project.

Taking into consideration the problems highlighted above with regard to car park layout, equipment installation and specifications, staffing and enforcement, customers with rights of way and disability issues, as well as the significant costs of installation of barrier systems, it is proposed that a pay and display system is the most economical and easily installed and maintained solution to introducing car park charging.

## **5. Financial Implications**

A request for capital monies to the value of £155,000 has been submitted in accordance with the annual budget process for 2006/07 to purchase and install sufficient Pay and display ticket machines in the Council's car parks. An annual budget for 2007/08 for ticket machine maintenance will also be prepared.

An original estimate of £120,000 was approved this year but this did not include all the civil engineering works, replacement signage and revised road markings that are needed.

A report on costs associated with enforcement and fixed penalty notices will be produced for a later Cabinet meeting as detailed discussions with Nottinghamshire County Council and the other District Councils are due to commence shortly.

A further report on collection of monies from car park ticket machines will be produced next year. It is hoped that our existing contract with a security firm could be expanded to include the collection of these cash boxes.

## **6. Recommendations**

That the Cabinet approve the Pay and Display method for the collection of car park charges as outlined in this report.

## **7. Wards Affected**

All wards

<b>APPENDIX 1 Car Parks, feature comparison by method of collection</b>			
<b>Feature</b>	<b>Pay on Foot</b>	<b>Pay at Exit</b>	<b>Pay and Display</b>
<b>Evasion of Payment</b>	All users will have to pay prior to exiting the car park.	All users will have to pay prior to exiting the car park.	Customers could evade paying for their parking.
<b>Revenue from Penalty and excess charges</b>	No	No	Yes, potential income but contract needs to be set up with an enforcement company
<b>Customers having to return to vehicles at a set time</b>	Customers can stay as long as they wish (exclusive of car park closing time).	Customers can stay as long as they wish (exclusive of car park closing time).	Customers have to return to their vehicles at a set time.
<b>Traffic flow</b>	The entry and exit times at the car park are increased but are faster than Pay on entry/exit systems. Queues onto main roads can be a problem.	The entry and exit times at the car park are increased. Queues onto main roads can be a problem.	There is no impediment of traffic flow.
<b>Discounted parking by shops, theatre etc</b>	Available by the use of validating device, which would be leased from council.	Available by the use of validating device, which would be leased from council.	Reminder portion of the ticket could be used to provide a discount against parking costs.
<b>Power failure</b>	Manual operation of the system with possible revenue loss.	Manual operation of the system with possible revenue loss.	Latest machines will operate for approximately 1-2 (+) weeks on battery only. No revenue loss.
<b>Equipment failure or down time due to servicing</b>	A 2 entry, 2 exit with 3 pay stations will be able to operate. There would be reduced	A 2 entry, 2 exit system will be able to operate. There would be reduced traffic flow during	Customers would have to use another machine (if more than one machine in the car park) and would

	traffic flow during the servicing or failure of a lane. A single entry/exit system is of course equipment critical at the entry and exit points.	the servicing or failure of a lane. A single entry/exit system is of course equipment critical at the entry and exit points.	therefore be inconvenienced.
<b>Staffing</b>	A member of staff is required to monitor the system and operate the customers 'help' intercom. It is possible to operate the site remotely but problems can occur if an attendant is not on site within a few minutes. This is especially true at peak times.	A member of staff is required to monitor the system and operate the customers 'help' intercom. It is possible to operate the site remotely but problems can occur if an attendant is not on site within a few minutes. This is especially true at peak times.	Provided the machine has tickets and the cash boxes are not full, the system could operate with the absence of staff. Effective patrol/enforcement is important but not essential in the short term to maintain revenues.
<b>Convenience</b>	Provided the pay stations are positioned in suitable walkways, customers do not have to walk any additional distance than would otherwise be the case. They do not have to make a repeat visit to their vehicle to display a ticket.	Customers do not have to make a repeat visit to their vehicle to display a ticket. Delays may be experienced at exit barrier especially in peak times.	Customers have to purchase their ticket and then return to their vehicle to display the ticket.
<b>Friendliness</b>	Customers do not receive penalty charges.	Customers do not receive penalty charges. Customers	Penalty charges are issued.



	Customers can be under pressure at the exit barrier if they are not able to offer or insert a valid ticket. Queues can quickly form.	can be under pressure at the exit barrier if they are not able to offer or insert a valid ticket/ or payment, Queues can quickly form.	
<b>Security</b>	Thieves would have to bring a vehicle into the car park in order to obtain a parking card to exit with a stolen car. Entry and exit lanes are excellent points to view a static vehicle driver with C.C.T.V.	Thieves would have to bring a vehicle into the car park in order to obtain a parking card to exit with a stolen car. Entry and exit lanes are excellent points to view a static vehicle driver with C.C.T.V.	Patrol Officers provide reassurance to customers.
<b>Change giving</b>	Yes	Possibly	No
<b>Vandalism</b>	Barriers are susceptible to vandalism and accidental damage. Major revenue loss may happen if a barrier arm is damaged.	Barriers are susceptible to vandalism and accidental damage. Major revenue loss may happen if a barrier arm is damaged.	Pay and Display machines can of course be attacked. If there is more than one machine in the car park then there is no reason for revenue loss unless there was a series of attacks.
<b>Maintenance Cost</b>	Unless operators have their own maintenance staff the service costs for Pay on Foot system are often two or three times that for a Pay and Display car park. Out of hours, weekend cover is likely to be required.	Unless operators have their own maintenance staff the service costs for a Pay at exit system are often two or three times that for a Pay and Display car park. Out of hours, weekend cover is likely to be required.	Low Maintenance cost. Attendants can rectify significant amount of faults. Car parks with more than one machine do not require weekend and out of hours cover.
<b>Access and egress to car park for staff</b>	Barriers Can be manually operated or by use of swipe	Barriers Can be manually operated or by use of swipe	No restrictions

<b>and other non paying customers</b>	cards	cards	
<b>Contract parking/ season tickets</b>	Can be provided by use of swipe cards or card readers	Can be provided by use of swipe cards or card readers	Season ticket displayed in window
<b>Estimated maintenance costs (per annum)</b>	£6000 per system (i.e. one pay station and set of barriers)	£4000 per system (i.e. one set of entry exit barriers)	£2000 per machine