Waverley Borough Council

Car Parking Strategic Review

Stage 2 Recommendations

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Prepared by

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1. Background

The purpose of the Review is to develop a strategy and action plan for the future management of Waverley Borough Council's (WBC's) off street parking assets. This is to ensure that the Borough's parking stock will continue to effectively support the economic vitality of its towns and villages.

The Review focuses on the four distinct settlements Cranleigh, Farnham, Godalming and Haslemere, the principal centres within the Waverley Borough but has regard to their interdependency with the large number of smaller villages and hamlets which surround them. The strategy looks to meet current and future demand, so that the Council can properly plan for the car parking needs of the area as it continues to develop.

The Review's brief was to focus on five key themes and principles: -

- The off-street parking assets, their management and their efficient use.
- The tariff structures and how they can be used to make more efficient use of the car parks and meet the conflicting demands of different users.
- Enforcement operations which will achieve high levels of compliance with appropriate levels of enforcement provision.
- The use of innovative technology to deliver cost savings through efficiencies and improved customer experience.
- Prioritisation of the need of local residents and businesses over the demand stemming from outside commuters.

The strategy will be consistent with and supportive of national and local policy objectives. It will be responsive to the needs of different groups and therefore individual and tailored strategic action plans are to be produced for each of the four principal settlements. The action plans will be developed to be flexible to meet the challenges and opportunities that will arise in the future.

The main outputs that WBC sought from the Review were: -

- Recommendations for the management of the assets which could include disposal for alternative uses, investment in refurbishment, improvement or redevelopment of the assets.
- Comparison of the regime with similar authorities and a discussion of relative advantages and potential.
- Recommendations for tariff structures and operational approach to maximise parking availability and meet consumer requirements in each of the four main settlements
- Recommendations for the use of short or long stay designations to assist with the maximisation of car parking availability.
- Recommendations for possible concessionary schemes for local employees, disabled persons etc.
- Recommendations for the possible integration of parking enforcement operations with other civil enforcement activities.
- Recommendations on the introduction of new technology to improve customer experience and efficiency
- Recommendations on the enhancement of electric vehicle charging and possible differential charging for more polluting vehicles.

This report is the second stage of the development of the strategy and challenges current parking policy and provides a detailed rationale to inform the next stage of developing a strategy document and action plan for public consultation.

2. Introduction

The Surrey Transport Plan (Problems and Challenges- August 2017) highlights that parking is seen to influence congestion in three main ways: -

- Firstly, at a strategic level the availability of parking has a direct influence on modal choice and high availability is likely to lead to increased car use and, in turn, to congestion.
- Secondly, in places where there is a high demand for parking (e.g. urban centres) congestion can be exacerbated by queuing at car park entrances and circulating traffic seeking on-street spaces. Drivers place a low value on the time spent searching for parking spaces near to their intended destination and these circulating drivers can add to local congestion.
- Thirdly, both legal and illegal on-street parking leads to a reduction in the amount of road space available for through traffic, creates bottlenecks, reduces traffic flow and increases journey times.

However, for those residents who live in rural areas, there is lack of alternative to the private car to make some journeys. Distances to amenities and lower population densities in rural areas affect the viability of public transport and increases the risk of social exclusion. This is compounded by the cost of subsidising uncommercial services and funding concessionary travel. As a result, bus services, whilst relatively frequent in the main urban areas are patchier in rural areas. Capacity is also an issue at school travel times. Services are even further reduced at evenings and weekends. Waverley's railway lines are also heavily used and there is growing concern from users about train capacity and limited parking at Haslemere and Farnham Stations.

This contributes to a reliance on the car as the principal mode of travel and demand for parking within the main settlements. According to the County Council's Transport Plan, car use is by far the most popular mode of transport in Surrey with higher than average levels of car ownership (86% of households in Surrey own a car compared with 73% on average across England (2011 Census). According to the Transport Plan. The continued rise in vehicle numbers in Surrey is reflected by an ever-increasing pressure on, and demand for use of, the limited amount of parking space available. Whilst policy seeks to influence behaviour and encourage modal change to more sustainable transport options including public transport, cycling and walking, the car is likely to remain the most popular transport mode for some time.

However, the function of town centres as a destination is evolving, with the prevalence of 'out of town' retail parks (although this is less of an issue for Waverley), increasing internet shopping, and a challenging economic outlook impacting the role of traditional retail in town centres. To succeed High Streets will need to become a diverse heart of the community, less centred on retail and providing an experience that cannot be replicated online. In order to meet these challenges, the Council's Economic Development Strategy 2018-32 focusses on six themes for long term activity and support including 'Supporting healthy town and village centres'. To support this theme the Council proposes developing a car parking strategy for each town centre. The strategy identifies that 'parking issues have been consistently raised, where a lack of capacity affects the ability of residents and those from a wider area to use the different high streets, which could lower footfall.'

It recognises that the needs of each of the main settlements were different and went on to say:

"To be most effective, different approaches may need to be applied to Waverley's different distinct town and village centres"

It also recognised that affordable parking for local employees was a significant issue for businesses. A key recommendation under theme 3 of the strategy was to:

"Develop a tailored parking strategy for each town centre, and areas where it is relevant, to maximise the use of existing capacity and provide additional capacity where needed and practicable."

The Council's car park estate is a key asset to WBC, not only as a source of income to allow the delivery of important services, but also for the opportunities it affords for improvement to the built environment and regeneration.

Parking is an emotive subject and there are always a wide range of views on it, but managed correctly it can be an enabler, providing travel choice and supporting employment and the economy. Poor management can have an adverse impact on the visitor experience, the built environment, congestion and air quality. A group of leading local authorities have been working in partnership with the British Parking Association (BPA), the recognised authority for the UK parking sector, to improve local authorities' parking services and the public's perception of those services. This initiative has resulted in the Positive Parking Agenda (PPA) which challenges misconceptions about the parking sector and aims to make the parking experience a better one for all concerned. Over 140 local authorities are now signed up to the PPA, which focusses on providing effective and positive communication, promoting innovation and the appropriate use of technology. The initiative seeks to open people's eyes to the necessity for and the benefits of effective parking management. It seeks to demonstrate to local authorities that they have a role to play in changing the perception of the sector by the public and the media.

The PPA focusses on: -

- Improving access to services and supporting the economic vitality and vibrancy of town centres and high streets,
- Supporting a more mobile society by embracing new technology,
- Working together to provide a more efficient and accessible road network,
- Fairness and transparency – Delivering a more effective, efficient and consistent parking management service.

In Waverley, the responsibility for parking policy and the provision of parking services is shared between Surrey County (the County Council) which manages on -street provision and transport policy and WBC who control off street parking policy. WBC and the County Council will need to work closely together to effectively deliver the necessary improvements needed to meet future challenges.

3. Existing Parking and Service Review – PML Base Case Technical Report

We have reviewed existing parking provision in the Borough in the context of consultation feedback the threats and challenges to the services. Our analysis and conclusions are provided within the Technical Base Case report contained within Appendix 1. These are based upon consultation feedback, our experience elsewhere and informed by analysis of the limited amount of data available. It is essential that reliable data is collected moving forwards to inform investment decisions and appropriate consultation is carried out before any final decisions are made on the future of the parking service.

Table 1 below summarises our findings.

Table 1 – Base Case Findings

Council's Parking Service:	• The Service is well managed by trained, professional staff. • Efficiency could be improved by make best use of existing/introducing new technology and establishing and managing KPIs for all elements of the service. • From available data the Council may be capable of operating on-street parking more efficiently than the current provider
Technology and Reporting	• Whilst functional, the current parking equipment is incapable of providing live occupancy data and adapting to the requirements of connected and autonomous vehicles. • The current provision of EV charging stations will be inadequate in the future.

Customer Experience:	• No information is available informing drivers of the availability of space • The payment experience can be improved by provided contactless payment options at all car parks. • Payment on exit options would be preferred however current legislations limits the Council's ability to implement a viable solution. • The Council's website whilst accepting electronic payments, provides only basic car park information and no information about on-street parking.
Supply and Demand:	**Godalming** • The car parks are generally extremely well used and space availability throughout the day is an issue. More spaces will be needed to accommodate future demand and projected population increases • There is a surplus of disabled spaces on off-street car parks based upon existing demand • Removal of recycling bins on car parks would increase capacity. • Existing parking layouts should be reviewed to assess whether more efficient configuration would provide additional capacity • Free on street spaces add to congestion impact amenity and space for pedestrians and cyclists • The consultation highlights that there is a perceived lack of affordable parking for retail workers. Due to capacity issues it is not practical to accommodate this on existing WBC car parks. Consideration should be given to identifying a new site close to the town centre. The car park at Wharf Road (Homebase/Pets at Home) retail park is currently underutilised and the potential use of some of this car park for worker parking should be investigation with the owner as an early option. • Lack of rail parking in Godalming appears to have reduced use of the station resulting in growth at other stations on the route. This issue is likely to worsen as populations increase unless more parking is provided at the Station. • Demand for parking at Farncombe station would also appear to outstrip supply. **Farnham** • Again, the car parks, particularly those in prime locations, are generally extremely well used and space availability throughout the day is an issue. • The Brightwells development will increase the number of parking spaces but the scheme will also increase parking demand. More spaces will be needed to accommodate future demand and projected population increases. • There is a surplus of disabled spaces on off-street car parks based upon existing demand • Free on street spaces add to congestion impact amenity and space for pedestrians and cyclists • There is considerably lower demand for the Riverside car parks which could be improved with better promotion and charges that are attractive for town workers. This may also release spaces in prime car parks for short stay use. • Lack of rail parking is an issue and there is a perception that rail users are having to use town centre car parks, reducing the number of spaces available for short stay visitors. **Haslemere** • Most WBC car parks in the centre of Haslemere operate close to capacity suggesting that there is insufficient parking capacity in Haslemere town centre to meet existing demand at peak times. • Existing parking layouts should be reviewed to assess whether more efficient configuration would provide additional capacity • The car parks closest to the railway station had plenty of capacity compared with Godalming and Farnham. • The introduction of charges at Wey Hill will help manage demand and the availability of spaces for local visits and workers • The free car parks supporting the smaller district centres were generally well occupied but did have spaces available despite being free to use. Whilst car parks are free is it difficult to manage usage and the facilities as being subsidised due to the costs of supervising and maintaining them.

	Cranleigh • The village presents different challenges to the other main settlements as shop vacancy rates are increasing resulting in a decline of parking demand. • Supply of parking is not a material issue but affordable parking for local workers is. • As there is no rail station in Cranleigh the impact of commuter demand is not an issue.
Pricing:	Prices are low compared with many neighbouring authorities. The very high occupancy on many car parks suggests that tariffs are too low in the prime areas of the town centres. Evening and Sunday charges are charged by many neighbouring councils and are unlikely to impact footfall if set at a reasonable level. Pricing should however be set according to local needs. Some provision should however be made for low paid workers to make parking charges accessible.
Other:	Closer collaboration with the County Council is essential to provide consistent and reliable parking information to customers and properly manage the congestion being experienced in the town centres.

4. Summary

4.1 What Does Success Look Like?

To deal with the issues highlighted in the Technical Base Case report and to deliver a robust and sustainable parking operation for the Borough, we recommend the following: -

- The collection of additional data to inform short term decision making. Many car parks are extremely well used at peak periods and consultation feedback would suggest that this would be improved by limited long stay parking. However, there is currently no data available to confirm the reasons behind long stay visits which could be hotel residents and all day tourist visitor, essential business users or commuters catching trains due to inadequate or more expensive provision at the station. If more spaces are to be prioritised for short term visits, then the Council must decide which of the long stay users are to be excluded and understand fully the impact on parking budgets and any potential collateral influence on the towns and villages.
- Technological improvements to help deliver a positive parking experience (providing customers with information, payment options, functional equipment with support when needed). These will also provide additional essential data that can inform decisions to provide additional capacity where needed, help manage congestion and air quality and provide a more efficient and cost-effective service
- Subject to viability, the provision of larger car parks in strategic locations to consolidate the spaces currently provided in smaller surface car parks (and on street in certain circumstances). These should have pay on exit capability, be of reasonable quality, secure and be well sign-posted from the highway network and be accessible on foot via legible pedestrian routes. This will make finding convenient, available spaces easier, whilst reducing congestion, improving air quality and release land, currently used for parking, for development and economic regeneration.
- Tariff structures that will manage occupancy effectively, providing priority to visitors and workers, and where appropriate discourage commuters to other towns and cities using rail stations
- Effective partnership arrangements with the County Council, public transport providers and local businesses to share the costs and benefits of the proposed improvements.
- Resources are allocated within WBC to effectively plan for future change and challenges.

Moving forwards, WBC, together with the County Council will need to work together to deliver a program of policy updates and investment in new technology to improve the customer experience, increase efficiency and keep the parking service fit for purpose. Affordable technological solutions for all issues currently highlighted by the base case report may not be available for a number of years but will need continual review and monitoring. The increasing sophistication of parking management functions and the increasing dependency on technology, systems and data will therefore place new demands on the parking service.

4.2 Our Approach

The vision and objectives will form an important part of the final strategy. They will define what needs to be achieved in the lifespan of the document in terms of successful outcomes for the residents, workers and visitors to Waverley.

Objectives have been identified underpinned by key themes. They have been developed in response to evidence led analysis and aligned to relevant local and national policy and strategy. The themes are: -

- Improving the supply and quality of parking provision.
- Providing a positive parking experience, responsive to the needs of different groups and customers
- Intelligent and efficient parking management that is ready to address future opportunities and issued.

A delivery plan will be developed for the borough and in respect of each of the main settlements to guide investment and resource decisions to achieve the aspirations expressed through the vision and objectives and is summarised in the final part of this document.

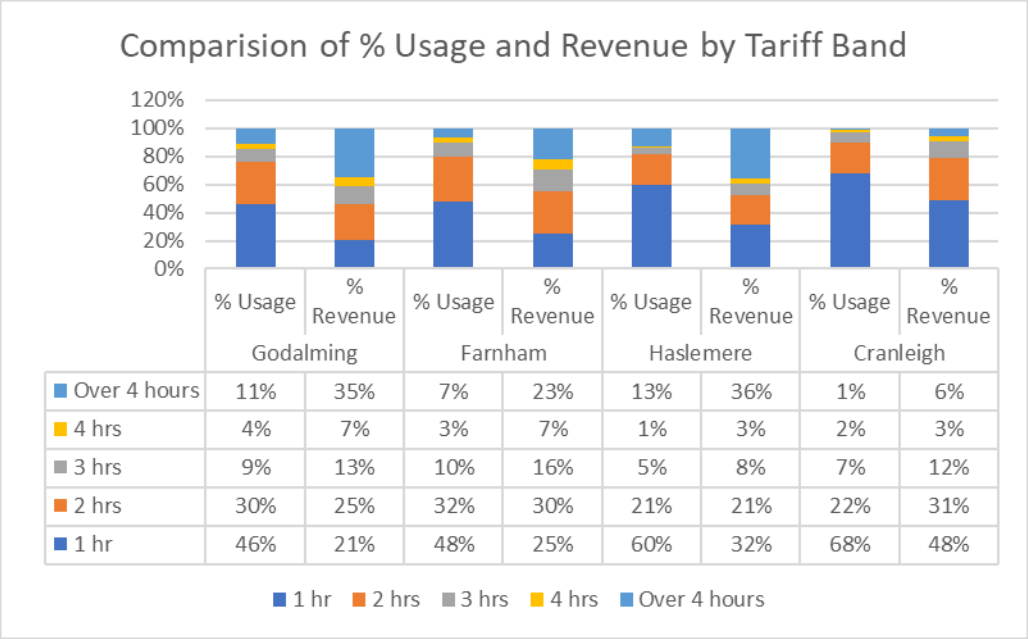
The following sections provides an overview of our recommended strategic approach to each of the objectives and priorities areas are identified with further analysis that will directly inform the actions we will take to deliver positive change.

5. Prioritising Use of the Car Parks

5.1 Understanding current usage

Car parks are occupied by a variety of user groups including residents, employees working in the borough, business visitors, customers of shops and restaurants, commuters using rail services, and tourists. Some of these will be Blue Badge Holders and have a variety of mobility issues to be considered. All of these users will have different needs and contribute to the local economy to varying degrees and therefore any strategy must consider whether all these users are to be encouraged at each car park and if not what the impact will be of excluding them.

Many car parks in the borough are extremely well used and available spaces can be difficult to find at peak periods which causes congestion and a poor visitor experience. Consultation feedback included a need for the council to limit long stay usage on its car parks to make more spaces available for visitors to help ease this issue. We have sought to understand whether this perception is a reality, however our Base Case Technical Report highlights that the current parking equipment is incapable of providing occupancy data and no origin and destination surveys have ever been carried out at the borough's car parks, therefore it is currently impossible to ascertain the true pattern of current usage. The parking equipment does however provide transaction data, which supported by similar information supplied pay by phone provider, provides a limited picture of the type of use at each car park. Our analysis of this data (excluding usage by permit holders) is summarized in Figure 1 below. Visits over 4 hours represent only 13% or less of transactions at each settlement, however, contribute as much as 36% of revenue. In addition, permit income in the borough produces almost £400k p.a. It is clear that limited long stay usage will certainly have a material financial impact on parking budgets, which is unlikely to be mitigated by additional short stay visits at peak periods.



	Godalming		Farnham		Haslemere		Cranleigh	
	% Usage	% Revenue	% Usage	% Revenue	% Usage	% Revenue	% Usage	% Revenue
Over 4 hours	11%	35%	7%	23%	13%	36%	1%	6%
4 hrs	4%	7%	3%	7%	1%	3%	2%	3%
3 hrs	9%	13%	10%	16%	5%	8%	7%	12%
2 hrs	30%	25%	32%	30%	21%	21%	22%	31%
1 hr	46%	21%	48%	25%	60%	32%	68%	48%

Figure 1 -Distribution of Parking Tickets Purchased and Revenue

We recommend that the Council procures better parking data via ANPR utilization surveys for each car park over a 1 week minimum period to include point of origin of vehicles, distances travelled and purpose of visit, to help understand occupancy at the borough's car parks. These surveys should take place outside school holidays to provide a more reliable sample. The data from these surveys would allow the Council to fully understand the usage patterns at the car park in order to decide whether to introduce length of stay restrictions or onerous tariffs to deter certain long stay users at the busier car parks. For example. long stay pay and display tariffs could be significantly increased for stays over 6 hours to discourage rail commuter usage. Local residents who work in the area could register with the Council to gain access to lower tariff levels via pay by phone payments and therefore would not be impacted by this option. Other issues created by such an approach should also be considered before any decision is made (e.g. more commuters parking on unrestricted residential streets, provision of alternative modes of transport, etc.).

6. Improving the Supply and Quality of Parking Provision

6.1 Consolidating Parking Capacity in Godalming, Farnham and Haslemere

The conclusions in our Base Case Technical Report identify the need for increasing and consolidating parking supply to improve service provision, reduce congestion and to support the future needs of businesses and residents.

The provision of appropriately located decked parking facilities would resolve this issue whilst releasing town centre land for development to help increase vitality in the area. Currently there is a lack of multi-storey car parking through the borough with only South Street and the proposed new car park at the Brightwells development in Farnham providing decked parking. Instead the towns and villages largely rely more on surface car parks, some of which are small, and on-street car parking.

Operating a portfolio of small surface parking areas is not an efficient way for WBC to use its land assets, nor does it facilitate an efficient parking service or allow residents and visitors to easily locate available parking spaces in the town centres. Given the Council's Economic Development Strategy, consideration should be given to the redevelopment of land that is currently occupied by car parks subject to a strong business case.

In some streets, the dominance of on-street parking detracts from the amenity of the town centre pedestrian experience and can lead to increased congestion as cars drive around for spaces. It is therefore recommended that consideration be given to reducing the amount of on street spaces in some locations and increasing off street provision to mitigate this.

Our analysis has shown that many of WBC's car parks operate at approaching capacity at peak times. Until some users groups such as long stay users are discouraged to use more sustainable modes of transport, the provision of additional parking spaces to meet currently unsatisfied and future increased demand needs to be considered alongside the potential impact on congestion and investment in sustainable transport modes.

Ideally the provision of parking for commuters should be reduced to release spaces for shorter term visitors. This could be mitigated by the introduction of car share schemes for example or new car parks on the edge of towns designated for workers. In respect of satisfying rising commuter demand, this would require lobbying for improved and integrated public transport connecting urban areas to railway stations or/and building additional parking spaces adjacent to railway stations

WBC owns a significant number of car parking assets in these areas and some of these car parks are in close proximity, providing the potential for consolidating parking into a larger 'decked' facility. A number of these sites are affected by 3rd party rights or contracts that may restrict development and would need to be investigated further.

The following potential opportunities should be considered for reviewing existing parking provision to release development land.

- In Godalming, consideration should be given to consolidating some of the smaller surface car parks such as Queen Street into a new decked facility at or adjacent to the Crown Court car park. This would provide a large facility in the centre of the town, which can be signed more easily on highway approaches. The Queen Street car park is not easily accessible and is often full, resulting in unnecessary vehicle movements in the area.
- Ideally additional capacity in Farnham should be located to the north of the town (off Castle Hill) to reduce the number of vehicles accessing the town centre from the M3, however there are no off street car parks on the approach and we are not aware of any potential sites that could be used. Both Upper Hart car park and Waggons Yard/Central car parks could be considered for a decked facility to capture traffic from the west. The east of the town is currently adequately served. Usage at Farnham Railway station should be monitored, and southwestern Rail/Network Rail lobbied to provide additional capacity if required.
- Options for decking in Haslemere are more limited as the Council as parts of High Street car park are leased and not under the control of WBC. Subject to the extent of the Council's ownership High Street would be preferable due to better accessibility, but Chestnut Avenue would be an alternative. Potential for relieving commuter demand issues should be considered including discussing the possibly on allowing additional parking on streets close to the railway station to help relieve any impact on the town centre.

It is essential that new parking provision is built to an appropriate and consistent quality specified in advance by WBC to ensure that car parks are well lit and kept easily clean, new spaces are of appropriate size and free from columns with a design allowing easy circulation through the car park for all vehicles. The parking management systems installed should allow pay on exit and preferably have barriered payment systems to improve the quality of occupancy data that can be provided to other systems in accordance with the recommendations later in this report.

Whilst the development of new multi-storey car parks could be considered, we have considered at high level the feasibility of providing additional decked parking areas in these areas and demonstrate under what conditions this may be viable.

6.2 Decking Systems

"Decking" systems are generally based upon a steel frame. There are several specialist decking suppliers including Fast Park, Another Level, Top Deck, as well as suppliers such as Bourne Parking and Duplipark UK who supply decks as well as multi-storey car parks.

Suppliers' costs vary significantly between £7k to £13k per space (the respective cost is generally reflected in the quality of the product). Decking systems can be installed over existing surface car parks while maintaining up to 75% of the existing capacity during works. Car park decks don't usually have foundations (in the case of single deck systems only) or lifts. The construction of a deck over an existing car park often requires the existing parking layout to be amended to facilitate the deck structure and ramp and allow a reasonable circulation throughout the whole car park. The design life of these decking systems is claimed to be 25+ years, however they will require regular maintenance to achieve this.

In practical terms, disabled access is limited to the surface level in the absence of lifts, however providing a reasonable number of accessible bays are allocated then there will be no issues complying with statutory regulations.

The only real benefit of this type of system is the speed of erection as a permanent traditional structural design would provide better value in the longer term. The construction period for a traditional deck is longer than for a temporary deck, in particular, because of the need for the construction of permanent foundations. However, where the lack of parking spaces can be an issue, such as in Godalming, Farnham and Haslemere, speed of construction and the potential to maintain some capacity, these systems may be a preferable solution.

The performance specification prepared for any procurement process should define an appropriate design life and level of quality, to ensure that the completed temporary structures will be fit for purpose and maintenance requirements will not be too onerous.

Some decking suppliers will lease their systems for short term periods.

6.3 Issues with Decking

There are issues that must be considered as part of any review as to whether decking will be an appropriate solution.

- Before any works can progress a temporary or full planning consent (as appropriate for each proposal) will be required. This could result in delays if certain proposals are deemed to be contentious. The procurement process for the supply and installation of the decking systems must also be factored in. The Council's requirements will have to be formalised via an ITT and advertised in accordance with the Council's procurement policies. If the sites are tendered separately the costs for individual sites will fall below OJEU thresholds. Subject to the advice of the Council's procurement officers, this method should reduce procurement risk and risk of challenge.

- Where decking is to be installed over existing car parks, a degree of preparation will be required to the existing surface layouts including removal of trees, kerbs, buildings and other physical obstructions. As the deck structure will interfere with the existing accessways, layouts will have to be redesigned and existing surface markings will have to be burnt off and reapplied.

- For permanent installations, the design quality will have to be higher with attractive cladding and clear span parking layouts to both comply with the likely planning requirements and to ensure that completed structures are user friendly and in accordance with modern requirements. The clear

span design itself will increase the system costs by c£1k per space, however cheaper options with regular columns at the front of parking bays make parking difficult for some users and would impact existing usage. For sensitive areas such as Retford we would expect a higher specification facility with appropriate cladding to help protect the character of the surrounding areas.

- Any additional provision of disabled spaces at the decked sites must be provided at ground level if no lifts have been allowed for. Consequently, the number of ground floor spaces on the existing car parks will be reduced to accommodate the wider disabled bays.
- The consequence of the previous two bullets is that to increase capacity by 100 spaces, we would expect decking accommodating c120 spaces would be needed.
- Additional pay and display machines will be required where decks are to be installed over existing car parks. As stated previously the installation of a barriered pay on foot system would be preferable to improve compliance and provide more reliable occupancy data.

6.4 Revenue Generation

Any proposal to provide additional decked spaces to cater for peak demand, should recognise that even where car parks are currently extremely well utilised during peak periods it is very unlikely that all additional spaces will generate a level of revenue per space equal to that currently generated by the existing spaces. This is because the new spaces will initially only be used at peak periods and will therefore generate a lower yield per space than those at surface level that will be occupied for longer periods. There is also the possibility that some of the revenue generated by the provision of additional spaces will not represent new income for the Council but will simply be existing revenue relocated from less popular Council car parks.

Assuming a maximum economic life of any new structure of 30 years and a construction cost of c£13k per space (including fees), we estimate that additional gross revenue (net of VAT) of c£1,250 per space would need to be generated to viably deliver a decking system.

6.5 Decking Viability Conclusions

As revenues per space (excluding permit income) are currently a maximum of c£3,300 per space Godalming and c£2,600 per space in Farnham and Haslemere the development of additional spaces should be financially viable. Increasing tariffs and season ticket prices in the short term would assist with funding development further and could be justified by existing demand levels and if some of the additional surplus produced is used to improve parking provision. In any event a detailed business case would be required before any decision could be made.

7. Providing a Positive Parking Experience

A key objective of introducing new technology should be to improve the customer experience. This can be achieved by: -

7.1 Communication with motorists and influencing behaviour to help relieve congestion at peak periods

The data gathered from parking technology can be used to communicate with and inform motorists, influencing their behaviour to help relieve congestion at peak periods.

The use of connected vehicles and apps will enable direct communication of traffic and parking conditions. Effective use of this opportunity will enable drivers to make informed choices about whether to drive or use other forms of transport, when and where spaces are most likely to be available and the best route to use.

If the information is provided, integrated information systems will also have the potential to recommend alternative travel methods, encouraging the use of public transport for all or part of journeys based on a combination of speed, convenience and price. For example, they could advise drivers to Farnham that Central car park is likely to be full and advise the use of an alternative car park or arrival during less busy periods.

This information will help manage demand and ensure that where capacity is an issue, all spaces are used as efficiently as possible throughout the day.

7.2 Acceptance of a variety of payment methods

The use of electronic payment methods (including contactless at the parking facility and payment by app) are already of increasing importance and are already in use in the borough. Digitisation is essential to accommodate future car and transport advances. In terms of immediate benefits, it will make it easier to create time based permits and special permits for specific functions, enabling the Council to tailor products to meet the needs of the communities it serves.

Creating convenient alternatives to cash is an essential pre-requisite for any parking operator that aims to reduce or remove cash payment. These include:

- **Providing contactless payment at all payment points**. Contactless payment is fast becoming the natural way to pay in large parts of the country[1] and is a convenient way to pay.
- **Optimising the use of Permits and long term passes**. Purchased online, these permits and passes can be a very efficient way of accepting payment for visitors and regular users alike.
- **Payment by Phone or App.** The current contract with RingGo allows users to pay for a fixed period with the option to extend this later, subject to length of stay restrictions. This model of contracting with a single mobile payment service will however be unsustainable in the long term and will need to be replaced by a multi-vendor platform that accepts payments from apps and vehicles without requiring the Council to enter into an exclusive contract with one provider. The platform would enable registered app or service providers to inform the system when one of their customers parks in a WBC parking space. Vehicles and apps from out of the area will need to be able to make payments, therefore a system able to accept payments from a variety of 3rd party sources is required. A 'multi-vendor platform' is an online service that will enable any payment app to make a payment for parking, for example, a visitor driving a German connected car would be able to use this system to pay for their parking, even though they have never registered directly with RingGo. This can be used in a variety of ways – for example a local store could also use the system to pay for a customer's parking as part of an offer. A similar platform has already been established in a number of European cities. The Council should seek to join with other authorities in jointly procuring a 'multi-vendor platform'.

Pay by licence plate.

This can be used in a number of ways.

- **At payment terminals** (aka pay and display machines[2]). Requiring customers to enter their licence plates number when paying removes the need for customers to return to their vehicles to place a ticket in the windscreen. It enables monitoring of parking places by mobile ANPR and provides data on length of stay and return rates. We understand that some of the existing pay and display machines have this capability, but it is not currently used. Whilst initially some car park users may be resistant to typing in numbers, we would expect this to only be a short term familiarity issues as these systems are widely

[1] The British Retail Consortium's annual Payments Survey shows that in 2016 card payments accounted for 54% of all retail payment transactions. Contactless is also changing the way in which people pay small amounts – 9 out of 10 coffees were paid for by contactless in 2017.

[2] Note that the term 'pay and display' is not used as machines will not issue a ticket for windscreen display.

used successfully elsewhere (increasingly so when linked to ANPR enforcement systems on privately operated car parks).

- **With Pay on Foot.** An ANPR system would assist with vehicle identification (for example with lost tickets, issues at exit etc) and with usage statistics.
- **Pay by app.** The licence plate is the vehicle identifier.
- **Permits and long term passes**. When combined with ANPR, customers can use these permits and passes seamlessly in pay on foot car parks; when combined with the new payment terminals these can be used in short term car parks. Other long term ticket types can also be created for specific types of user (e.g. commuter, tourist, rural residents, carers) to support other council policies.
- **Discounts and offers**. Payment by licence plate simplifies the process of offering discounts and validations, using an online system to manage the process of applying a discount to the parking session.

Pay for time used rather than pay on arrival.

As the current pay and display system requires payment on arrival, users are required to predict their length of stay. Many businesses express the concern that the inflexibility of this system impacts visitor dwell times. In 2017 The city of York Council and the local Business Improvement District commissioned customer research, one of the key findings of which was that 67% of respondents expressed a preference for "pay on exit" systems as they were not certain of their length of stay upon arrival.

There are alternative to pay on arrival that have been successfully implemented elsewhere. The existing options available are: -

- **Pay on foot with barriers in larger or more strategically important car parks**. This method is not currently used in WBC as is most places it is generally restricted to multi-storey car parks, however barriered systems (sometimes linked to ANPR) are becoming more commonly used by local authorities on larger surface car parks (including in Chester and Stoke-on-Trent). Pay on foot has the advantage that users have to pay to leave, reducing the need to patrol and issue PCNs (note that PCNs can still be relevant for those who park inappropriately, e.g. in disabled bays). As this is an engineered system, it can fail, therefore appropriate maintenance and support contracts will be required to manage any breakdowns. On larger surface car parks where adjoining properties have rights of access, RFID passes would have to be supplied to allow these rights to continue. Alternatively, if ANPR is installed, licence plate details for rightholders can be stored to provide access automatically.

- **Check in –Check out**. This is a system that has already been trailed by WBC in Cranleigh. It can be installed as an 'add-on' function to payment terminals that accept card payment. Customers can use their credit/debit card to identify themselves on arrival, then return to the machine before departure. Using the same card enables the machine to calculate the fee, process payment and "check out" the vehicle. This removes the need for customers to estimate their stay length on arrival. A similar process can be used with pay by app. Whilst this approach has been successfully piloted at a number of Councils across the UK including Newcastle, Lichfield and Basingstoke, we are aware that it was less successful in Waverley and was subsequently removed. Consultation feedback was negative towards this type of system.

Figure 2 below summarises the customer journey for each parking terminal configuration.

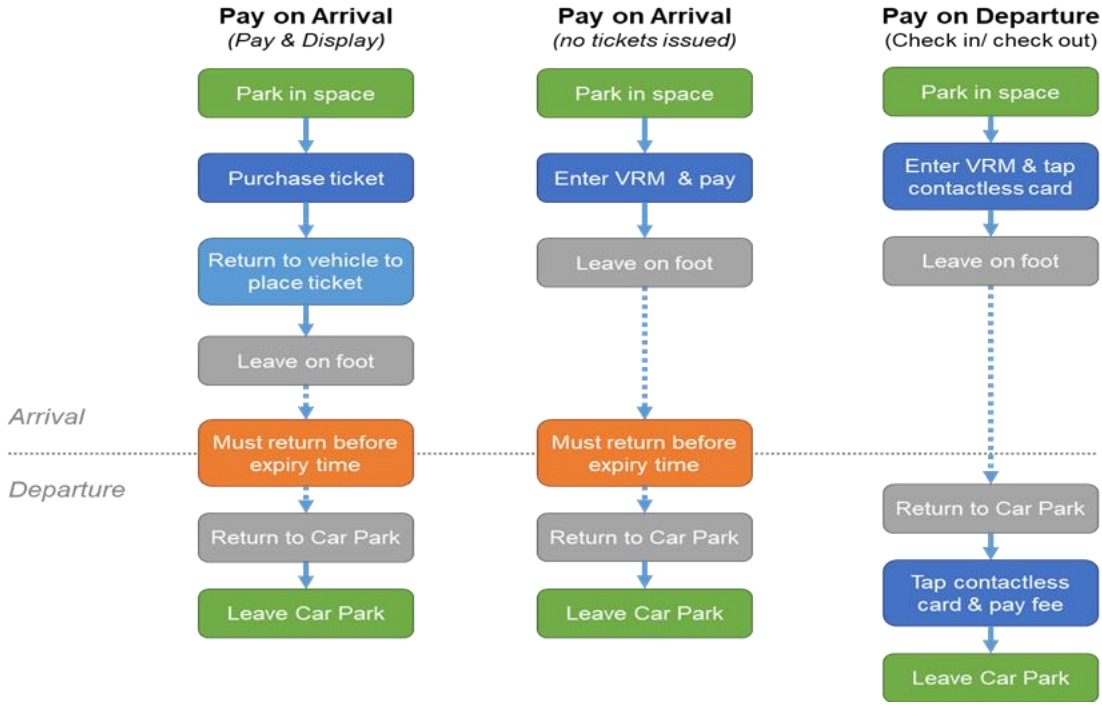


Figure 2 - Customer Journey by Parking terminal Configuration

Case Study – Cheshire West and Chester Council

Cheshire West and Chester Council (CWCC) operates both on and off-street parking within its boundary. It had historically operated its off-street car park using pay and display with the exception of one car park in Chester which had pay and display on some floors and pay on exit on the remainder. Due to issues with the pay on exit system, CWCC considered options for its replacement and the potential to extend the system to other car parks in Chester. This was for a number of reasons including: -

- Improving compliance rates at off street car parks – enforcement resources had been prioritised to on-street to ensure statutory obligations were complied with
- To improve payment options. Existing machines accepted only coins and no change was given.
- To provide functionality for the introduction of concession arrangements with local businesses

A WPS Pay on Foot and ANPR (licence plate recognition) system was subsequently installed at 7 of its car parks in Chester and new pay and display machines at other which now allow contactless payment and provide change for cash payment. Functionality includes: -

- Recognition of season ticket/pre-payment card holders with barriers raising automatically
- CWCC resident Blue Badge Holders park free for up to 4 hours using a chip system applied to the badge which the pay on foot system recognises.
- A system to manage free parking for specific users such as visitors to surgeries. A custom-built Ticket Entry Terminal in each entry lane enabling visitors to choose between concession parking and public parking. If a concession ticket is chosen the system automatically analyses the parking status and provides visitors with a 'concession parking available' ticket (to be validated within the concession

before exit), or informs them that concessions have reached the available limits and requires them to take a 'standard' public ticket.
- A web-based application that allows business to pay towards or for its customers' parking.
- An intercom system linked to the Council's car park management office during operational hours. Outside these periods, issues are managed by the CWCC's main CCTV control room.
- A flexible WPS maintenance contract, supported by front line maintenance from CCWW officers if required.

Since installation, revenue has increased significantly with the capital costs being recouped within 12 months. The system has allowed CWCC to focus more resources on enforcing on-street parking contraventions to keep traffic moving in the city. As reasonable provision was made for customer support and equipment maintenance there have been no material issues with system reliability,

Other methods not currently allowable/ANPR Technology

Consultation feedback has also proposed the use of barrierless pay on exit systems which use Automatic Number Plate Recognition (ANPR) to enforce non-payment with penalty notices issued by post to users who don't make the appropriate payment.

ANPR technology is widely used for parking management in the private sector and by local authorities in other European countries. However, under current UK legislation and regulation, UK local authorities can only use ANPR in a limited manner. In particular, PCNs can only be issued after viewing vehicles for a statutory period and then placing a ticket on the windscreen. The restriction on the use of ANPR was seemingly based on the premise that enforcement by local authorities using ANPR was unduly harsh. Elsewhere cities across Europe and North America have successfully introduced digitised systems based on ANPR surveillance. The result has been increased compliance, reduced numbers of penalties issued and increased revenue from spontaneous payment of parking fees. UK authorities are now beginning to take advantage of the same technology within the constraints of the current parking legislation.

Over the period concerned by this report the increase in the number of connected cars will ensure that motorists have sufficient information and opportunities to park in a compliant manner. It is to be hoped that this along with measures being introduced in the Positive Parking Agenda will convince legislators to revisit this question and permit the appropriate use of technology to provide efficient identification and enforcement against non-compliant vehicles. As on-street parking management morphs into more sophisticated kerbside management this issue will become more important.

Where private operators manage car parks on behalf of local authorities, we understand that the same legislative restrictions would apply although that this has yet to be legally tested.

7.3 The Case for Cashless Payment

For the customer, the need to carry change for cash payments can be inconvenient. Where coins are accepted the Council needs to securely collect and process the income at a cost to the authority. There is also the risk of break-ins to payment machines with a potential loss of income. Reducing the number of coins collected by the authority will decrease the cost of processing this income and reduce the potential for theft. However, while reducing the number of parking payment machines could lead to revenue savings on maintenance, saving on the collection and processing costs will only be achieved if the actual proportion of coins coming through the system is reduced.

Despite new payment choices previous research shows that many customers remain keen to use cash. At a national level, the most common parking payment method is still using cash to pay and display and research from 2016 suggests that nationally, the general, public would not support a wholesale shift to

cashless parking.[3] However it is clear that contactless cards are changing the way customers pay for other products and services and it may be time to use this as a way of removing cash from parking. Customers expect to be able to pay for services as seamlessly as possible, using new technologies where appropriate, and want a quick and effortless service.

The rationale is clear for moving to card only payment, removing the risk of theft and vandalism through the removal of cash storage in car park pay machines. However, experience to date suggests that other Councils have elected to retain the option to pay by cash in one form or other. While not a statutory requirement, retaining the option to pay in cash is often retained has been justified in order to encourage people to visit and support local business, to accommodate disadvantage and address equality concerns. This appears to have been the case even where parking charges are relatively high compared to those in WBC and certainly more than 'loose change'.

For WBC, it is argued that current charges are still at the 'loose change' level for short-term parking activity. Furthermore, payment by cash at a pay and display machine is well understood by the public and accepted, and there is generally a clear payment process. On the basis of experiences elsewhere retaining the option to pay in cash for low cost (i.e. short stay) parking would be recommended in the short term.

7.3.1Cashless Experiences

Most cashless parking experience is based on providing the customer with a 'pay by phone' service.

Barnet

In 2009 Barnet Council introduced cashless parking, removing its pay and display machines from the streets, and offering phone payment for parking. Charges for parking in Barnet range from £0.50 for an hour to £5.00 for more than 2 hours.

In reviewing the equality implications, it was recognised that the removal of pay and display machines could disadvantage some older customers who it was felt would be unable or unwilling to utilise the Pay by Phone service for a variety of reasons.

In 2011, Barnet reintroduced the option to pay by cash, through a contract with PayPoint Limited. The PayPoint option was included to mitigate that possible disadvantage. When this did not entirely allay concerns, a further method of payment for on and off-street parking was later added, involving shopkeepers purchasing supplies of paper 'parking scratchcards' to resell to their customers.

This reversal of policy to allow cash payment for on and off street parking was also justified in order to encourage the use of town centre parking in the borough.

[3] A study carried out for the British Parking Association by Opinium Research (sampling 2,000 UK adults (aged 18+) between 8-11 November 2016) indicated that half of the UKs motorists still prefer to use traditional cash and pay and display machines when paying for parking.

According to the survey, nearly a quarter of motorists (23%) were happy to use their credit / debit card at the pay and display machine, but were less comfortable with newer tech methods, with just 17% saying they would prefer to use a mobile phone app.

The study showed that preference for traditional payment methods was attributed to; a distrust of newer technologies (28%), finding apps or websites confusing (13%) or worrying it will cost them more than necessary (12%). 44% of motorists say that finding somewhere to park is a stressful experience, with only 28% saying it is stress free. Yet, just 17% of motorists have used a parking app to help them find a place to park and a quarter (25%) said they are not aware that these apps and website even exist.

Westminster

In Westminster, 70 per cent of all the Council's car parking spaces can only be paid for using a mobile phone or a parking card on sale at libraries and post offices. Charges for parking in Westminster range from £1.70 to £3.70 per hour.

Islington

Having first introduced phone parking in 2008, Islington Council managed to reduce its cash collection costs from £500K per annum to £65K, offset by an increase in bank processing charges, achieving a 70% take up of cashless payment. In its 2015 phone parking retender Islington also retained the offer of a cash alternative payment option through business outlets in the borough. Charges for parking in Islington range from £1.20 to £6.00 per hour.

Cambridge

In Cambridge, following a period of theft and vandalism, the parking operation decided to switch to only accepting card and mobile phone payments. It too received criticism and concern in terms of its change of policy. It has recently cash payment to some of its pay and display machines.

Brighton and Hove

Brighton and Hove Council recently upgraded 650 pay and display machines to card-only payment, more than 50 per cent of parking transactions are now made using a mobile phone. However, following the establishment of PayPoint through the city, customers can still pay using cash, including banknotes, and will receive change, unlike pay and display machines. Customers can also remotely top up their parking session at any outlet without having to return to their vehicle.

Caroline Abrahams, Charity Director of Age UK, is quoted as saying that pay by phone parking and other automated services present "huge difficulties" for many older people, more than half of whom are deaf or have hearing problems, with large numbers suffering from arthritis, making it hard for them to use mobile technology. She said: "Payment systems are an essential service and must be designed inclusively so that they are easily accessible to everyone. Evolving towards greater use of new payment methods but retaining cash or other payment methods may be more acceptable than the wholescale shelving of the cash option to ensure good customer service for all"[4].

7.3.2 Cashless Payment Recommendation

WBC should aim to become cashless. However, with all the changes in equipment, tariffs etc proposed, it may be unwise to move immediately to a cashless system and it may be preferable to aim to wait for a period before changing. The Council can assist with the change, however. An increase in customers using credit/debit card is anticipated once all the pay and display machines have contactless available. In car parks with multiple terminals, the Council should consider replacing some of their machines with cashless only terminals to encourage the use of credit/debit card transactions.

A marketing campaign highlighting the availability and convenience of card payments would also be recommended to increase awareness and increase cashless uptake.

As cashless usage increases the Council will be able to opt to convert more machines to contactless only.

[4] Elderly 'excluded' from car parks that only allow payment by mobile phone-Gordon Rayner and Dan Hyde- Daily Telegraph, 30 January 2015

7.4 Wayfinding

Audits undertaken of existing WBC off-street car parks have highlighted a number of issues and inconsistencies that need to be addressed to improve the customer experience in terms of legibility and convenience. Key issues identified include:

- There are currently no highway Variable Message Signs (VMS) with information about car parks and capacity
- Limited assistance locating available spaces.
- Car park names lack meaning for casual visitor.
- No sense of destination when walking out of most car parks.

Poor legibility and information can lead to cars circulating to find spaces in the town centre exacerbating congestion and air quality issues and generally providing a poor initial impression of the town. Onward destination information is also important to help customers quickly find their way once they have arrived through the provision of legible wayfinding information. This will frame the town in a positive manner providing a good first impression. For example, key routes between car parks and town centre can be improved both with physical improvements and digital information to improve the customer experience.

Digital apps will also help with wayfinding and it is therefore essential that open source data is available, at least confirming the location of car parks and the number of spaces.

8. Intelligent and Efficient Parking Management

The base case report highlights that there is a lack of parking occupancy and usage data to assist WBC with understanding how its car parks are used.

It is essential that decisions relating to meeting current and future parking demand are balanced and data led, considering impacts on all groups and customers. Parking technology provides a significant opportunity to collect the necessary data, whilst also reducing parking management costs for the Council to achieve more with less.

8.1 Making best use of available resources

Monitor parking bays.

Bays should be monitored according to their tendency to be misused, or to gather data in order to establish their availability in busy areas.

In WBC, we understand that Civil Enforcement Officers (CEOs) are deployed according to a number of factors including experience and community demand. They are required to seek out proof of payment via a number of sources including handheld machines and the pay and display ticket in the vehicle.

There are ways to make this more efficient by introducing new technology to collect data: -

- **Payment Terminals.** Car parks that are equipped with payment terminals can provide real time data on usage, especially if the terminals are configured for licence plate entry and/or check-in/check-out.
- **Occupation Sensors** Whilst payment terminal data will be adequate for many locations, busy or prime locations may in due course need a supplementary bay monitoring system (usually an 'overhead' camera based system or bay sensors if camera visibility is restricted by trees or other obstructions) that will provide more accurate data on space usage. Car parks can also be monitored by mobile ANPR systems (mounted in cars or scooters) giving snapshots on occupancy levels. The latter would be more cost effective if ANPR vehicles monitored on street parking too, spreading the cost across both on and off street services.

- **Pay on Foot with barriers**. If decked car parks are developed in the future that are suitable for barriered pay on foot systems, then these will provide accurate occupancy data. The addition of ANPR to these systems will add further data on patterns of use. Note however that Pay on Foot car parks with special bays (disabled, parent and child or EV charging bays) will need a secondary method of monitoring to ensure that these facilities are not being abused.

Reduce costs

Whilst new technology may require significant investment, the resulting systems will be more efficient and easier to operate for the reasons set out below.

- **Rationalise the parking machines required.** If machines no longer issue tickets then fewer machines may be required as customers do not have to return to their vehicles. Car park machines should also be positioned to make them convenient for customers entering or leaving the car park on foot.
- **Centrally manage parking systems.** Central systems can now manage tariffs remotely, including dynamic tariffs, loading new tariffs in advance and creating special tariffs for specific days. Equipment operating status can also be monitored centrally, enabling a quicker response to issues
- **Monitor the use of cash machines.** Removing mechanisms from machines with no demand for cash will reduce the requirement for onsite hardware (e.g. in commuter car parks), reducing the cost of maintenance and cash collection. Machines that only accept card payment are also less prone to theft and vandalism.
- **Adopt intelligent deployment.** Data gathered by the methods described above will build a detailed picture of parking across the Borough. This will enable the parking service to deploy mobile monitoring and CEO resources to increase compliance**.**

Integrate systems

If data from payments machines, permits, mobile payment apps, sensor technology and back office enforcement systems are integrated, in the wider context of travel in the Borough this will enable:

- traffic managers to effectively manage peak periods of visitor demand
- Multi-modal journey recommendations to be integrated into public transport strategies
- Data will also be able to inform future policies on issues such as parking demand and tariffs.

This data can be shared with County traffic managers to ensure an integrated approach to traffic management.

Data, Reporting and Business Intelligence

One of the key benefits of these solutions is that it will create a significant amount of data on the parking operation. This will not only support the creation of accurate revenue and transaction reports; it will also enable detailed analytics to be easily compiled, for example on the performance of specific car parks, the effect of tariff changes in a town, compliance levels at specific times of day, etc.

To achieve this level of information the solution will need to include business analytics software, properly configured to meet the needs of the parking operation, including the reports to support the intelligent deployment requirement described above. WBC will then have the option to develop specialised business intelligence skills in house or employ outside specialists to answer specific queries as required.

8.2 Other benefits

Employing more integrated and effective technology will reduce the cost of enforcement, and also tend to increase compliance. In the short term this may result in a higher number of PCNs being issued as patrols become more efficient, however in the longer term the increased compliance will result in an increased revenue from parking fees.

8.3 Relieving congestion and improving technology

The need to reduce emissions and improve air quality is a key driver for the Borough. Whilst current policies do not advocate controlling access to any areas, other authorities (such as Bath and Oxfordshire) are considering low or zero emission zones as a radical way of reducing NO2 and improving air quality in their city centres.

The data gathered from parking technology can be used to communicate with and inform motorists, influencing their behaviour to help relieve congestion.

The use of connected vehicles and apps will enable direct communication of traffic and parking conditions. Effective use of this opportunity will enable drivers to make informed choices about whether to drive or use other forms of transport, when and where spaces are most likely to be available and the best route to use.

This information will help manage demand and ensure that where capacity is an issue, all spaces are used as efficiently as possible throughout the day.

Phone payment apps are also a practical way of offering reduced tariffs to encourage the use of low emission vehicles in the Borough. For example, RingGo offers an Emissions Based Parking (EBP) service using vehicle registrations, combined with information from the DVLA, to automatically vary parking tariffs, based on the emissions of the vehicle being parked. A similar approach should be considered in Waverley.

9. Emerging Technologies

Some technologies, including some mentioned above, are still emerging and WBC may benefit from awaiting the results on trials conducted by authorities taking a lead on emerging digital solutions, before progressing with implementation.

For example, Harrogate Borough Council and North Yorkshire County Council have commenced a trial of smart parking in Harrogate with Appyway. The project went live on 28 January and provides a smart parking system (encompassing bay occupancy identification/navigation and 'one click' minute-by-minute payment). Around 2,000 sensors have been placed around the spa town which are battery operated and communicate with mobile phones via blue tooth technology. After locating free spaces, the technology guides drivers to the space and then even allows them to begin paying their parking charge at the touch of a button.

The £275,000 cost to implement the service has been funded through the Innovation Competition Fund, an initiative developed in partnership by AppyParking and Visa. The fund was established to find locations in the UK to showcase the benefits that can be unlocked for local authorities and residents when intelligent mobility solutions are embraced. The borough council and county council have each invested approximately £45,000 in the trial to cover the analytical software, service support and product enhancements.

We understand that almost 10% of all paid parking sessions are currently conducted via the associated mobile app. A number of performance measures have been established to evaluate the project. Over 500 users responded to an email survey which found the following results:

- 39% stay longer in Harrogate Town as a result of not worrying about a pay and display (P&D) ticket expiring.
- 21% have saved time finding a car parking space – further work is required to translate this into CO2 saved.
- 66% of users say that using Appy alleviates stress normally associated with a P&D ticket expiring.
- 89% say that AppyWay is more convenient than using a P&D machine.

Apparently sessions using the system are on average six minutes longer on-street and 23 minutes longer off-street than P&D payment sessions. Transaction costs have also reduced.

Whilst early indications are that smart parking is more convenient for the customer, increases dwell time in Harrogate Town Centre and enhances its offer, the viability of delivering a service elsewhere given the implementation costs still needs to be demonstrated once further details of the trial are available.

10. Technological Recommendations and Delivery Plan

A full digitised parking management concept will require investment and will need to be implemented in stages as existing contracts with suppliers expire and when affordable solutions are available to deliver the necessary occupancy data.

Parking Matters recommends that WBC adopt a phased approach to upgrading the parking technology. In view of the way that parking management is structured between WBC and SCC it may be appropriate for a joint approach for the delivery of this investment to ensure a consistent approach throughout the county and ensure that the specification for new technology is consistent with existing for SCC processes and procedures.

10.1 Phase 1

In Phase 1 the car park equipment would be upgraded over time or replaced as existing machines reach the end of their operational life. Once the upgrades/replacements are complete, the functionality and data produced will bring immediate improvements to the customer experience, reduce the cost of damage and theft and provide real time data to assist with enforcement.

Table 2*: Phase 1 improvements*

	Item	Benefit
1	Implement a programme of Parking Terminal replacement in the surface car parks	Enables Contactless payment at all car parks Replace existing machines with more robust technology
2	Configure new machines replacing P&D to require customers to enter Vehicle Registration Mark (VRM) with no ticket issue	Customers do not have to return to vehicle to display ticket Reduced maintenance as no tickets are issued. Real time data on VRMs made available
3	Ensure that data from all systems (machines, phone payment, back office can be integrated)	Brings all parking data together to improve reporting and begins to inform demand management strategies and intelligent deployment. Reduces the cost of enforcement. Allows flexibility between systems e.g. a payment terminal transaction could be extended via the phone app)
4	Link the enforcement system to the integrated data	Increases compliance monitoring efficiency – identifying areas that may require closer monitoring and creating a flexible 'intelligent' deployment capability. Reduces the cost of enforcement.

10.2 Phase 2

The new technology procured in Phase 2 will enable WBC to be ready for connected vehicles but will also support the introduction of targeted tariffs and innovations to improve the Council's services to the community. Note however that technology for sensing occupancy and for ANPR is improving rapidly, so specific recommendations on the best products today would be out of date by the time that phase 2 is

procured. Consideration should be given to procuring some of these improvements in partnership with the County Council for use throughout the County.

Table 3: Phase 2 improvements

	Item	Benefit
5	Install pay on foot systems (with integrated ANPR system) on larger car parks (including new decked facilities)	Easier pay on exit capability and improved compliance. The system will also deliver accurate occupancy information and usage data to inform transportation strategies.
6	Identify car parks that require sensor technology and install.	Accurate information on busy car parks will assist with predicting availability and add to the pool of data that assists with intelligent enforcement and demand management through tariffs.
7	Introduce parking availability platform	Publishes the real time availability in car parks for use by 3rd party apps/cars Reduces the number of vehicles searching for parking
8	Introduce parking payment platform	Removes the need for a contract between mobile phone/app provider and Council Enables multiple payment/mobile phone/app providers to pay for parking
9	*(Depending on free parking in future decked car parks)* Blue badge registration system (enabling Blue badge users to register their badges in return for free or reduced rate parking).	Reduces potential for fraud Increases enforcement efficiency (enables ANPR to identify that a vehicle has a badge associated with it)
10	System for assisting those with no access to credit/debit cards	If the removal of cash payment is contemplated, then this should be implemented (usually an RFID card used in a similar way to a meter key or Oyster card).

11. EV Charging Stations in Car Parks

As there are so few electric cars on the road, and with the technological improvements to come, it is impossible at this stage to predict the likely demand for charging in specific parking situations. In addition, there is very little data on how and where EV users will want to charge their vehicles, for example local shoppers may only want to charge their EVs at home and would not use a town centre car park as a charging point. Whilst the London Mayor's office demands that 20% of all new spaces in a development should have charging points, there is unlikely to be a demand for this level of charging in WBC car parks for many years.

11.1 Charging types

There are currently 3 broad types of charging station currently in use:

- **Rapid** are the fastest type, able to charge an EV to 80% in 20-40 minutes depending on battery capacity and starting state of charge. These are mostly installed in motorway service areas or similar facilities.
- **Fast** chargers are the most common in car parks and are available in two power capabilities (7kW and 22kW). These are able to charge a compatible EV in 3-5 hours, or in 1-2 hours if both vehicle and charger are compatible with the higher power.
- **Slow** charging units are rated at 3kW. Charging times vary on unit speed and vehicle.
- As the technology develops other charger types will appear.

11.2 Power requirements

Whilst a small number of slow chargers will not affect most car park power supplies, larger numbers of slow chargers or fast/rapid chargers may require the car park supply to be upgraded, often at a significant cost. Limitations in the power distribution network may preclude large number of higher power chargers.

11.3 Electric Vehicle Charging Recommendations

The lack of usage data, together with the continuing development of charging technology, suggests that modest investment in car park charging stations is the best course of action but that the underlying capacity of the electricity supply should be established.

Further investigation is required into the best types to install. When specifying a charger it will be important to identify how it will be used; in a car park used for short term parking it may be important to install higher power fast chargers in order to enable a customer to obtain a useful charge, whereas in commuter car parks, a larger number of slow chargers may be more useful as they are cheaper and will be connected to one vehicle all day.

WBC should constantly review the use of charging points and increase the number available when required up to the limit of the available supply.

12. Using Pricing as a Demand Management Tool

This section considers what steps the Council could take to update car park charges and help influence parking behaviour.

12.1 Research, Analysis and Consultation Feedback

From our analysis, current parking tariffs in WBC are generally reasonable having regard to current demand levels and a comparison with neighbouring towns. There is an opportunity to review tariff levels, particularly if revenue raised is reinvested to improve the parking experience.

Available research referred to in the section 4.5 of the Technical Base Case report would suggest that space availability is more important than pricing. As the base case report states. Car park charging is often perceived, particularly amongst businesses, as being a key determinant for changes in footfall levels in town and city centres. Over three-quarters of the business owners / workers interviewed for research in 2015, ('Assessing the impact of car parking charges on town centre footfall, (Welsh Government Report), Welsh Government, 2015', suggested that car parking options have an impact on the number of people coming into the town centre and therefore on their custom. Further general information regarding the rationale for car park charges and available research on their impact is attached within the Base Case Technical Report.

Beyond the anecdotal though, there is very little published evidence which links changes in car park charges to changes in town centre footfall. However, most research generally concludes that the general availability of spaces is felt by visitors to be more important than cost in their overall decision about visiting. This is understandable as parking provision is only useful if customers can utilise appropriate parking at the right locations to suit their needs. Above all else, customers value the certainty of being able to park when and where they want to. Whilst this doesn't always meet the objectives for the town, convenience is a quality which most people are willing to pay for.

Our analysis concludes that the car parks (with a couple of exceptions) are very well utilised and at peak times, spaces are likely to be difficult to find. Subject to further surveys to confirm our conclusions, moving forwards tariffs should be fixed to reduce commuter use to improve churn at the car parks, making more spaces available for visitors and workers. In particular, the discount applied for season tickets should be reduced over time in accordance with improvements in provision of more sustainable forms of transport.

The following sections summarise our recommended future approach to tariff policy in the Borough.

12.2 Tariff Recommendations

As a finite resource, parking needs to be managed and tariffs are one of the main ways of doing this. Moving forwards the following principles should apply.

Charges should be set at reasonable levels to: -

- Ensuring they are fair and reasonable for all user groups having regard to the needs of the individual community.
- Manage turnover of spaces effectively
- Off-set the Council's costs of operating the car parks
- The need to generate revenue for investing in future physical and technological improvements highlighted earlier in this report, to ensure the continuous improvement and sustainability of parking services. For example, is it appropriate and sustainable to continue to offer free parking at some car parks and free evening/Sunday parking at others?
- Acknowledging the feedback from consultation regarding the introduction of 'pop in/pop out' concessions prevent convenience shopper from using off-street car parks.
- Providing lower cost all day parking (where possible) for workers
- Preventing rail commuters from occupying bays that are needed for visitors and workers.
- Concessions should only be applied where there is a SMART objective for doing so and where their impact can be tracked and measured to ensure that identified objectives are met. Our initial recommendations on potential concessions are set out in the following sections.

12.2.1 Free parking schemes

Section 4.5.2 of the Technical Base Case report deals with the impact of offering free parking and confirms that based upon available case studies and research there is consensus that such schemes attract more shoppers. **In terms of revenue to WBC, providing 1/2 hour free would result in lost income of c550k p.a. (net of VAT) and 1 hour c£1.15M (net of VAT) with no guarantee of any demonstrable economic benefit. This is therefore not an option that could reasonably be recommended.**

12.2.2 Restricting Long Stay Uses

For reasons set out in Section 5, we would not recommend restricting lengths of stay or preventing long stay use until the Council has a better understand of current patterns on usage and can reasonably predict the impact of this.

12.2.3 Evening and Sunday Charging

From our investigations, free evening parking is only offered at some council car parks in the neighbouring authorities. Privately owned shopping centres generally always charge for evening and Sunday parking, which would suggest that from their experience, reasonable charges do not impact footfall.

We have limited or no data to evidence occupancy of off-street car parks during evenings and Sundays therefore more surveys and consultation will be required to support our recommendations Based upon the data we have and our experience of other similar locations and the fact that charges are applied at nearby towns, we would not anticipate that the introduction of low and reasonable during these period would materially influence parking demand. Income derived from evening and Sunday would help fund service improvements at the car parks and additional capacity. We would therefore recommend the introduction of evening charges at car parks in the main settlements.

Based upon our analysis and experience elsewhere, if an evening and Sunday tariff of £1 per visit was introduced by WBC throughout the borough than this could result in the following additional (net of VAT) revenue: -

Option - £1 per visit Evening Charge – Potential Additional Income: c£200k p.a.

Option - £1 per visit Sunday Charge – Potential Additional Income: c£200k p.a.

12.2.4 Free parking at Smaller Settlements

Whilst parking charges may deter some convenience retail customers where parking costs may represent a much larger proportion of retail spend, if set at a fair level they can help ensure that parking spaces frequently turnover, thereby increasing overall footfall. This effect can sometimes also be achieved by utilising limited stay restrictions without charging motorists, however the successful management and enforcement of car parks comes at a financial cost that needs to be funded to be sustainable, usually by charging for these parking visits. No parking provision is actually free as costs have to be funded, even if not by the motorist. For example, at out of town retail parks where free parking is often quoted as a major attraction, these parking management costs are paid for by retail tenants via lease service charges.

At a time when local authority budgets are under immense pressure, it is increasingly important that parking services are self-sufficient, whilst ensuring that parking continues to support local businesses and communities. Implementing a reasonable charging policy can meet these objectives.

Free parking is currently available on car parks in Milford, Beacon Hill, Grayswood, Hindhead, and Bramley. These are ranked in the second tier of settlement in the Waverley Settlement Hierarchy (Factual Update 2012) as communities with local services (those with a good range of services expected in larger rural and/or suburban villages). The Wey Hill car park in Haslemere is currently free on a temporary basis only.

Our recommendations (subject to consultation) are that charges are implemented, where possible, in car parks in second tier settlements adopting similar charging levels as Station Lane in Milford where a small charge is applied for stays of up to 2 hours, and an increased charge thereafter to encourage turnover of spaces.

In respect of Wey Hill we recommend a similar approach but with an all day tariff in the region of £4 per day. A lower rate could be introduced (again consistent with Station Lane in Milford) for local workers who have registered their licence plate for the discount to be applied via RingGo or the pay and display machine (providing this functionality is available).

It is difficult to accurately forecast the potential revenue from introducing the recommendations on the free car parks as there is no usage data available, however we estimate that it would be in excess of £100k p.a.

12.2.5 Cleaner Vehicle Concessions

In order to encourage the use of lower emission vehicles, we would recommend freezing future tariff increases for these vehicles so that their use is incentivised. This can be achieved using the RingGo Emissions Based Parking (EBP) service referred to earlier in this report.

12.2.6 Tariffs for local residents/Resident Cards

Some councils offer residents discount schemes for car parks and other services via smartcards. Similar schemes could be implemented via a virtual permit interface. Those registered on the scheme(s) will be able to access a special tariff through their licence plate if all WBC car park systems are based on licence plate recognition or entry.

Current schemes include the Minster Badge in York. The City of York Council currently offers residents who own a vehicle various discounts on parking charges in its car parks upon purchase and the badge allows free parking in some car parks and the on-street parking bays after 6 p.m. The badge costs £20 to cover administrative costs and is valid for 2 years. In 2017/18 only 6% of paid car park transactions were from Minster Badge holders.

The Advantage Card administered by the Royal Borough of Windsor & Maidenhead is understood to be much better utilised. This resident card offers its users much wider benefits than parking discounts including reductions on local leisure destinations and retail outlets including Legoland, Royal Windsor Racecourse and the Borough's leisure centres. An estimated 80% of the Council's population are owners of the card. The card is free for residents. Free entry is also available to all public areas of Windsor Castle In terms of parking cardholders can gain discounts of up to 50% during daytime hours and evening parking is free in most car parks.

It is clear that these types of concession are more popular if linked to a number of activities could be considered as part of a wider marketing strategy to attract more visitors to the Borough's towns and villages. When limited only to parking, they simply act to reduce parking tariffs when there is no clear evidence that will impact town centre footfall or that there is demonstrable demand for their use. They can be however be beneficial in locations where there is significant seasonal traffic to manage and deter via higher parking charges, without impacting local residents who have access to reduced rates.

12.2.7 Discount or Incentive Schemes

Using barcode technology, businesses could provide incentives for customers including providing discounts off their next visits. Payment terminals would need to be fitted with barcode readers to accommodate this.

The emergence of payment platforms integrated to the Council's systems will allow businesses to create and register apps for their own or their customers' use. These will enable them to pay or part pay for customers' parking without having to engage with the Council or use complicated vouchers or cards at payment machines. Businesses would also be able to create schemes that pay for customer parking in advance (e.g. "free parking for local customers this weekend"). We recommend that schemes are consulted upon once the car park technology can support them.

12.2.8 Concessions for Workers

Existing discounted permit schemes are not practical or affordable for all workers in the Borough. Many people work flexibly and do not visit the office every day, or alternatively may only work mornings or afternoons. Via pay by phone payment providers, bespoke tariff products can be developed for workers in the borough, particularly this on low pay. Registered users can then pay concessionary rates to park on designated car park during agreed periods. The provider would recognise the users via the registered licence plate number. Once parking terminals all have keypad functionality the same scheme could be used at the machines too.

A limited number of concessions for low paid workers should be considered at Riverside 3 car park in Farnham and Stocklund Square car park in Cranleigh. Due to capacity, options are more limited in Haslemere and Godalming unless another site can be identified for parking for workers in the towns.

12.2.9 Free Parking for Disabled Badge Holders

The Government's rights and responsibilities leaflet, issued with a blue badge, states that the purpose of the blue badge is to help a disabled person to park close to their destination, either as a passenger or driver. The leaflet also states that "...the badge is intended for on-street parking only".

Many disabled people and groups do not understand the rationale for making off street disabled parking free, the important element is that spaces are made available in convenient places. The argument that disabled people tend to be on a low income therefore should benefit from free parking, is criticised by a wide range of organisations and groups who argue that, using the same logic, other low-income groups should also be able to park for free.

The issue becomes more complex if the recent consultation on including 'hidden' disabilities (such as autism and dementia) results in an extension of the scheme.

Disabled Motoring UK's (the largest UK charity specialising in the mobility of disabled people) policy position is that Blue Badge holders should be able to park for up to three hours free of charge in off-street car parks. They argue that that the same free parking concession should apply in car parks as it does on-street e.g. three hours free parking and when car parks charge it encourages more badge holders to park on the street which is more dangerous and could possibly cause traffic problems.

Some councils (including WBC) do however charge disabled users for example, Plymouth, Newcastle and Exeter. Others such as Cornwall County Council, Rushmoor Borough Council and the Borough of Poole limit free parking to automatic Blue Badge holders with most need (automatic qualification is available if holders are receiving certain mobility benefits). Disabled Motoring UK feels this is confusing and unfair as it discriminates against people with equivalent needs who for some reason may not qualify for these benefits.

Examples of other councils' justifications for charging include tackling abuse and helping to fund services such as Shopmobility.

There is no clear recommendation on whether or not disabled parking should become free for all Blue Badge Holders in the Borough, and we would suggest that this a political decision. Charging does reduce abuse as there is no longer an incentive for Blue Badges to be shared with family members to avoid parking charges. The exact impact of removing charges would be extremely difficult to measure as there is no data available as to the proportion of vehicles previously displaying Blue Badges on Council car parks, however from anecdotal evidence from other local authorities, it could represent circa 2%-3% of gross revenue (net of VAT).

It should also be recognised that the re-introduction of free parking for all Blue Badge holders in the borough would create operational issues for any future pay on exit systems. In addition, Blue badges are issued to individuals, not to vehicles and this creates difficulties when monitoring parking using digitised systems. Badges would need to be linked to vehicles, effectively treating the badges as special passes, providing a website where badges can easily be registered (including temporarily), and incentives (such as free parking) linked to badges that have been registered. A second way of registering (e.g. a phone line) could also be provided to ensure accessibility.

When using barriered systems, registration can be used with ANPR or RFID cards. Each has its advantages (for example RFID cards can easily be transferred between vehicles) but each also has disadvantages (RFID cards could be used by drivers without a blue badge). From an operational point of view, it is better to make arrangements that remove the need to differentiate disabled badge holders from other vehicles.

12.3 Detailed Tariff Recommendations

More detailed and specific initial tariff proposals set in accordance with the principles outline above will be contained in the final strategy document.

13. Next Steps and Delivery Plan

In consultation with the Council, the next stage is to develop a strategy document and delivery action plan derived from the key recommendations contained within this report. The action plan will be split for borough wide actions and actions in respect of each of the main settlements including at a car park level.

Glossary

ANPR	Automatic Number Plate Recognition	a technology that uses optical character recognition on images (usually a CCTV camera) to read vehicle registration plates
APDS	The Alliance for Parking Data Standards	A not for profit body that Develops, promotes, manages and maintains a uniform global standard to allow organisations to share parking data across platforms worldwide.
AVP	Automated or Autonomous Valet Parking	A system able to take control of a vehicle and to drive it from the drop-off zone to the parking space and from the parking space to the pick-up zone
BI	Business Intelligence	A set of technologies, methods and processes that transform raw data into meaningful and useful information used to enable more effective strategic, tactical, and operational insights and decision-making
BPA	British Parking Association	A not for profit organisation, representing, promoting and influencing the parking and traffic management profession throughout the UK and Europe
CEO	Civil Enforcement Officer	A person employed to enforce parking, traffic and other restrictions and laws in England & Wales.
CIHT	Chartered Institution of Highways & Transportation	A not for profit body that represents and qualifies professionals who plan, design, build, manage and operate transport and infrastructure.
DfT	Department for Transport	
ELT	Extract, Load, Transform	A data integration process for transferring raw data from a source server to a data warehouse on a target server and then preparing the information for downstream uses
EV	Electric Vehicle	
GDPR	The General Data Protection Regulation	Regulation (EU) 2016/679 - a regulation in EU law on data protection and privacy for all individuals within the European Union (EU) and the European Economic Area (EEA).
	Intelligent deployment	The use of Business Intelligence methods to maximise CEO effectiveness. CEOs are deployed to locations based on the likelihood that vehicles are parked in contravention, based on previously gathered data
	Mobile Monitoring	The use of ANPR mounted on vehicles to monitor large numbers of vehicles in a short period of time.
MSCP	Multi-Storey Car Park	
P&D	Pay and display	A parking system in which a motorist buys a temporary permit from a machine and displays it in the window of the vehicle
PCN	Penalty Charge Notice	A fixed penalty notice issued by a CEO, backed with powers to obtain payment by civil action
PML	Parking Matters Ltd	
RFID	Radio-frequency identification	A system using electromagnetic fields to automatically identify and track tags attached to objects. The tags contain electronically-stored information. Oyster cards and contactless credit/debit cards are examples of this type of system

SAE	Society of Automotive Engineers	A U.S.-based, globally active professional association and standards developing organization for engineering professionals in various industries. Principal emphasis is placed on transport industries such as automotive, aerospace, and commercial vehicles
SMMT	The Society of Motor Manufacturers & Traders	A trade association that supports and promotes the interests of the UK automotive industry at home and abroad. Working closely with member companies, SMMT acts as the voice of the motor industry, promoting its position to government, stakeholders and the media.
UWE	University of the West of England	
VRM	Vehicle Registration Mark	The mandatory alphanumeric registration mark of a vehicle, displayed on a vehicle registration plate

Appendix 1 – Base Case Report