DRAFT FINAL REPORT

CHICHESTER ROADSPACE AUDIT

PLACE/ LOCALITY PLANNING

CONFIDENTIAL

APRIL 2016

WSP | PARSONS BRINCKERHOFF

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West Sussex County Council

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Draft Final Report
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EXECUTIVE SUMMARY

As with many towns and cities across the UK Chichester faces a number of challenges, it must accommodate significant new development, both residential and commercial, whilst preserving its historic character. Parking is particularly problematic, with high demand and constraints in meeting supply in the areas of greatest demand. West Sussex County Council (WSCC) and Chichester District Council (CDC) have sought to embark on a progressive approach to meeting these challenges, which looks beyond parking measures alone in order to meet current and future demands on the road network, the outcome being a strategic blueprint for Chichester that defines how parking, sustainable transport infrastructure and future development can be integrated across the city.

Roadspace reallocation is one of the great challenges of our time for contemporary transport planning. The role of high street is changing rapidly; people no longer have to make as many trips into the city centre for essential items or services with the growth of home delivery, internet and out-of town shopping centres, supermarkets and click and collect. So it is becoming increasingly important for towns and cities to be places people want to visit for their quality and character.

Our transport inheritance is typically highway dominated, built for and around car use. But it is increasingly recognised that this is not always the optimal approach: neither in transport terms, where in more urban areas public transport, walking and cycling are becoming increasingly critical for a place to thrive.

Significant growth is planned in Chichester District, much of which is focused in and around the City itself - 32% increase to City households and 31% increase in population. The Chichester Transport Study 2013 indicated that even without additional new development, there is likely to be just over 20% growth in trips by 2031 compared to the 2009 base. Proposed improvements to transport infrastructure, coupled with the measures to control travel demand and promote sustainable modes of travel, are considered sufficient to accommodate the levels of development proposed in the Local Plan.

However it is evident from the model findings that the smarter choices package plays a significant part in mitigating the effects of the new development. These changes in mode share are achievable, but this kind of step change requires a bold new approach to transport provision within the city. There is always the possibility that measures which reduce traffic congestion have the potential to enable traffic to move faster, and therefore can induce more traffic, which will reduce the benefits. As such it is generally accepted that complementary measures designed to ‘lock in’ the benefits, such as a reallocation and reduction of road capacity.

OPTIONS DEVELOPMENT

Based on the findings of the roadspace audit and desktop research of planned future development, a range of conceptual tools were firstly identified to take to stakeholders for their consideration. The conceptual tools for reallocating roadspace can be broadly grouped under the following core themes:

- Tackling parking complaints (on-street)
- Parking supply and traffic management
- Reallocating roadspace: improved places and sustainable transport corridors
- Reallocating roadspace: “to, not through”

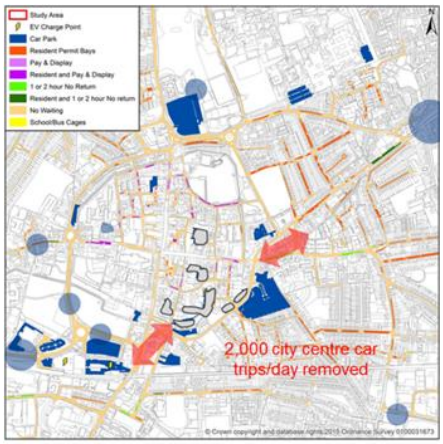
TACKLING PARKING ISSUES (ON-STREET)

Chichester relies on a significant in-commute from other towns to provide the labour and expertise for many of its services; the hospital is a regional employer sourcing staff from across the wider hinterland, and so are reliant on car-borne staff that commute from neighbouring lower cost towns. Thus the strategy for on-street parking treats commuter parking as something that is not only necessary, but should be welcomed. Where commuter parking is seen as a problem is where it is un-managed; policy responses are typically reactive and thus compound this impression of action being a response to a problem. For this reason we propose that a Residential Parking Scheme covering the whole urban area of Chichester is defined and prepared for implementation.

The evidence has indicated that many residential streets carry surplus capacity at all times. Sections of kerb that are not relied on by residents may offer a number of parking spots suitable to be allocated for daytime use by commuters. This approach establishes a city-wide solution.

On-street parking is valued, and should typically be priced higher than off street parking. A desirable occupancy rate is typically around 85-90% for on-street parking. Performance Pricing is based on adjusting the tariff paid to park based on demand to achieve the 85-90% occupancy at all times. At times and locations that demand is high, the price to park is increased and where there is high availability, the price is reduced. With performance pricing established, the need to control duration of stay using time limits should diminish.

PARKING SUPPLY AND TRAFFIC MANAGEMENT



The assessment of off street parking within Chichester indicates that there is limited scope for growth in parking demand based on existing city capacity. Occupancy was 78%, including spare capacity in the Avenue de Chartres and Leisure Centre car parks. This level of occupancy is high for a city average and this view is supported by the city centre car parks showing levels at or close to 100%.

The closure and redevelopment of surface car parks at the heart of the city centre would remove around 2,000 vehicle trips per day in and out of the city. The strategic approach suggested is for further short stay capacity to be provided in the current cornerstone car parks of Northgate, Cattle Market and Avenue de Chartres by reducing the space given over in these locations to long stay permit use.

Additional parking long stay capacity should be sought, over time and based on opportunity, in locations further out from the city centre but still within reasonable walking distance. Long stay parking displaced from the cornerstone car parks would allow those to accommodate and become the principal short stay locations serving the city.

ROADSPACE REALLOCATION

The third core concept builds on the previous two, and reallocate some of the roadspace, and promote improvements to the urban realm and greater travel by sustainable modes. The approach to roadspace allocation promoted within this study is underpinned by an improved understanding of the competing needs of street users, based on the principles of “Link” and “Place”. Each part the cities network of streets has a different role to play, including a differing balance between its Link and Place status functions.

As well as improving the urban realm, roadspace reallocation can serve as a crucial tool in providing a more conducive and appealing environment for walking, cycling and travelling by public transport. In combination with the parking measures and smarter choices package proposed as part of the Local Plan transport strategy, it is essential to 'lock in' the benefits of car based trip reductions.

In our view Chichester is potentially ideally configured towards promoting sustainable transport. Ultimately reallocating roadspace to create better walk, cycle, urban realm and public transport, whilst simultaneously removing or relocating provision for car based travel can create a virtuous circle, where more people chose to walk and cycle because there is less traffic on a particular route, which justifies further measures, further reducing demand for travel by car. A step change from seeking to continually invite more vehicle traffic into the city centre and cater for it by increasing highway capacities at the expense of the other roles streets play and the contrary to the overarching vision and objectives for the city.

TO, NOT THROUGH

The fourth concept builds on the previous ones and looks to then go a step further, by thinking about how in the longer term traffic might be progressively and proactively managed away from the city centres core areas to enable a greater emphasis on key place functions (visitor attractions, shopping, restaurants, bars etc.). The strategy is therefore to reduce the attraction of using the inner ring road as a way to pass through the city. This is a bold proposal but what is becoming increasingly accepted within the transport planning fraternity, is that in combination with measures to make travel by sustainable modes more appealing, it is necessary to introduce some restraints to vehicular access.

For those within the urban form the reduced access and volume of vehicular traffic creates greater permeability for cycling and walking, making walking and cycling the natural choice for residents travelling within Chichester. This culture and choice need not be borne of significant cycle infrastructure engineering, but by a progressive and clear reduction in vehicular traffic on the roads within the city core and the provision of obvious routes in those areas away from the core.

For motor vehicles, the strategy is based on creating clarity that any trip into the core must return by the same route that it entered, and Chichester is not a through route for motor traffic. This, along with a progressive reduction in more central parking destinations will significantly reduce the traffic demand and open up clear opportunities beyond the initial years to reallocate roadspace used for wider highways just outside the city walls.

STAKEHOLDER FEEDBACK

The stakeholder feedback was encouraging, with a 23% reduction amongst technical stakeholders who felt achieving the vision would be challenging or very challenging, and a 32% drop in the number of community stakeholders who felt it would be very challenging, demonstrating a broad acceptance that the overall strategy would help contribute towards realising the overarching vision for Chichester. Reallocating roadspace was the preferred concept, both amongst the technical and stakeholder groups. The concept of relocating off-street parking supply was the 2nd priority amongst technical stakeholders, whilst community stakeholders were evenly split between several options for both their second and third priorities.

OUTLINE RECOMMENDATIONS

These recommendations were distilled into a package of specific solutions that make up an outline programme of short, medium and long term actions.

Demand for city centre parking is close to capacity. There is some capacity in car parks outside and on the periphery of the city centre. It is likely that with further growth in demand a strategy and plan to implement changes to improve parking availability will be required. A number of off street car parks are within the core historical area of the city. These locations have high turnover generating a large number of vehicular trips into the city throughout the day. Many of the larger car parks on the edge of the city centre accommodate a significant number of long stay parking. There is scope for these users to be displaced in order to generate sufficient capacity for short stay car parks in the central area to have a reduced role and allow for demand growth and urban improvements.

A number of areas where place function should take priority over traffic access/parking were identified, which in our view give undue priority to traffic over their importance as places. High traffic volumes, highway dominated environments and vehicle speeds create visual intrusion, noise, emissions and severance, impacting on place quality. Elsewhere streets are underselling the local attractions through poor urban realm or narrow footways.

We recommend that a policy of delivering improved urban realm in areas with high place functions, with the emphasis on improving the quality of the street as a destination in its own right, prioritising pedestrians. The degree to which these priorities should be compromised by the streets role as a link should be governed by its Link status. In some places it may be that a link status can or should be downgraded from a primary traffic route.

We would suggest that Chichester can afford to be bold. It is ideally configured for sustainable transport; by virtue of its compact scale walk/cycle times cover most of the urban area. It has the makings of a good cycle network, and proposals for significant number of additional routes. Equally the constrained historic city streets in many places are more suited to the human scale. Importantly it is sufficiently attractive appealing destination that in our view it can and should strive to be a quality destination, with an emphasis on the experience rather than competing on how close to the shops visitors can park – this will never be Chichester's competitive edge, its unique character and charm is. The feedback from stakeholders largely echoed these sentiments.

Following on from the recommendations for parking supply, we propose a bold approach be considered whereby the longer term objective is for traffic to be intercepted at the re-purposed principle car parks (Northgate, Avenue De Chartres, Cattle Market), which may then enable part of the ring road to be downgraded. The strategy being to reduce the attraction of using the inner ring road as a route through the city, whilst still providing access to trips that are destined for the city centre. This would require extensive optioneering, conceptual design, feasibility assessments and traffic modelling to determine its viability, and how best it might be implemented. But we would advocate that the concept be explored further, as it could contribute significantly towards realising the vision and objectives for the city

EVALUATION OF APPROACH

Throughout the duration of the study we have maintained a log to inform how the approach might be adapted and refined for future application.

1 INTRODUCTION

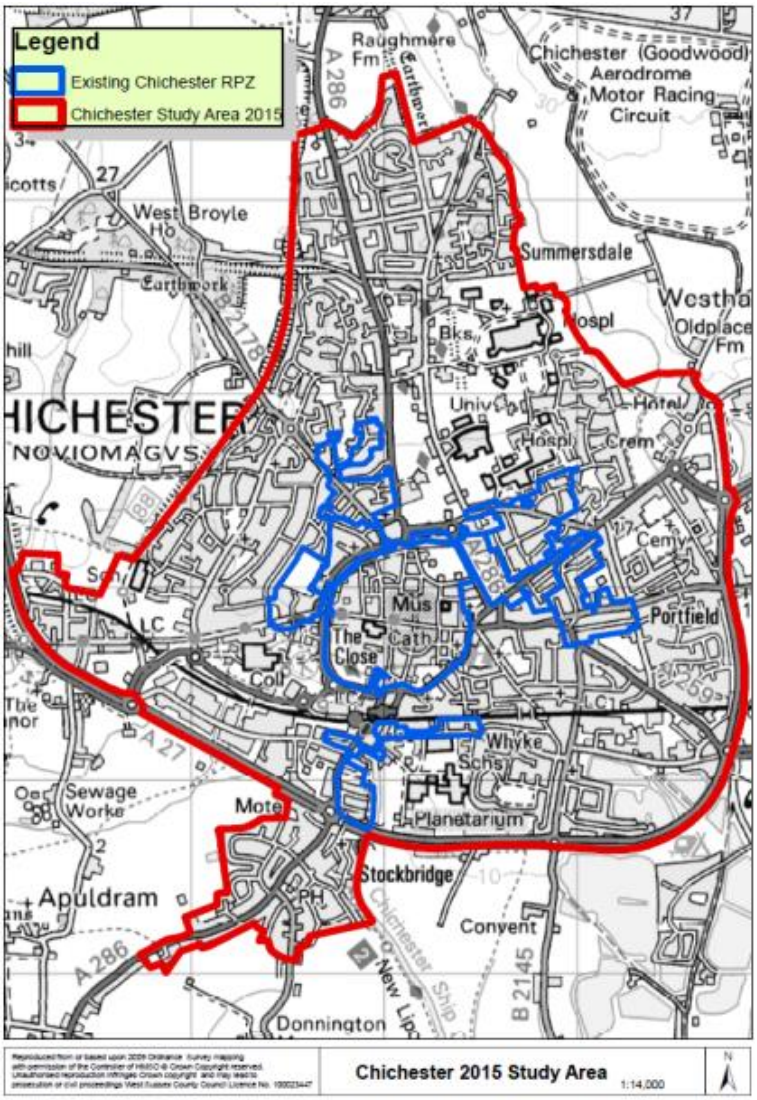
1.1 STUDY OBJECTIVES

CHICHESTER FACES A NUMBER OF CHALLENGES

- Existing congestion
- Planned growth
- Preserving and enhancing its historic character
- Parking issues are particularly acute

As with many towns and cities across the UK Chichester faces a number of challenges, it must accommodate significant new development, both residential and commercial, whilst preserving its historic character. The city's transport network will inevitably feel the strains of these added new demands on its already congested and constrained streets, many of which date from Roman or Medieval periods and were designed with horse and cart in mind. Parking is particularly problematic, with high demand and constraints in meeting supply in the areas of greatest demand.

Figure 1 Study Area



HISTORY

In January 1988, Chichester District Council approved a proposal to introduce charging in its free off-street car parks in the city. The introduction of these parking charges, it was felt, would lead to increasing pressure for on-street spaces in the surrounding area. West Sussex County Council (The Employer) therefore decided that on-street parking controls should be introduced to complement and deal with the likely effects of charging in the off-street car parks. A Residents Parking Scheme (RPS) was subsequently introduced in the city centre in 1990, with further zones added in outlying areas during 1992. In April 2014, a number of new zones were added

to the RPS, primarily to deal with high levels of parking by groups such as commuters, non-residents, shoppers and students in unrestricted roads on the edge of the existing scheme.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Chichester parking hell has been 'pushed north'

A busy Bostock Road

Whilst the extension of the RPS and other waiting restrictions into outlying residential roads has been beneficial for many residents, the inevitable consequence has been that a large number of vehicles have 'displaced' into other unrestricted roads, either because these offer free long term parking or because there are fewer off-street car parks available to use further away from the city centre. Some of these roads may have rarely experienced parking congestion before, while others may already be congested with the displacement intensifying the problems.

Whilst further waiting restrictions (including a possible extension to the RPS) may be justified in some areas on safety, access and amenity grounds, it is clear that these alone do not offer a long term solution to the overall growth in car use and parking demand and therefore displacement is likely to continue in unrestricted roads across the city. In the meantime, new housing allocations and redevelopment, business and retail expansion, the growth in the visitor economy and the associated growth in car use places continual pressure on the existing road network across the city as well as its car parks.

A BROADER APPROACH, BEYOND PARKING MEASURES ALONE

→ Move towards place/locality based planning, outcome being a Strategic Blueprint for Chichester

→ Defines how parking, bus, rail, cycle, walk, safety improvements and future development (e.g. housing) can be integrated so network is used most efficiently

West Sussex County Council (WSCC) and Chichester District Council (CDC) have sought to embark on a progressive approach to meeting these challenges, which looks beyond parking measures alone in order to meet current and future demands on the road network. In line with emerging corporate objectives, the aim is to now move towards wider place/locality based planning, the outcome being a strategic blueprint for Chichester that defines how parking, various alternative travel solutions (bus, rail, cycle, walk etc.), infrastructure improvements, safety considerations and future development (e.g. housing) can be integrated across the city so that the road network is used and managed in the most efficient way possible. This blueprint will ideally allow both councils to understand what resources and funding is required to carry out sustainable transport related improvements (not just parking) in Chichester but also take a view on how similar studies might be prioritised and implemented across the district and indeed the county of West Sussex in the context of locality/place plans.

THE 'ROADSPACE AUDIT'

→ Primarily concerning parking, but also considering wider measures to manage parking demand

→ Current and potential future demands

→ Understanding stakeholders perspectives

→ Options and Recommendations

WSP | Parsons Brinckerhoff were appointed to undertake a roadspace audit of Chichester. This will provide essential technical data and enable officers to identify and assess the current demands upon the road network and parking stock. Furthermore, by identifying potential future demands/pressures on the road network and parking stock and making recommendations for improvement, it will enable officers to assess what measures and resources might be required in order to meet these challenges, adjust supply and ultimately optimise the efficiency of the road network and parking stock.

1.2 ROADSPACE ALLOCATION

HOW SHOULD THE STREETS OF CHICHESTER BE USED?

→ Historic City with constrained infrastructure capacity

→ The role of high street is changing rapidly

→ people no longer have to make as many trips into the city centre

→ Shopping as a share of all trips is falling

→ On average there were 19% fewer shopping trips in 2011 compared to 1995-7

→ Growth in online shopping, home deliveries

→ Out of town shopping for bulk items

→ Must be places people want to visit for their quality and character. About the experience

Many of the challenges fundamentally come down to how scarce roadspace is allocated, and the consequences of that allocation in terms of how people travel and use the space available.

STREETS FOR PEOPLE

Roadspace reallocation is one of the great challenges of our time for contemporary transport planning. The role of high street is changing rapidly; people no longer have to make as many trips into the city centre for essential items or services, as much of these can be now be ordered on-line and delivered directly (home delivery, internet banking) or picked up outside of the City centre (out-of town shopping centre, supermarkets, click and collect). So it is becoming increasingly important for towns and cities to be places people want to visit, not through necessity, but for their quality and character.

Our transport inheritance is typically highway dominated, built for and around car use. But it is increasingly recognised that this is not always the optimal approach: neither in transport terms, where in more urban areas public transport, walking and cycling are becoming increasingly critical for a place to thrive.

Given streets make up the bulk of the public realm, they play a crucial role in fostering this all important character, and attracting people to the city. Equally the needs of the City, the community and the economy are also changing as the population ages.

The issues faced by Chichester are not unique; the context and the local considerations are.

2 APPROACH

2.1 OVERVIEW

The approach taken to progress this study and achieve the objectives set out in the preceding chapter are described below, and summarised in Figure 2, drawing on our experience of similar projects elsewhere in the UK.

ROADSPACE AUDIT

Our approach adopts a supply and demand balance. The parking supply has been determined from an assessment of inventory. Demand is taken to be the maximum demand, which is placed into the context of 'Use' in the third element of our approach.

DETAILED SITE APPRAISAL

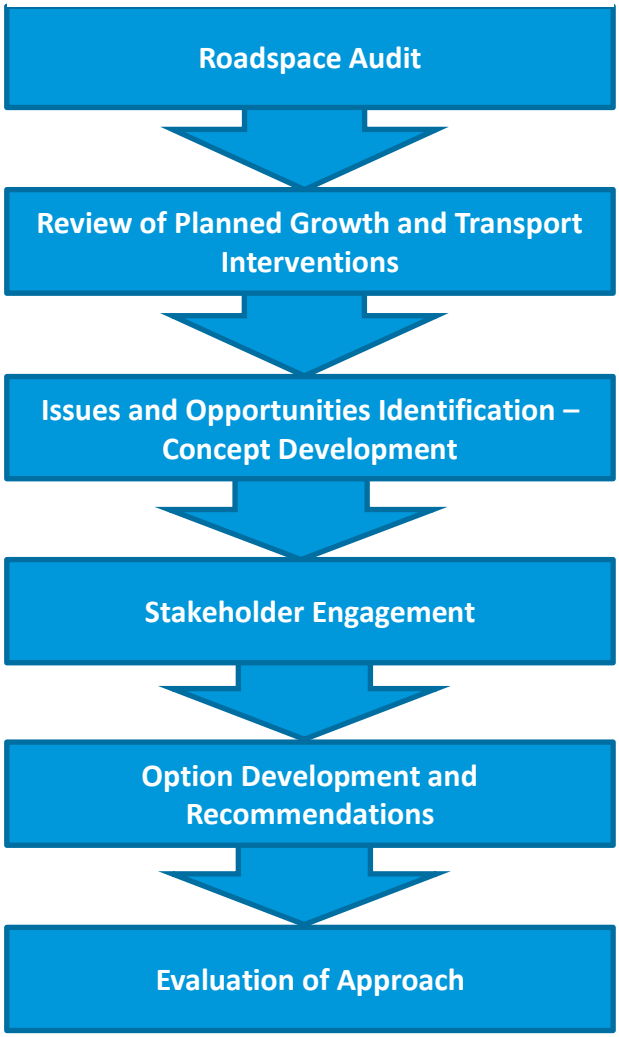
A key aspect of the study approach has been for the team of independent specialists to spend time on site. Our team made extensive observations and built up an extensive collection of site photographs to inform the concept development

ON-STREET PARKING DATA

Inventory - confirmation of the number and type of on-street parking bays within the study area has been based on referencing existing traffic orders and undertaking an on-site survey to confirm the physical inventory of the city.

Demand - we liaised with Council records to confirm numbers and types of permits issued. Waiting list demand for each permit type was also collated and applied to the presentational data.

Figure 2 Study Methodology



Use - the actual use of the permits was measured in the RPS by observational survey during a typical term time weekday. The same surveys were used to capture voucher use, parking compliance, bay occupancy, duration of stay and turnover in the city centre.

OFF-STREET PARKING DATA

A similar approach was adopted for off street car parks.

Inventory - we collated an inventory of significant off street parking available for public use, whether operated by the District Council or other private organisations. For each we determined an inventory of capacity, surface condition/type, hours of operation, tariff, payment method and enforcement. Using a GIS layer we collated for Council locations information on season ticket use and any waiting lists, and applied the same approach to privately operated facilities.

Demand - we sourced records from the Council relating to issued season tickets of each type and waiting lists.

Use - we undertook a single term time weekday survey of each off street car park to determine actual use. The type of tickets used for each vehicle parked was noted. This information was then reconciled with season ticket sales, and compared to ticket transaction data provided by the Council to validate observations. We then used this relationship to identify changes in use over the year.

Extending the RPS - we undertook two separate parking surveys (one in the summer holidays, one in term time in 30 roads within the study area (not including the existing RPS). These surveys and data collection enabled an evaluation of the need for further residential permit zoning. The first survey of the day at 5am to capture all and only the residents. With this beat achieved, the 19:00 beat may be superfluous; commuter parking and short stay visitor parking was picked up through the other beats.

A **Purpose Assumption Matrix** was used on a number of surveys to effect greatest efficiency and confirms most probable purpose of observed vehicles. Where parking pressures during the day were potentially short stay and locally generated, such as in the vicinity of a hospital, university or retail area, a further parking beat survey was undertaken during the day at an interval of not more than an hour from another. This has helped to identify the extent to which that the location is being used for relatively short stay parking, and provide factors applicable to other times of day.

REVIEW OF PLANNED GROWTH AND TRANSPORT INTERVENTIONS

We undertook a comprehensive desktop study to assemble relevant documents from WSCC and Chichester District Council (CDC), including:

- Local Plan 2014-2029 documents – including planning, policy and forecast demographic changes
- Chichester District Council – Local Plan Transport Study of Strategic Development Options and Sustainable Transport Measures – Final Report (March 2013)
- Chichester District Council - Local Plan Chichester Link Road Modelling (January 2014)
- West Sussex Transport Plan (2011-2026)
- Draft Chichester Strategic Infrastructure Package (SIP) (August 2015)
- Draft Chichester Infrastructure Delivery Plan (IDP)
- Chichester District Car Park Strategy 2010-2020 (September 2010)
- Draft Chichester Place Plan
- CDC Vision for Places
- The beautiful outdoors initiative - West Sussex Promotion as a tourist destination
- Chichester Employment Land Review Update, Chichester District Council, Final Report (January 2013)
- West Sussex Local Economic Assessment Spatial Area Factsheets – Chichester
- Chichester and Horsham Travel Surveys 2015 Report of findings, September 2015

- West Sussex Sustainable Travel Towns LSTF Bids – Chichester
- Previous Transport Studies, including the South Coast Corridor Multi Modal Study (SoCoMMS)

These provided a useful overview of the likely future shape of Chichester, including new developments, transport infrastructure, parking policy and spatial planning.

The reviews also enabled us to identify the existing vision/s for Chichester as set out in the current policy documents, both in terms of transport and on a wider planning basis, to inform the stakeholder engagement process.

We undertook a review of travel patterns and projected future network performance from available traffic model outputs and automatic count data.

STAKEHOLDER CONSULTATION

A critical aspect of the study has been to ensure that it is informed by consultation with a wide range of stakeholders, as each brings a particular perspective on the issues being considered.

The **Stakeholder Engagement** provided an opportunity to relay the emerging findings of the roadspace audits and review tasks, and some initial conceptual tools to present to the stakeholders for consideration and comment, allowing us to test the water and incorporate revisions, and ultimately secure buy-in.

Engagement & Communications Strategy - given the number of stakeholders involved, good communications between the various parties were vital. An overarching engagement and communications strategy was prepared, taking into account the different types of stakeholders and their unique relationships to the city. We undertook a stakeholder mapping exercise in collaboration with WSCC to identify the full range of stakeholders, including officers and elected members, statutory bodies and utilities, parking, transport and freight operators, representatives of business organisations and large employers, cycling and walking groups, local interest, conservation and accessibility/disability groups.

The strategy was to bring consistency of approach to the engagement activities and set out a project communications protocol, with pre-planning to ensure that subsequent consultation activities were effective and consistent.

Stakeholder Engagement Meetings and Workshops - stakeholder workshops were hosted involving key groups, including invitations to representatives of the following groups:

- → Business groups (Chamber of Commerce, BID, Federation of Small Businesses
- → Major Employers/ Land owners – College, Health Services, University, Business Park etc.
- → Public Transport operators
- → Taxis
- → Police and Emergency Services
- → Accessibility groups
- → Transport user groups
- → Parking operators
- → WSCC and CDC officers

The workshops provided steer as to the key issues and perceptions of the different interest groups, and will play an important part in informing and refining the options development and recommendations.

Workshop Format - around 30-35 stakeholders were invited to each workshop. The sessions each ran for approximately 2.5 to 3 hours. Each featured interactive presentations and small group discussions, with the overarching aim of exploring the issue and potential solutions, reaching consensus where possible. We made effective use of 'electronic voting' handsets during the presentations to capture participants' views on key discussion topics. These are an effective system for ensuring that all participants, not just the most vociferous, have had the opportunity to express their views.

Tailored approaches to engagement we taken with each group; technical stakeholders were pre-divided into several discussion groups (5-8 participants per group). We set participants a task to review how roadspace could be allocated in a number of example streets across Chichester, illustrating some of the examples provided earlier in the session. For community stakeholders the group exercise was replaced with an extended question and answer session.

OPTIONS DEVELOPMENT AND RECOMMENDATIONS

Based on the findings of earlier stages, including the evidence base informed by the roadspace audit and feedback from a wide range of stakeholders we developed a range of recommendations for how roadspace might be most effectively allocated throughout the city.

For each solution we have made an assessment of their:

- Indicative scale costs
- Deliverability
- Timescales

An overarching strategy was developed bringing together the inter-related core concepts, which each contributed a number of proposals to an overall package of schemes covering the short, medium and long term.

EVALUATION OF APPROACH

Throughout the study a log of our experiences and lessons learnt have been recorded against the following headings, to inform how the approach might be adapted and refined for future application:

- Suitability of Scope and additional considerations
- Difficulties encountered
- Limitations of the approach - reliability/clarity of data
- Deliverability within budget
- Timescales
- Recommendations for future improvement/refinement

3 EVIDENCE BASE – KEY FINDINGS

This chapter presents a summary of some of the key findings from the **roadspace audit** (parking surveys and review of existing roadspace use) and the **desktop reviews** of planned growth and committed or proposed future transport interventions.

3.1 LOCAL CONTEXT AND PLANNED FUTURE DEVELOPMENT

Chichester is the Cathedral City of West Sussex and is situated in the south-west corner of the county, approximately 15 miles east of Portsmouth. The city has a population of approximately 25,000 and provides a significant centre of employment within the sub-region.

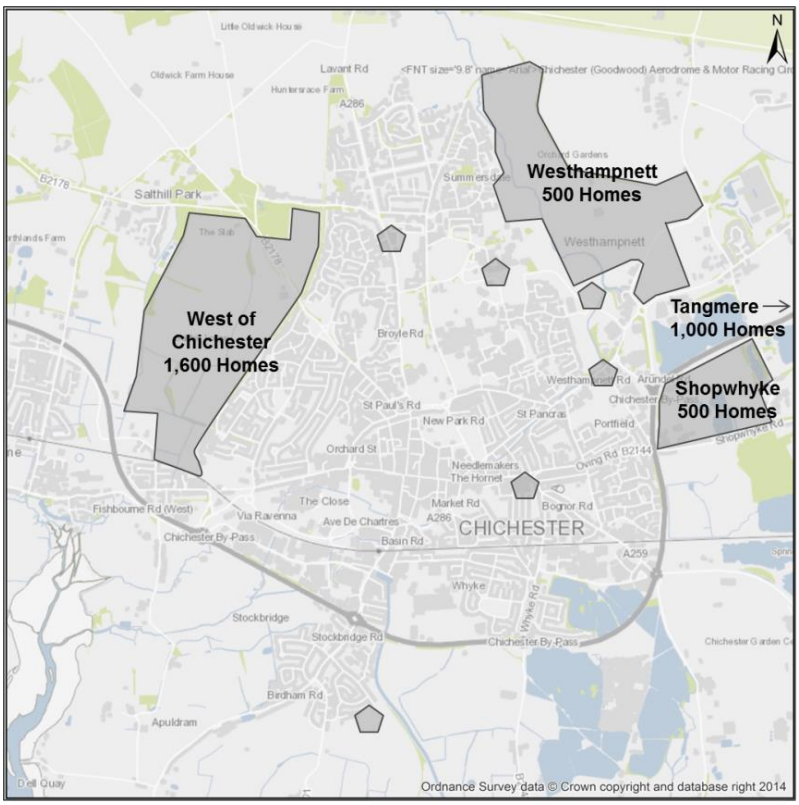
Significant growth is planned in Chichester District, much of which is focused in and around the City itself.

- 7,388[1] homes over the period 2012-2029
- Approximately 435 homes per year
- 16% increase to district households
- 32% increase to City households
- 31% increase in population

As well as the strategic sites shown in Figure 3 a number of other committed and ongoing developments are underway, including Graylingwell to the north of the city (700 dwellings).

In combination with the strategic sites these developments amount to a sizeable increase to City.

Figure 3 Strategic Development Sites

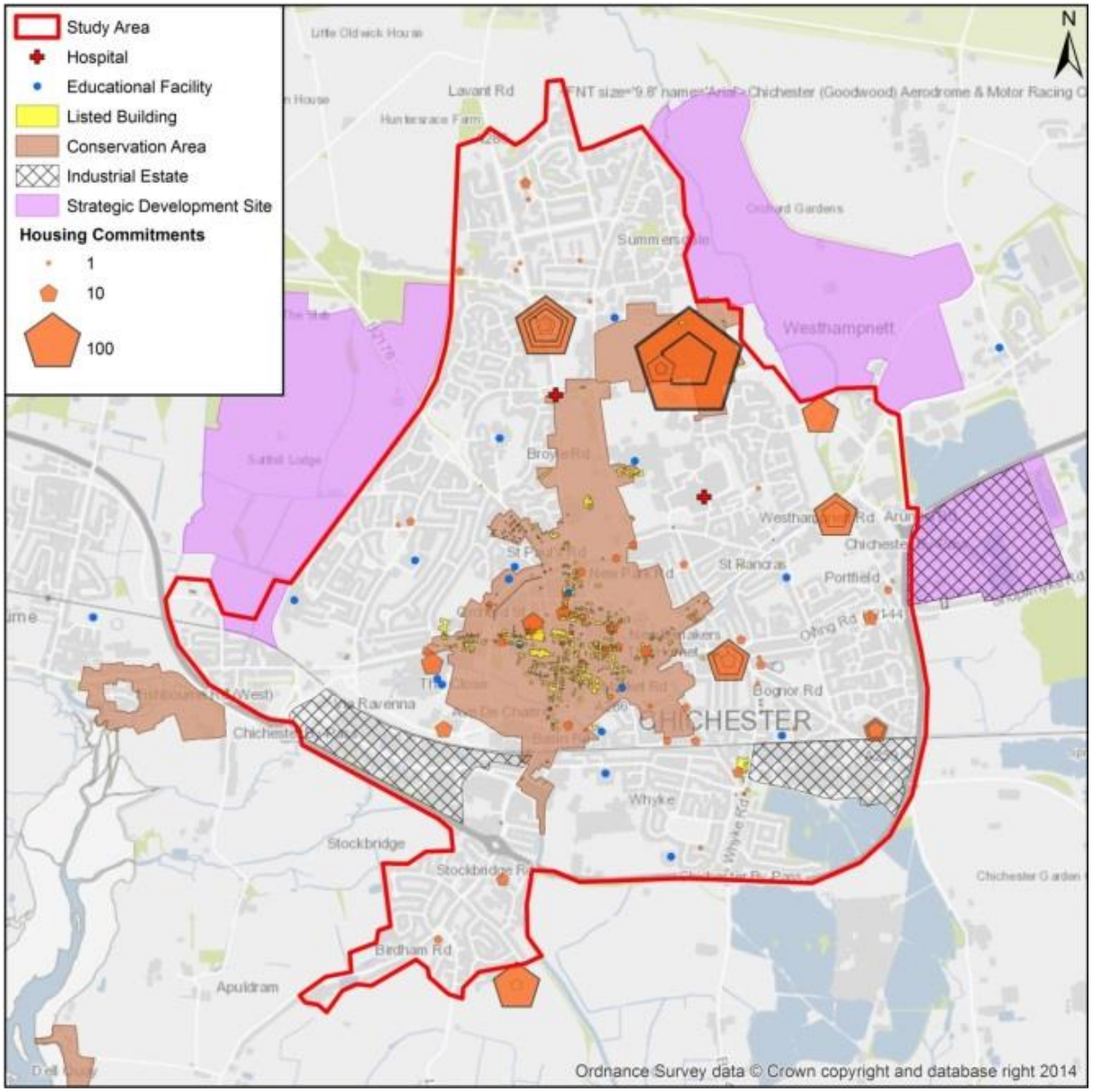


[1] Source: Local Plan

Figure 4 overlays the planned future development, both strategic sites and smaller housing commitments, onto the existing planning designations (i.e. conservation areas, listed buildings, industrial estates) and key services/amenities, such as schools, colleges, universities and the hospital.

→ Road congestion is already a major issue, ~20% growth in car trips forecast by 2031 without additional new development

Figure 4 Planned Future Development, Planning Designations and Key Services



3.2 TRANSPORT CONTEXT AND FUTURE PROPOSALS

Chichester is the hub of several main roads, the most important of these being the A27 coastal trunk road connecting Eastbourne with Southampton. The A27 also connects Chichester to the M27. The secondary coastal road, the A259, which begins at Folkestone in Kent, joins with the A27 here and ends in Havant to the west. Both those roads make east-west connections. Three roads give Chichester access to the north:

The A29 from London, which has also joined the A27 to the east of the city; and the A285, which gives access to Petworth and another cross-country road (the A272); and finally the A286, heading towards Guildford.

Chichester railway station, on the West Coastway Line, has regular services to Brighton, London Victoria via Gatwick Airport, Portsmouth, Southampton and Basingstoke.

Road congestion is recognised as a major issue affecting the city and the junctions on the A27 Chichester Bypass, particularly during peak travel periods. The consequences of which are traffic diverting onto less suitable roads, delays and road safety issues. These have a detrimental impact on air quality in the city, which has resulted in the designation of three Air Quality Management Areas (AQMAs).

The Chichester Transport Study 2013 indicated that even without additional new development, there is likely to be just over 20% growth in trips by 2031 compared to the 2009 base. Without mitigation, new housing and employment proposed in the Local Plan would increase this further, leading to further congestion and increased queuing times around the A27 junctions and within Chichester city.

TRANSPORT STRATEGY TO FACILITATE GROWTH

The Local Plan strategy for transport aims to promote a more integrated and sustainable local transport network and to facilitate ease of access to local services and facilities supporting planned development and mitigating its cumulative impact on the highways network and other transport services.

The West Sussex Transport Plan (2011-2026) provides strategic direction for transport planning within the Plan area, focusing on the objectives of promoting economic growth;

- tackling climate change;
- providing access to services, employment and housing; and
- improving safety, security and health.

The strategy aims to tackle identified transport issues as funding becomes available, and ensure that new development supports and contributes to:

→ increasing use of sustainable modes of transport ('Smarter Choices'); improving the efficiency of local transport networks to improve journey times and air quality;

→ improving safety for all road users; discouraging HGVs from using unsuitable roads; and

→ improving accessibility between communities and larger towns within the District.

A key element of the strategy is a package of proposed improvements to the six junctions on the A27 Chichester Bypass, aimed at improving traffic capacity, reducing congestion and queuing, and addressing road safety issues. The District and County Councils worked with Highways England to identify a package of transport measures to mitigate traffic impacts associated with new development over the Plan period.

Figure 5 Example of the highway improvements proposed for the A27

Figure 7-c Fishbourne Road Roundabout Improvement – Preferred Approach

→ £12.8m on A27 improvements to the 6 junctions on the A27 Chichester Bypass

In addition, the County Council has developed a **Strategic Infrastructure Package** to support planned new development. The package includes proposed transport improvements which will aim to reduce congestion and encourage people to use sustainable modes of travel such as walking, cycling and public transport.

A key objective will be to achieve a significant shift in travel behaviour aimed particularly at reducing car use for short distance journeys. Proposed measures will include targeted investment in local transport infrastructure, focusing on delivery of improved and better integrated bus and train services, and improved pedestrian and cycling networks.

It is also recognised that parking policies for the city included in the **Chichester District Car Park Strategy 2010-2020** will also play a role in managing growth in car use. The Car Park Strategy indicates that if spare capacity in the city's car parks falls below a specified level, the need to introduce Park and Ride should be considered, and notes that should this situation arise, a review of the Local Plan may be required in order to revise the transport strategy for the city and identify potential Park and Ride sites.

→ £7.25m on Local junction improvements, Cycle route improvements, Bus priority measures, Real-time Passenger information, Better bus-rail interchange, Variable Message Signs, Parking management, Travel Marketing, Travel Plans, Car sharing, Smarter Choices

→ WSCC Strategic Infrastructure Package to support planned growth

→ Focus on improved bus and rail services, improved pedestrian and cycling networks

→ Behavioural change, such as easy-to-use journey planning tools

→ Parking policies will also play a role in managing growth in car use

These proposed improvements to transport infrastructure, coupled with the measures to control travel demand and promote sustainable modes of travel, are considered sufficient to accommodate the levels of development proposed in the Local Plan.

Further to the proposals associated with Local Plan WSCC secured **LSTF funding** to deliver a number of additional measures to improve walking, cycling and rail access in Chichester city centre, including:

→ North/south cycle route - Improved cycle links through and around the city centre, connecting from the north to the bus and rail stations with retail core, employment and education sites and leisure facilities

→ Chichester rail station – access improvements - Improved station forecourt area for pedestrians, cyclists and drivers (taxis, drop-off and parking) and access to the bus station.

→ Expanded cycle secure parking facilities at the rail.

→ A286 Northgate gyratory - safety improvements for cyclists

→ A286 Southgate gyratory – safety improvements for cyclists - A new cycle route and upgrade of crossings.

BACKGROUND – TRAFFIC MODELLING

A27

→ Modelling indicates a reduction in congestion along the route compared to the 2031 Baseline, despite the increase in total traffic flows

Local Roads

→ Significant increases in traffic flows and queues between 2009 Base and 2031 Baseline, from already committed housing development and background growth in traffic

→ A27 delays have "Metering" effect, limits the amount traffic entering the centre - performance of City Centre network is protected

→ Modelling indicates improvements to the A27 allow more traffic to travel through the Chichester city centre causing congestion at Northgate and Southgate gyratories.

→ No excessive junction capacity problems, though some local pressures

Modelling undertaken as part of the Local Plan mitigation strategy found that with the proposed new development and transport improvements in place, there was a slight reduction in congestion overall on the A27, despite higher overall traffic flows. Overall journey times along the A27 have reduced along the route except through the Bognor Rd roundabout.

Figure 6 Example of Traffic Flow Difference Plots for Local Plan Development Scenario and mitigation measures

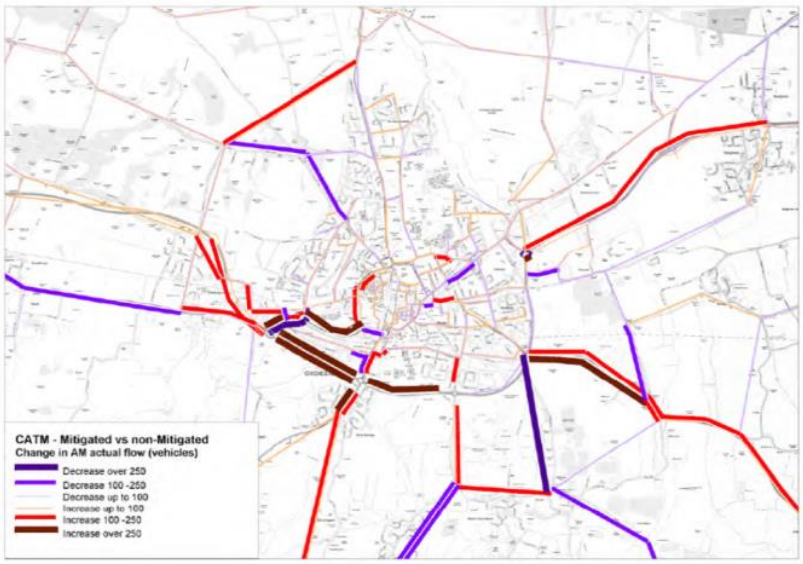


Figure 7-h 2031 Traffic Flows – Preferred Approach – Change from Non Mitigated to Mitigated - AM Peak Hour

Chichester Local Plan – Transport Study
Final Report

The change in flow plots shows an increase in traffic all along the A27 but the large traffic queues have fallen significantly to below the 2031 baseline level. This indicates a reduction in congestion along the route despite the increase in total traffic flows, which suggests that the proposed mitigation measures will be effective.

Large reductions in delay are forecast at Fishbourne and Stockbridge roundabout, combined with a smaller increase in delay at the other junctions, caused by the increase in traffic along the A27. However once the

Smarter Choices elements of the mitigation package measures are included the journey times have reduced to the 2031 baseline levels.

Prior to the A27 mitigation measures the congestion on the A27 has served to 'metre' the amount of traffic travelling into Chichester itself. With the improvements to the A27 more traffic is forecast to travel through the centre, causing congestion at Northgate and Southgate gyratories.

However again when combined with the Smarter Choices demand management measures the journey times on the local roads through Chichester fall to the 2031 baseline levels. The large delays at Bognor Rd roundabout are also reduced when smarter choices measures are introduced.

The findings reported[2] show that smart choice measures will reduce traffic on the local roads compared to the baseline, when combined with the A27 mitigation measures, reducing the amount of traffic on diversionary routes to the North of Chichester, although increased traffic flows persist on the A285 Westhampnett Road mini roundabouts in East Chichester, resulting in a small increase in journey times compared to the 2031 Baseline in the westbound direction.

THE ROLE OF SMARTER CHOICES

It is evident from the modelling findings that the smarter choices package plays a significant part in enabling the transport strategy to mitigate the effects of the new development.

Figure 7 Role of smarter choices in improving journey times

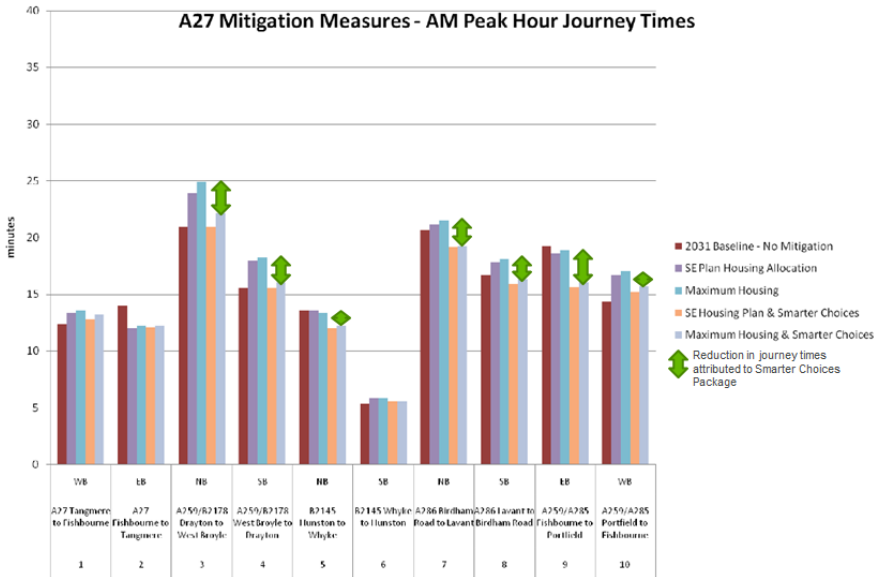


Figure 6-b Journey Times across Chichester – AM Peak Hour

- → Smarter choices play a key role
- → 7% reduction in trips to / from Chichester city centre
- → 5% reduction in trips to / from Strategic Development sites
- → Modelling indicates smarter choice measures will reduce traffic on the local roads compared to the baseline, when combined with the A27 mitigation measures
- → Journey times on the local roads fall to the 2031 baseline levels.

Figure 7 demonstrates the scale of the reduction in journey times attributable to the smarter choices package.

There is a growing body of evidence to support the effectiveness of these programmes, most notably in the UK from the DfTs Sustainable Travel Towns programme[3], which found a

[2] Chichester Local Plan – Transport Study Final Report 2013

reduction of 5-7% in car driver distance travelled by residents for those journeys under 50km that were in scope, at a costs of approximately £11 per person per year (at November 2009 prices). The preceding 2004 smarter choices study estimated the full potential for a reduction in traffic/ car traffic in urban areas was as high as 14%/ 18% from a 10-year programme with an annual cost of roundly £20 per head (at November 2009 prices).

INDUCED TRAFFIC AND 'LOCKING IN'

There is always the possibility that measures which reduce traffic congestion have the potential to enable traffic to move faster, and therefore can induce more traffic, which will reduce the benefits. As such it is generally accepted that complementary measures designed to 'lock in' the benefits, such as a reallocation and reduction of road capacity. In the case of the Travel Towns, a criticism of the programme was that comparatively little was done to complement the behaviour change measures and reduce road capacity, in line with the reductions in car driver mileage by residents.

DELIVERY TIMESCALES

Some initiatives, such as workplace travel planning, may take a relatively long time to deliver results, and that smarter choices work generally requires significant start-up time in terms of getting staff in place, with an appropriate strategy and training.

LONGEVITY OF BEHAVIOUR CHANGE

Population turnover, such as moving home and changes to lifestyles occur naturally over time, and over for instance a 5-10 year period, behaviour changes would be subject to erosion as the individuals changed and moved. The Travel Towns research considered that this may amount to a 40% 'decay rate' would be.

Longevity can therefore be a challenge to smarter choices proposals, but also more fundamentally there is a need to 'lock in' the results, because if you clear the road of congestion, roads will get faster, the comparative attraction of travelling by car will improve, and new drivers will fill them – so it becomes crucial that roadspace reallocation is combined with the behaviour change programme. The transport strategy associated with the Local Plan includes this to an extent, with cycle route improvements and bus priority measures, but to achieve and lock in the reduction in car trips envisaged requires transformational change, equating to something like:

- Increasing bus use 20%
- Increasing train use 10%
- increasing cycling 25%
- Increasing walking 20%
- Increase working from home 20%

[3] The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Research Report (TRL)

From 2001 to 2011 journeys to work from Chichester have changed as follows:

- Falling journeys by car drivers (-1.8%)
- Increased journeys by rail (+1%)
- Increased working from home (+1.2%)
- Falling journeys by bike (-0.9%)
- Increased journeys on foot (1.4%)
- Bus largely unchanged (+0.3%)

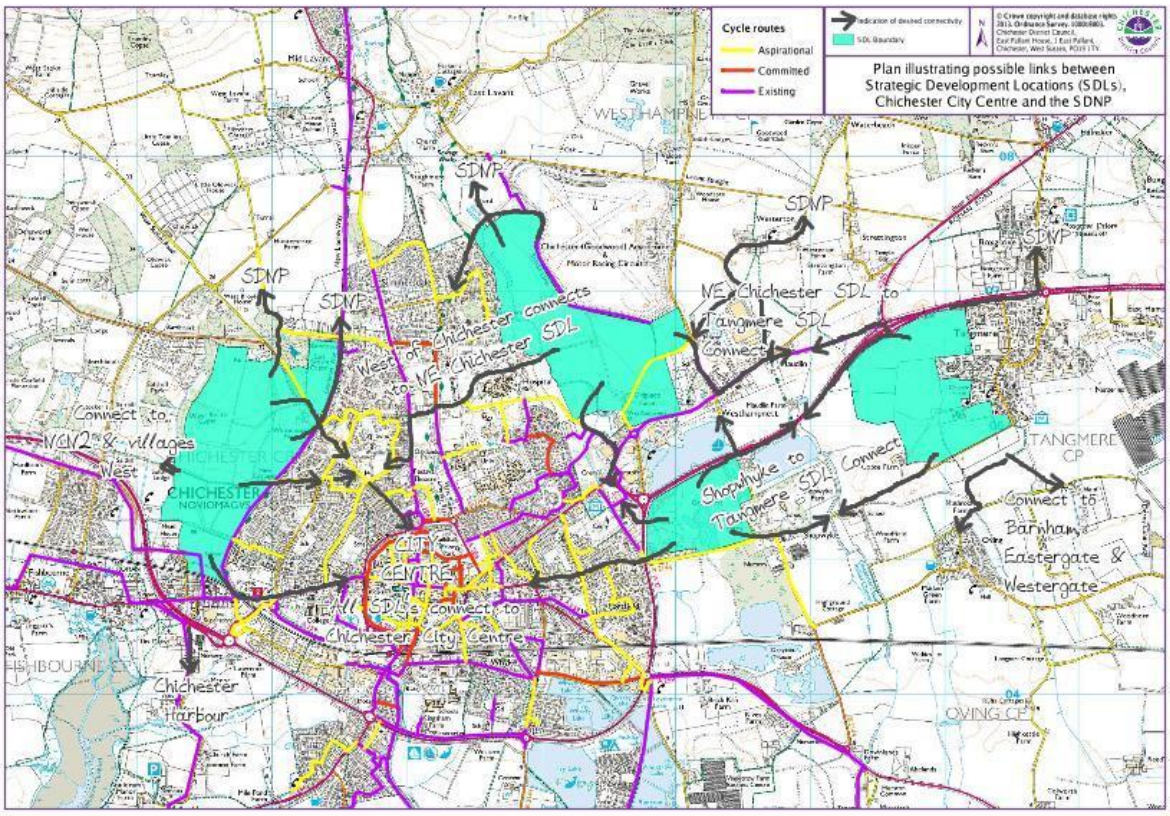
Table 1 Method of Travel to Work– Residents (2011 Census Data)

Mode of Travel	Total Count	Chichester	England and Wales
Works at Home	1,248	16.4%	10.3%
Underground	22	0.3%	3.8%
Train	459	4.3%	5.0%
Bus	261	1.9%	7.2%
Taxi	54	0.2%	0.5%
Motorcycle	70	0.7%	0.8%
Car/ Van Driver	5,868	56.4%	54.5%
Car/ Van Passenger	576	3.9%	5.0%
Bicycle	982	4.1%	2.8%
On Foot	3,004	11.3%	9.8%
Other	50	0.5%	0.5%
Total	**12,594**	**100%**	**100%**

These changes in mode share are achievable, and many towns and cities in the UK and internationally equal or better these, in Cambridge only 19% of residents drive to work, compared to 56% in Chichester[4], but this kind of step change requires a bold new approach to transport provision within the city.

Figure 8 then shows how the District Council envisages these sites being connected into the existing transport network, including existing, committed and aspiration cycle routes.

Figure 8 Strategic Development Sites and Transport Linkages



[4] Note that Cambridge is likely to have a lower proportion of the resident population working outside of the city, and so have a larger proportion of the population for whom their workplace is within a comfortable walk/cycle distance of their home.

3.3 PARKING CONTEXT

Figure 9 summarise the findings of the street inventory undertaken, bringing together information from TROs to provide an overview of how roadspace and parking is currently distributed around the city.

As with many historic towns and cities, as land becomes increasingly valuable, landowners recognise the poor value achieved from using space to park cars. Saint Richard's Hospital has reduced its parking to accommodate new development, and has not replaced it; and like many towns, the supermarkets have migrated to edge of city locations where space is cheaper (Tesco and Waitrose in the south, and Sainsbury's in the east).

Chichester enjoys a healthy tourist trade and their needs, and thus the needs for the local traders, are for a quality environment and sense of place to spend time in. This brings with it though seasonal variations in demand for travel and parking within the city.

Options to provide greater parking capacity are frequently the first choice. However providing decked parking, such as Avenue de Chartres, creates a more costly solution that must be funded. This relates back to what the community are willing to pay or consider realistic to enable additional parking supply. Options to develop the popular Northgate car park are constrained. Edge of town parking, and provision of park and ride is a solution currently applied in December.

The primary concern around residential parking, not at all unique to Chichester, has become highly topical in the areas to the north of the hospital and university, and there is recognition that a pro-active approach to residential parking zones is necessary, and clarity over how the community thinks residential roadspace should be reserved, used and provided. This only serves to highlight the requirement for WSCC to continue to work closely with the City Council to provide coherent policies that support the city's objectives.

Figure 9 Existing Chichester Parking and Roadspace Allocation

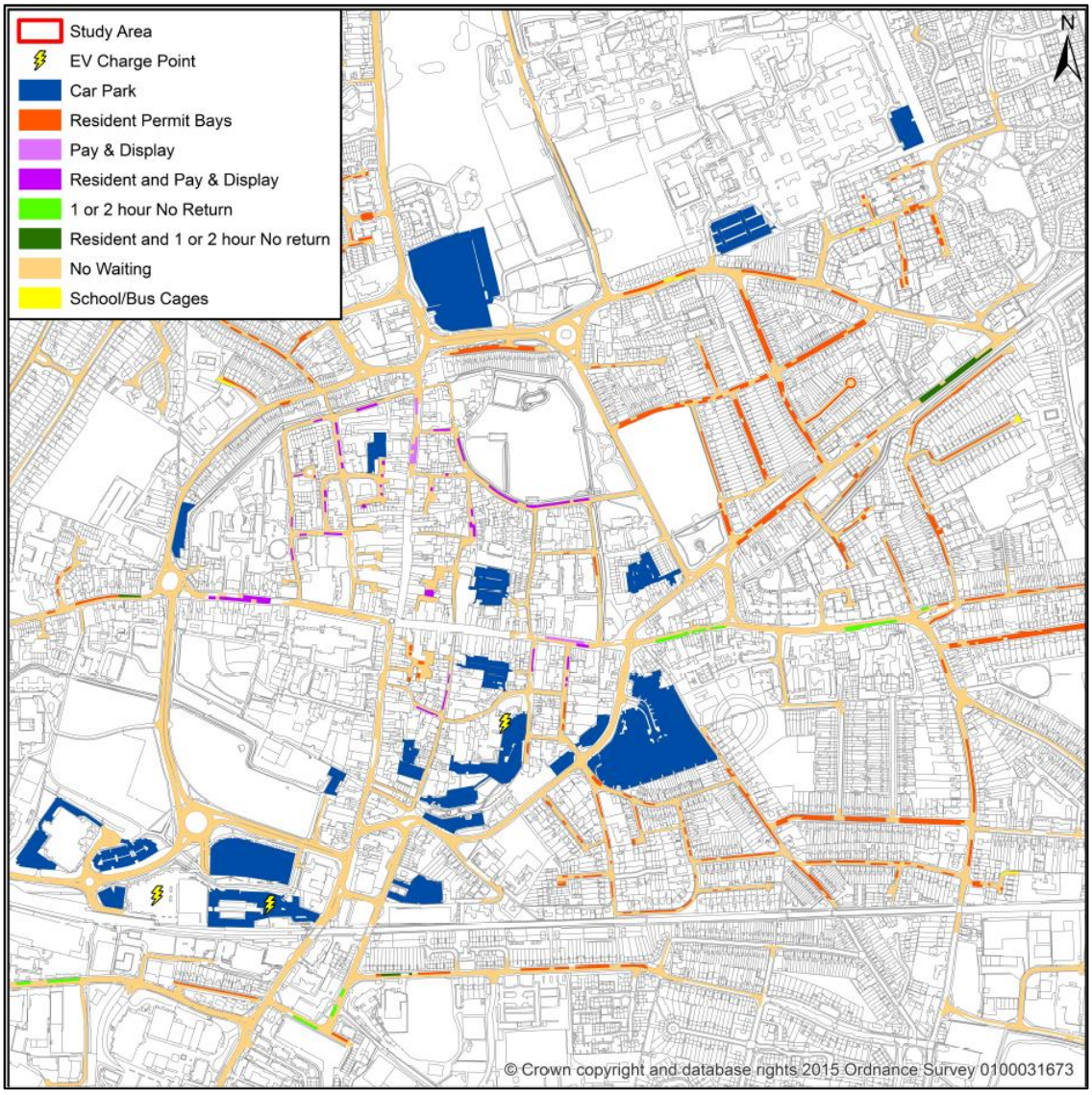


Figure 10 highlights the varying statuses of streets around the city to give an indication of the primacy and role within the wider network. It also highlights the extent of the 20mph zone, which covers all of the city and study area, with the exception of Stockbridge.

Figure 10 Highway Network Composition

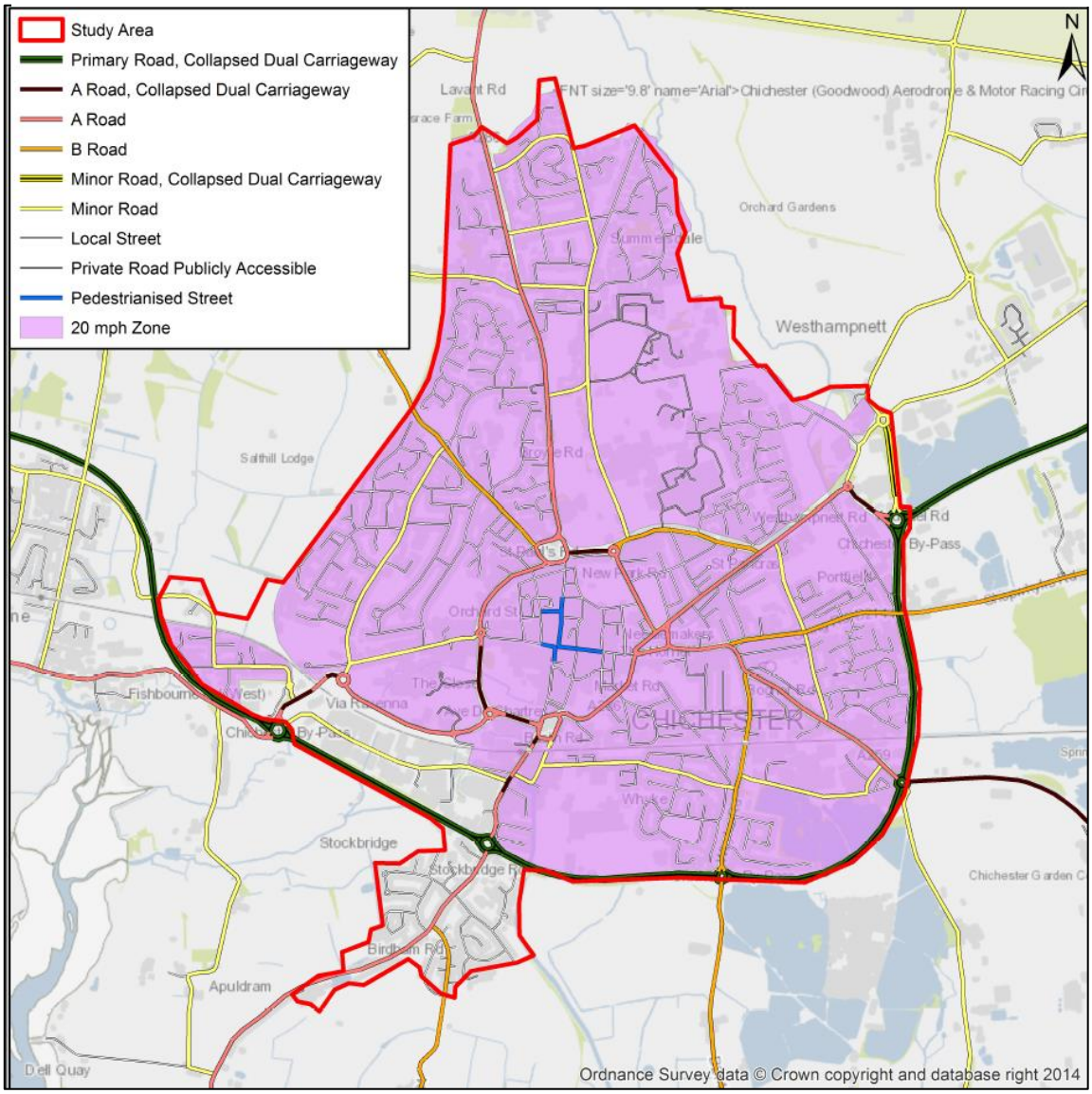
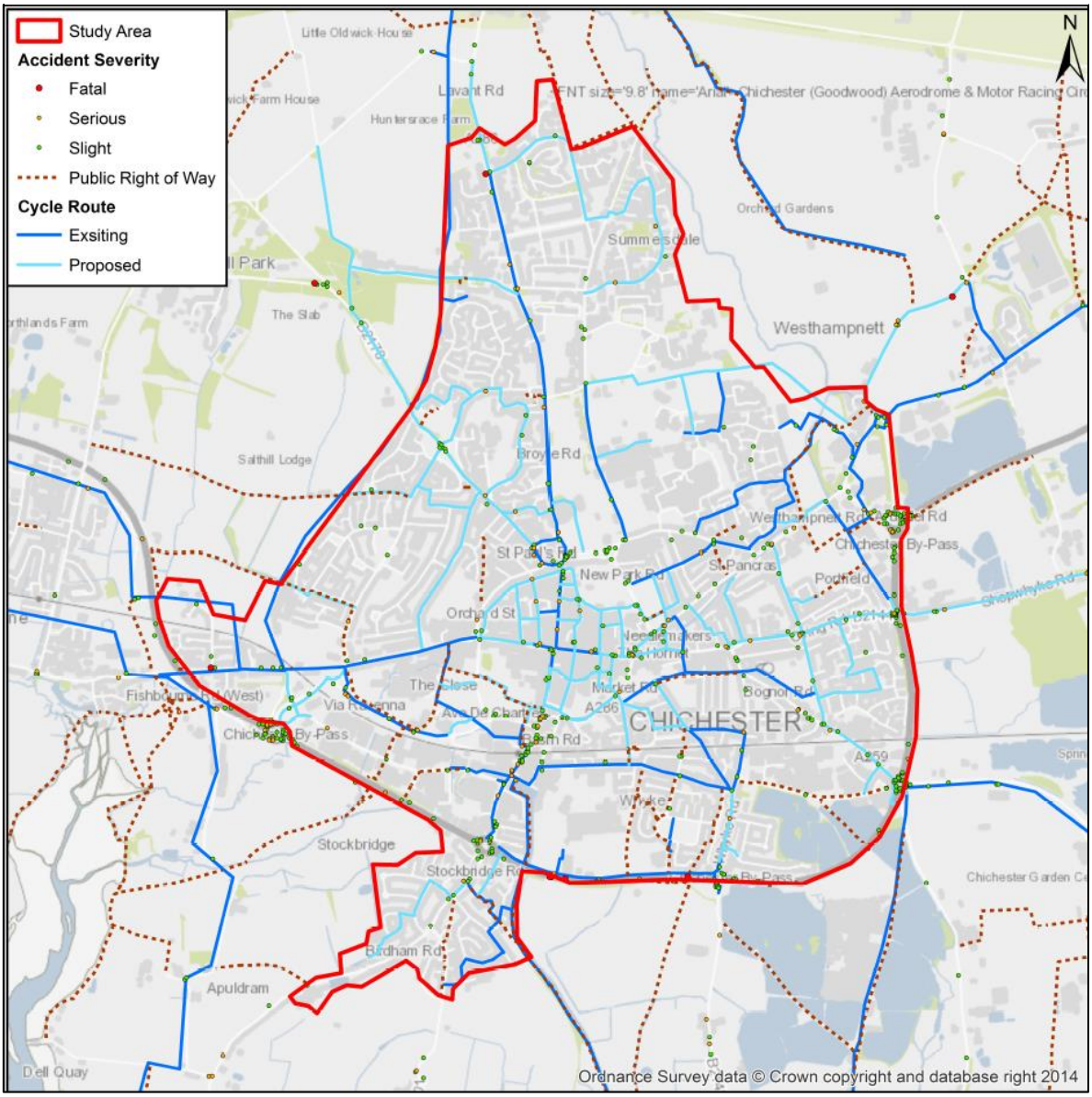


Figure 11 presents the cycle route network in place access the city, which includes a mix of on and off-street cycle lanes and advisory routes.

It also highlights proposed future extensions to the network. The figure overlays accident data onto this network to draw out any apparent accident clusters, indicative of unsafe junctions or links across the city.

Figure 11 Cycle Network (Existing and Proposed) and Report Accidents (2011-14)



3.4 ON-STREET PARKING IN RESIDENTIAL AREAS

A number of residential parking schemes (RPS) have been introduced to Chichester. These have been created primarily in the residential areas adjacent to the city centre to safeguard on street parking space for residents that otherwise have limited access to off-street parking.

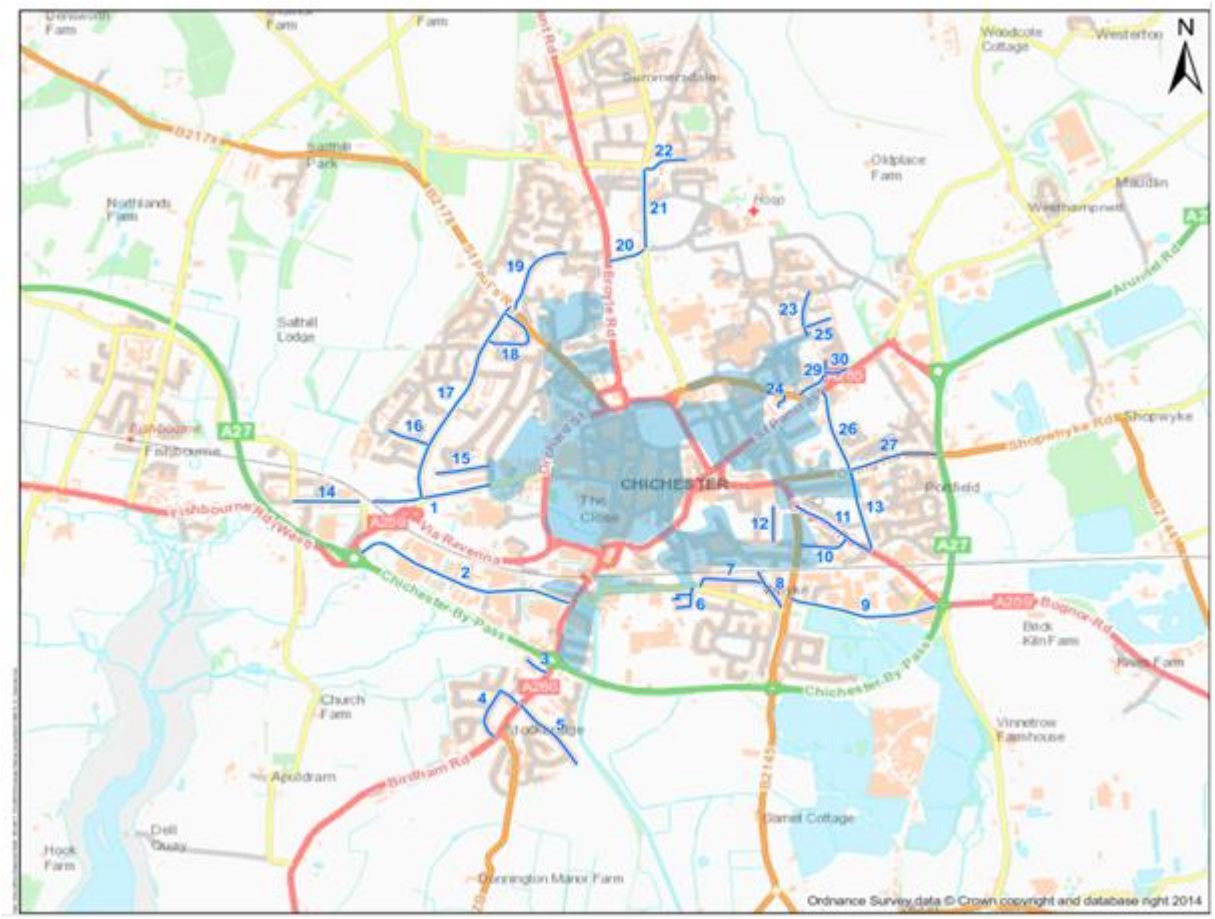
In many zones, vehicles may only be left on the highway during the hours of operation of the RPS if they display a permit for that zone. These permits are available to residents. In those zones where there is deemed to be spare capacity, permits can be purchased for use by those commuting to the city. The general awareness of this option to buy permits by those that are not necessarily resident in the zone is probably low and uptake is not what may be expected.

For those parking on street in residential areas that are not covered by RPS, parking is uncontrolled and free to users. The creation of the RPS zones has in many cases led to complaints that commuters are parking at and just beyond the boundary of the RPS, creating problems for residents looking to park in those areas.

3.5 SURVEY

As part of the brief, we were asked to assess the scale of this problem and consider what action may be suitable for those locations at the boundary of the existing RPS. To this effect, we undertook surveys on thirty streets identified by WSCC. These are shown in the following figure.

Figure 12 On-street Parking Surveys



Methodology

The surveys were conducted in the following way. During the night of **Wednesday 26th** and Thursday **27th August 2015** every road was walked and the vehicle registration marks of all vehicles parked on the highway recorded. Where there was kerb-space that could reasonably be used for parking but at the time was vacant, this was also recorded. The surveys were repeated during Thursday morning (between 09:30 and 12:00) and again in the afternoon (between 14:00 and 17:00), following a standard route and order.

In addition to a weekday during the summer months, we wanted to assess the demand during a weekday when schools and the University were in session. On **Friday 9th October** the daytime morning and afternoon surveys were repeated.

On **Saturday 10th October** the streets were again surveyed both in the morning to provide an indication of the use on a weekend. For reasons of cost-efficiency, registrations already recorded overnight during the August survey were carried forward.

Analysis

Registrations that were identified overnight were taken to be residents. Other registrations identified only in the morning or afternoon survey were classified as Short Stay visitors. Registrations seen in both the morning and afternoon survey (but not overnight) were classified as commuters. While the method includes some assumptions it does provide a cost-effective estimate and indication of how roadspace is being used in each street.

The total capacity of the street was estimated from the kerb-space observed to be vacant and that occupied.

The results for each street are presented in below. The grey area represents the total capacity of the street. Purple shading are residents with the blues being commuters and visitors.

Figure 13 Unrestricted streets – occupancy surveys (weekday without University)

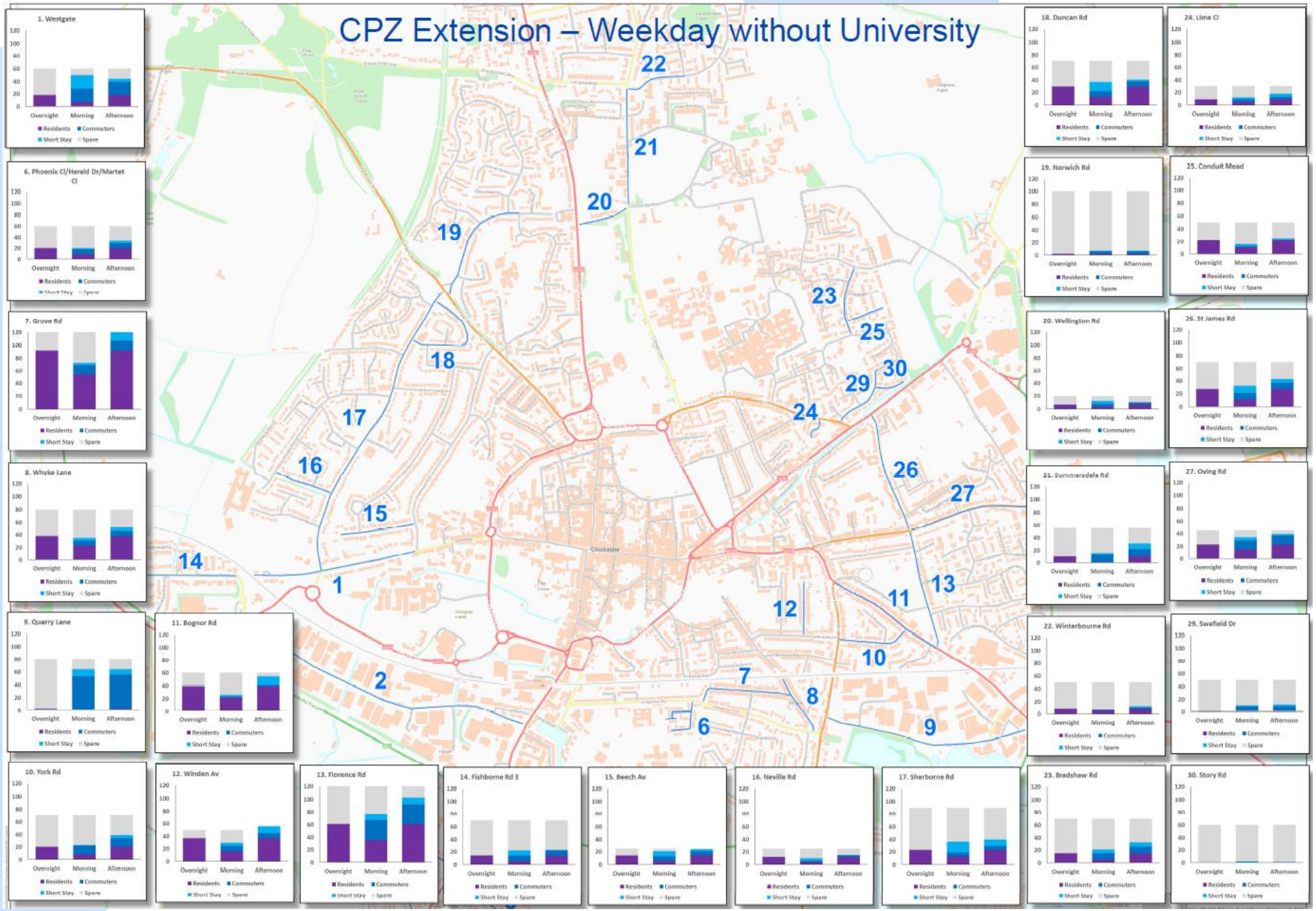


Figure 14 Unrestricted streets – occupancy surveys (weekday with University)

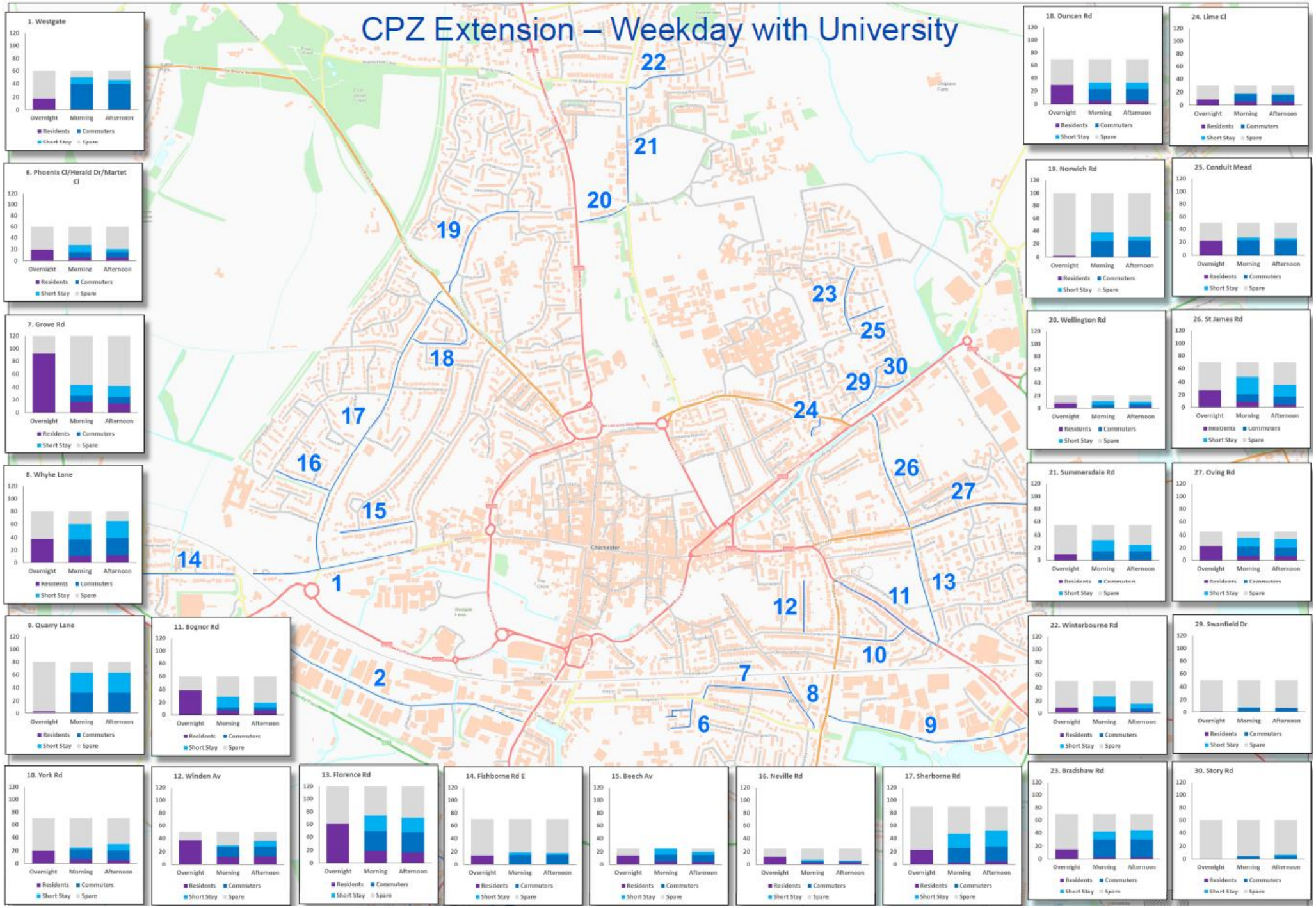
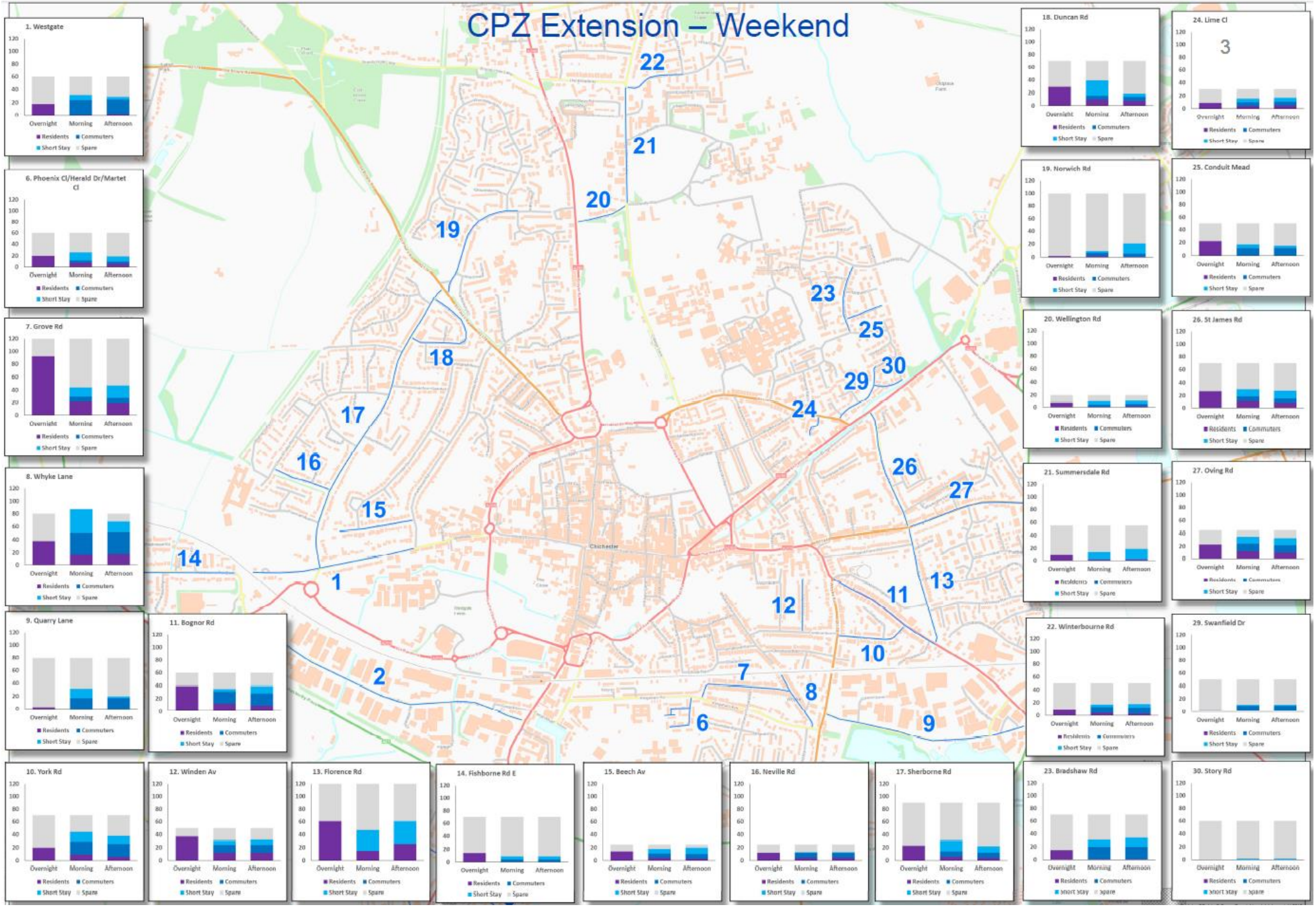


Figure 15 Unrestricted streets – occupancy surveys (weekend)



CONCLUSIONS

Most streets are showing spare capacity overall during the night-time. The level of demand and policies adopted by WSCC to limit the provision of residents' permits to the available kerb-space across a zone are working to ensure that the availability of on-street parking for residents is good. West Sussex County Council operate a wait list for those seeking more than one permit and provision of additional permits is considered based on the capacity of the zone. Not all authorities do this, yet this is in our view the correct and sensible approach. Furthermore the Council do not grant automatic qualification to a first permit for residences that have been created after the introduction of a permit scheme. Thus only existing allocations for permits exist where a property is re-developed or sub-divided. We would endorse both policies as best practice and good management for the well-being of the neighbourhood.

As we may expect, many of the residents parked overnight use their vehicles during the day.

The surveys confirm that a number of these streets are being used by visitors and commuters during the day. Some show little use by non-residents. The highest demand in most streets is seen in the afternoon observations when the mix of visitor and commuter parking adds to increased residential demand. While the survey was necessarily spread over the afternoon, we can confidently expect that the greatest conflict will occur as residents return home from their activities or work in the latter part of the afternoon and the available space is occupied by commuters still at work and others who may be making visits to locations in the city, perhaps having finished their work or taking children to activities in the city after school.

The extent of additional visitor and commuter demand is more evident in the October weekday survey. Notwithstanding, the results indicate that in the overwhelming number of streets, the capacity across the whole street is in excess of the demands for parking across all time periods observed. Even streets with a high level of visitor or commuter use are carrying spare capacity (as shown by the grey area of the bar).

Alexandra Road. Zone H. While only 100 metres from New Park Road Car Park, these spots are reserved for residents and other permit holders.

The key issue is though that this capacity is not necessarily where it is desired by residents. The complaints made by residents regarding insufficient capacity is due to occupation of the available kerb-space outside or within a reasonable vicinity of the resident's home. Duncan Road provides

a good example. Commuters occupy the next available parking spot on Duncan Road closest to the city centre, university or hospital. Thus on street parking at the eastern end of Duncan Road is rapidly occupied. Residents at the eastern end of the Duncan Road struggle to find a vacant spot to park during the day. The western ends of Duncan Road are not attractive to commuters and visitors while there is still space elsewhere that is nearer. Thus while the overall capacity of Duncan Road has been identified to be sufficient for the demand, the conflict for parking space is a localised issue.

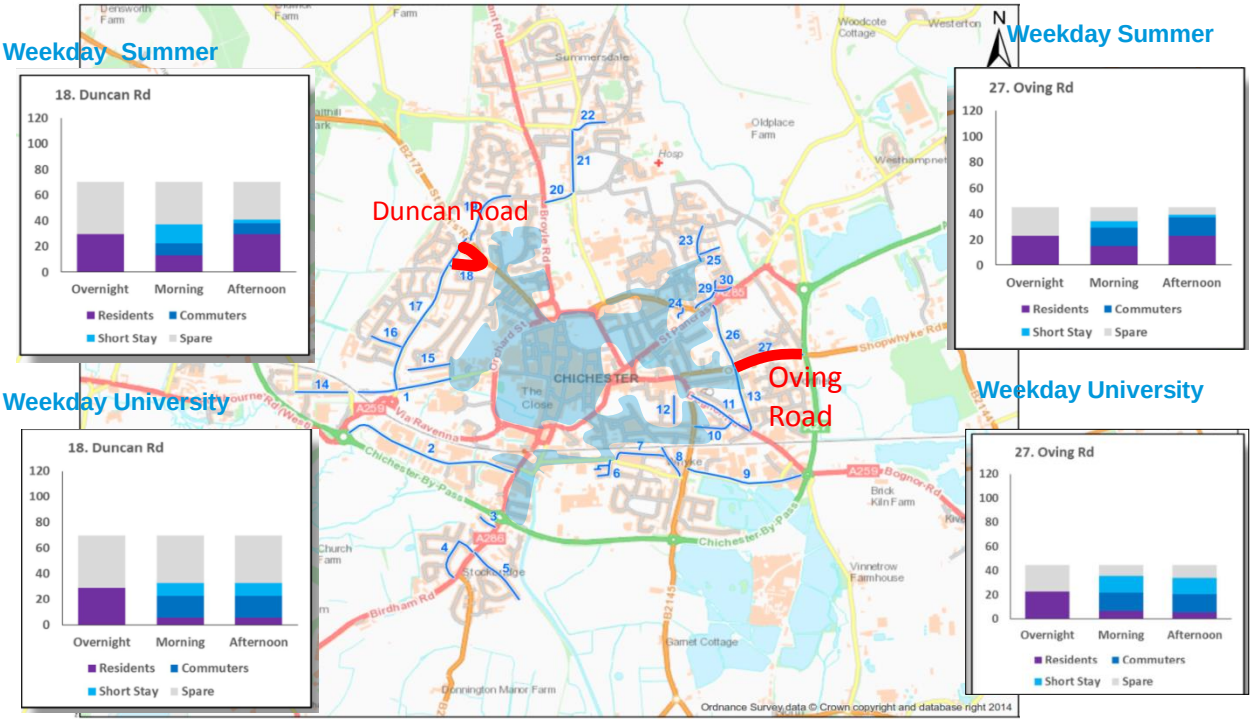
It is thus the case that most streets have capacity overall to accommodate visitors and commuters, but without restrictions or control, the visitors and commuters occupy all available space in a concentrated section of the street making it problematic for residents that happen to live in that section.

Oving Road demonstrates a more severe situation. The demand from commuters and visitors across the whole street is a considerable proportion of the total capacity and likely to be causing issues for most residents in the street.

While the road overall retains capacity, the commuter parking on Stockbridge Gardens is clustered on the section closest to the city centre.

Chichester is not a large city. While a number of streets were not observed to currently have visitor and commuter parking, most streets within the boundary of the urban area are in scope to be used by commuters or visitors to the centre. Restrictions to these boundary areas will cause visitor and commuter parking to migrate to another street, and could actually concentrate that demand in a way that makes it more problematic. Given the scale of the city, it is unlikely that a boundary point could be found for the city that would be considered too far to walk for a number of long stay commuters.

Figure 16 Comparison of unrestricted parking occupancy – Duncan Road and Oving Road



3.6 EXISTING USE OF THE RESIDENTIAL PARKING SCHEME

As part of the assessment of reallocation of road space we wished to understand and provide some evidence as to how the streets within the current RPS zones were being used. We selected to survey a sample of streets in the central zone (E) the area close to the hospital (H, H2, O & J), the north west sector (K, L and N) and Whyke area (F). These streets provide a suitable cross section across the city's RPS in terms of likely demand and restrictions applied.

Surveys were conducted on **Friday 9th October.** A morning beat was performed between 10:00 and 12:00 and an afternoon beat between 14:00 and 16:00. All vehicles parked in the street were recorded, as were vacant spots.

The type of ticket or permit being used for the parking was collected. Vehicles with residents' permits are shown on the charts are purple, dark blue are scratchcards, light blue are Blue badge users and the grey represents vehicles that were not displaying any form of parking ticket or permit (and may have paid for parking by phone). The capacity of the street is indicated by the horizontal red line.

Figure 17 ON-STREET PARKING – RESTRICTED PARKING AREA SCHEME (RPS) STREETS

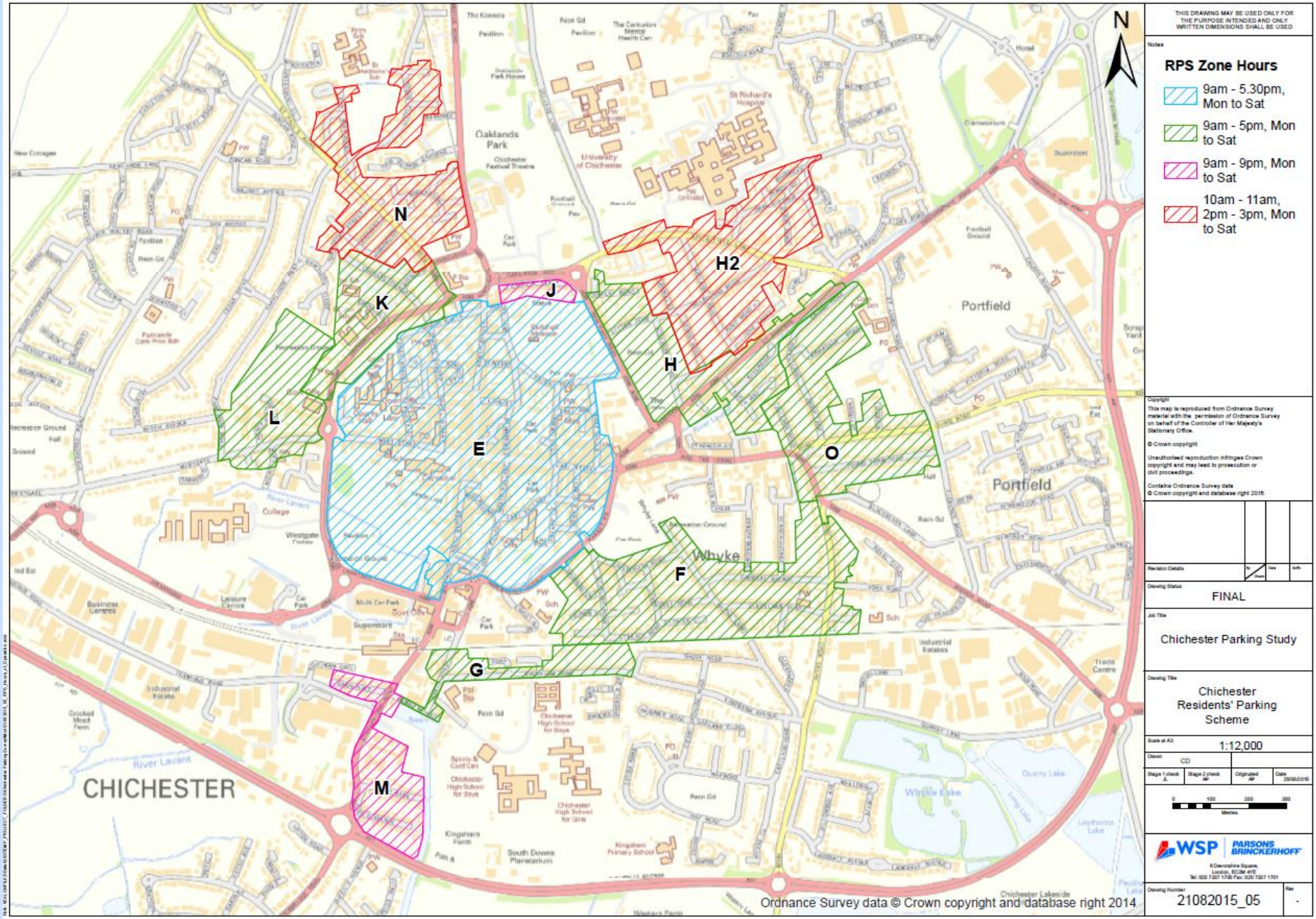


Figure 18 CPZ Zone E Occupancy

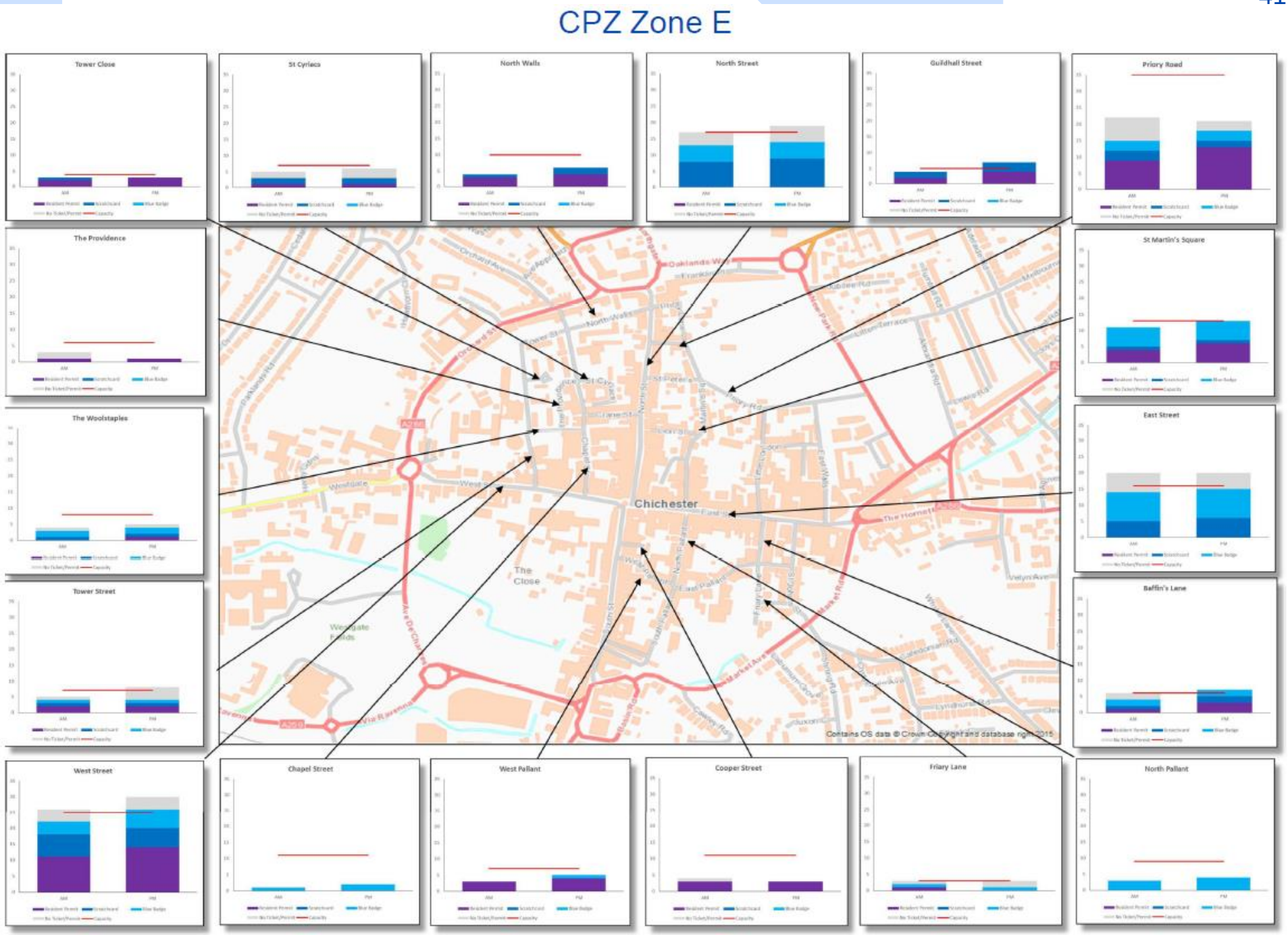


Figure 19 CPZ Zone F Occupancy

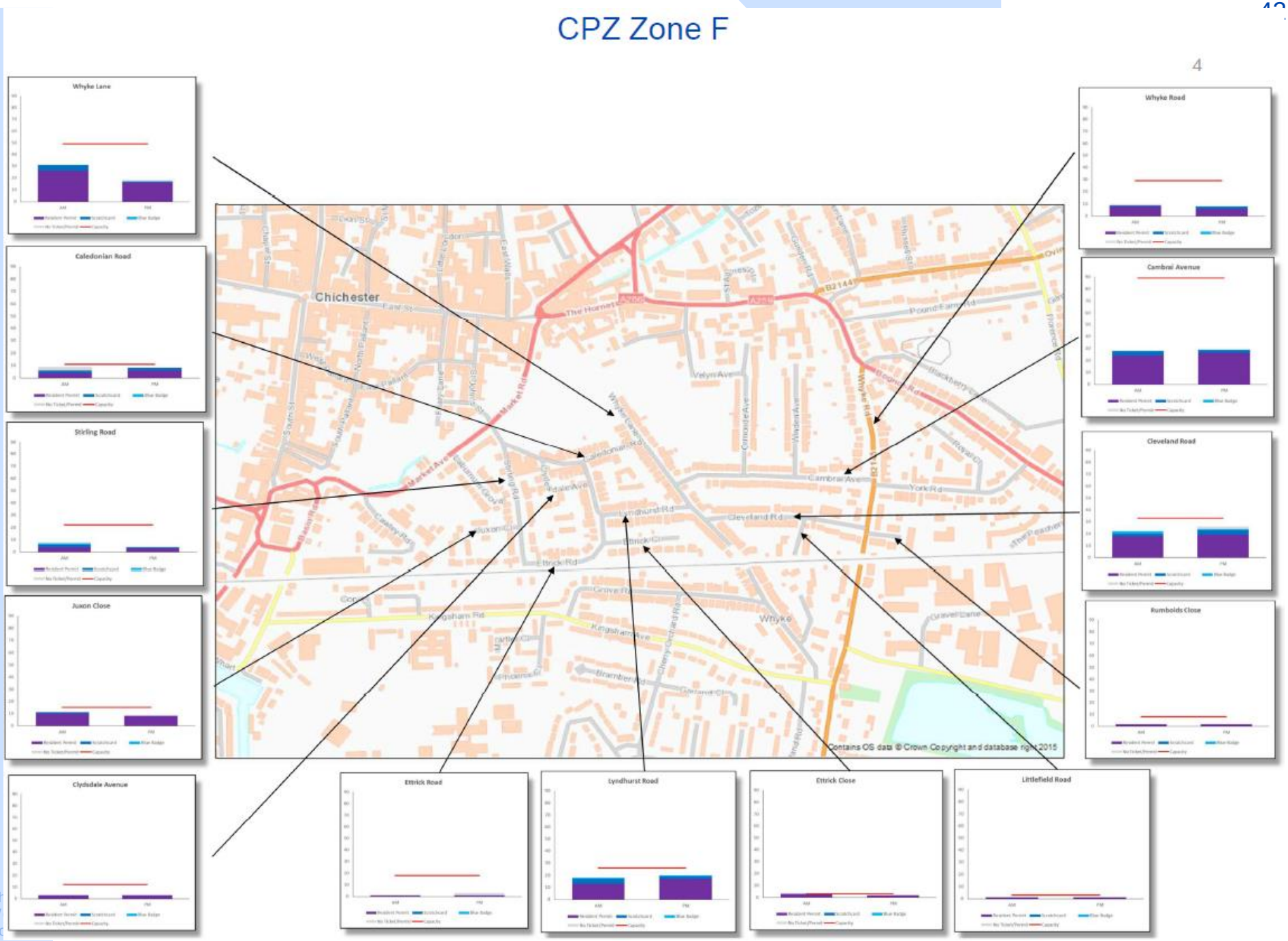


Figure 20 CPZ Zones H, H2, O and J Occupancy

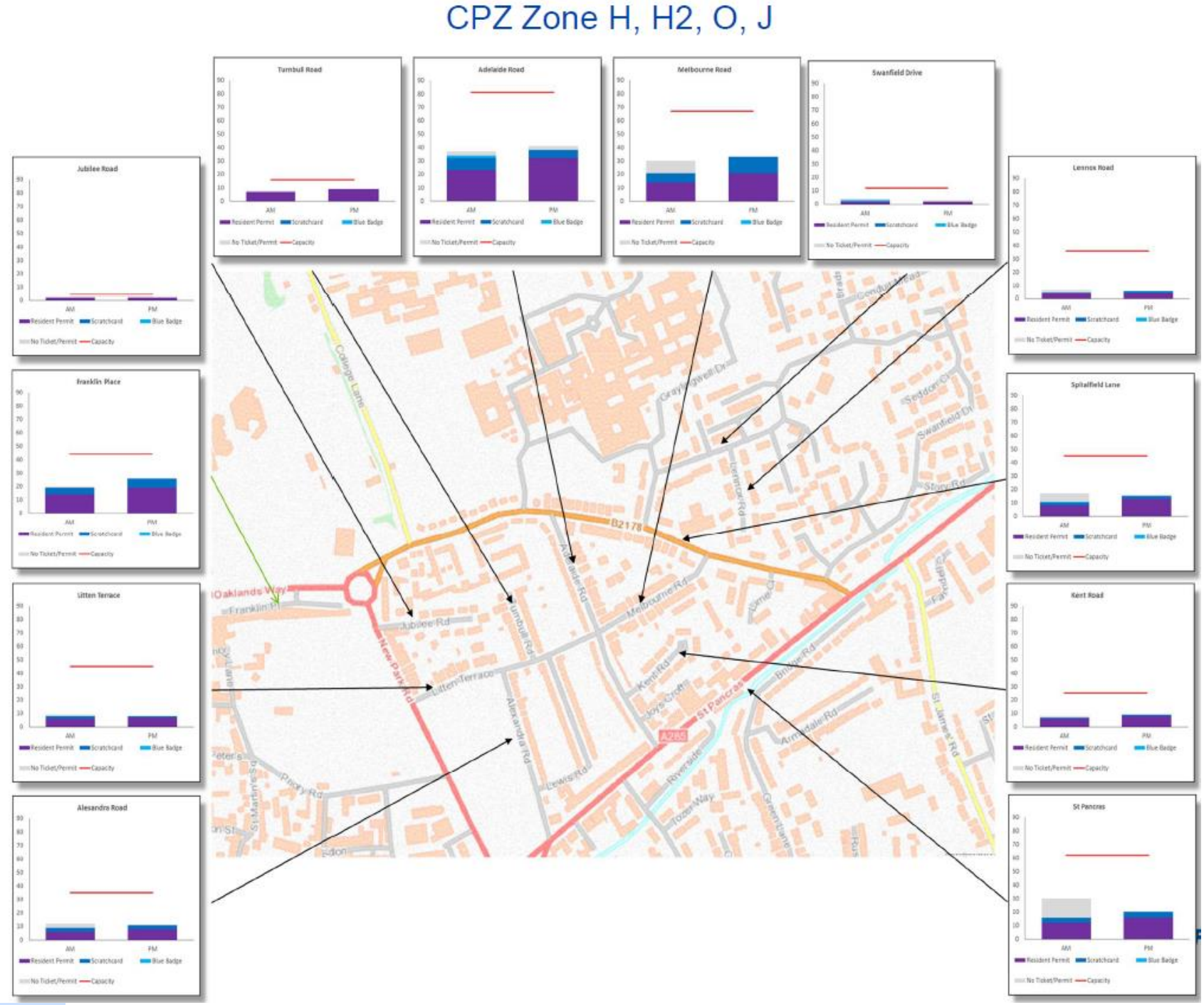
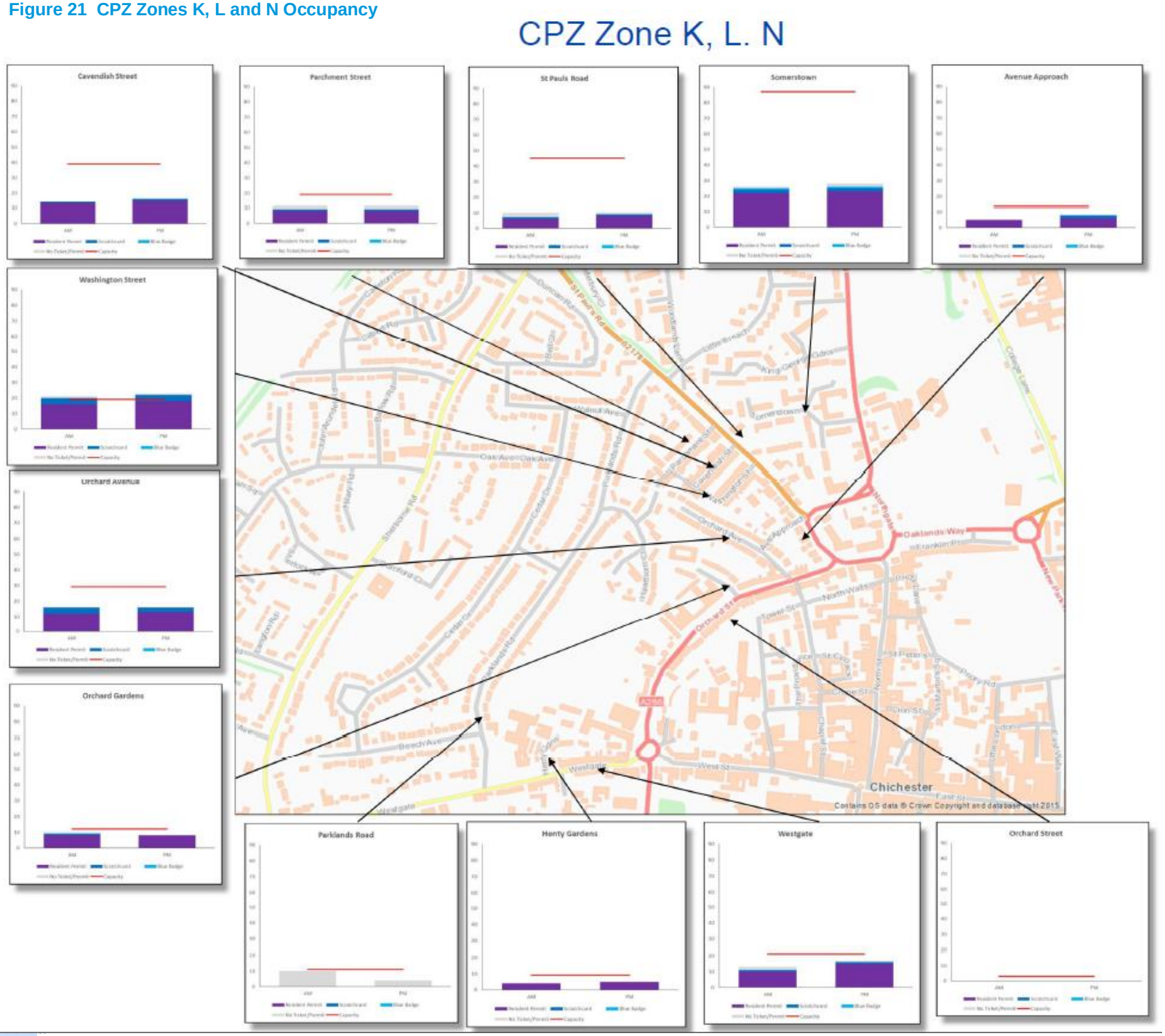


Figure 21 CPZ Zones K, L and N Occupancy



SUMMARY OF ON-STREET PARKING – RESTRICTED PARKING AREA SCHEME (RPS) STREETS

Within zone E, at many locations usage is quite high. A number of streets were seen to be full on both visits. However overall there was evident spare capacity and one could be confident on finding somewhere to park in Priory Road, Chapel Street or North Pallant.

The residential streets between the city and hospital were notable in that virtually all had at least half of the parking spots vacant.

RPS DAYTIME CAPACITY

West Sussex County Council have provided a listing of the current demarcation of parking bays for each street within each RPS zone.

Table 2 RPS Parking Bay Capacities by type

	Parking Spot Specification					
RPS Zone	Voucher	Residents	Shared	Blue Badge	Limited	Total Capacity
E	33	14	149	13	0	209
F	0	356	0	0	0	356
G	0	41	7	0	0	48
H	0	188	0	0	0	188
H2	0	373	0	0	0	373
J	0	47	0	0	0	47
K	0	60	0	0	0	60
L	0	48	0	0	0	48
M	0	120	0	0	22	142
N	0	291	0	0	11	302
O	0	274	0	6	0	280
RPS Total	**33**	**1812**	**156**	**19**	**33**	**2053**

During our surveys of the residential parking scheme zones we observed the type of permit or ticket being used by those parked on street. The following table collates the mix of use for the central area (zone E) for the AM & PM survey. During the AM period, (when visitors, in terms of number and proportion of total parked vehicles are highest) there were approximately 100 visitor vehicles.

Table 3 RPS Parking Bay Utilisation Mix

Zone E	Resident's Permit	Scratchcard	Blue Badge	No Ticket or Permit displayed	Total	Visitors
AM	**43**	**33**	**37**	**31**	**144**	**101**
PM	**59**	**35**	**42**	**27**	**163**	**104**

We have provided an estimation of total use of the available parking capacity in each zone based on the maximum occupancy observed in either the morning or afternoon beat. (Numbers do not tally necessarily with those used in the table above which are for the AM period only). For those zones for which specific beats and counts have not been conducted (G and M) we have used rates established in nearby zones.

Table 4 RPS Parking Bay Occupancy

RPS Zone	Total Capacity	Surveyed Occupation (Maximum of AM and PM visit)	Estimation of Use	Spare Capacity at 85%
E	209	78%	163	15
F	356	39%	140	163
G	48	*39%*	19	22
H	188	42%	79	81
H2	373	42%	156	161
J	47	42%	20	20
K	60	48%	29	22
L	48	48%	23	18
M	142	*48%*	68	53
N	302	48%	145	112
O	280	42%	117	121
RPS Total	**2053**	***47%***	**959**	**788**

Surveyed Occupations in italics are carried from nearby zones

St Pancras in Zone H. While Permit Holders Only it carries consdierable spare on-street capacity during the day

Based on the maximum observed use, and allowing for a target practical maximum of 85%, the table indicates the level of weekday daytime spare capacity within the zones.

Many streets within the RPS carried considerable unused kerbside capacity. Many of the zones are restricted to permit holders only during the daytime.

Overall we estimate that there could be over 700 spots available for use. We acknowledge that the critical period is generally after 16:00, and this estimation may be tempered for any parking in the late afternoon to ensure sufficient availability for residents. However the results do indicate that the RPS could make a significant contribution to day time parking capacity on the periphery of the city centre.

CONCLUSIONS FOR ON-STREET PARKING

The figures show that many of the streets within the RPS carry a lot of unused capacity during the daytime. Some streets were seen to be full, especially in the core centre (zone E) during the day, but most were not. During the day especially there is a considerable opportunity for more potential use between 10:00-16:00.

In the areas just outside the RPS there is some evidence of commuter parking. While overall this is not large, the quantities in some streets are notable and the concentration of that parking in one area of the street is likely causing issues and conflict. The wider residential streets of Chichester have got capacity to accommodate daytime commuter and visitor parking subject to having a method to prevent that demand accumulating in specific locations.

The following table summarises the analysis of the number of short stay visitor parking occurring within the city centre and the remaining on-street parking occurring throughout the RPS.

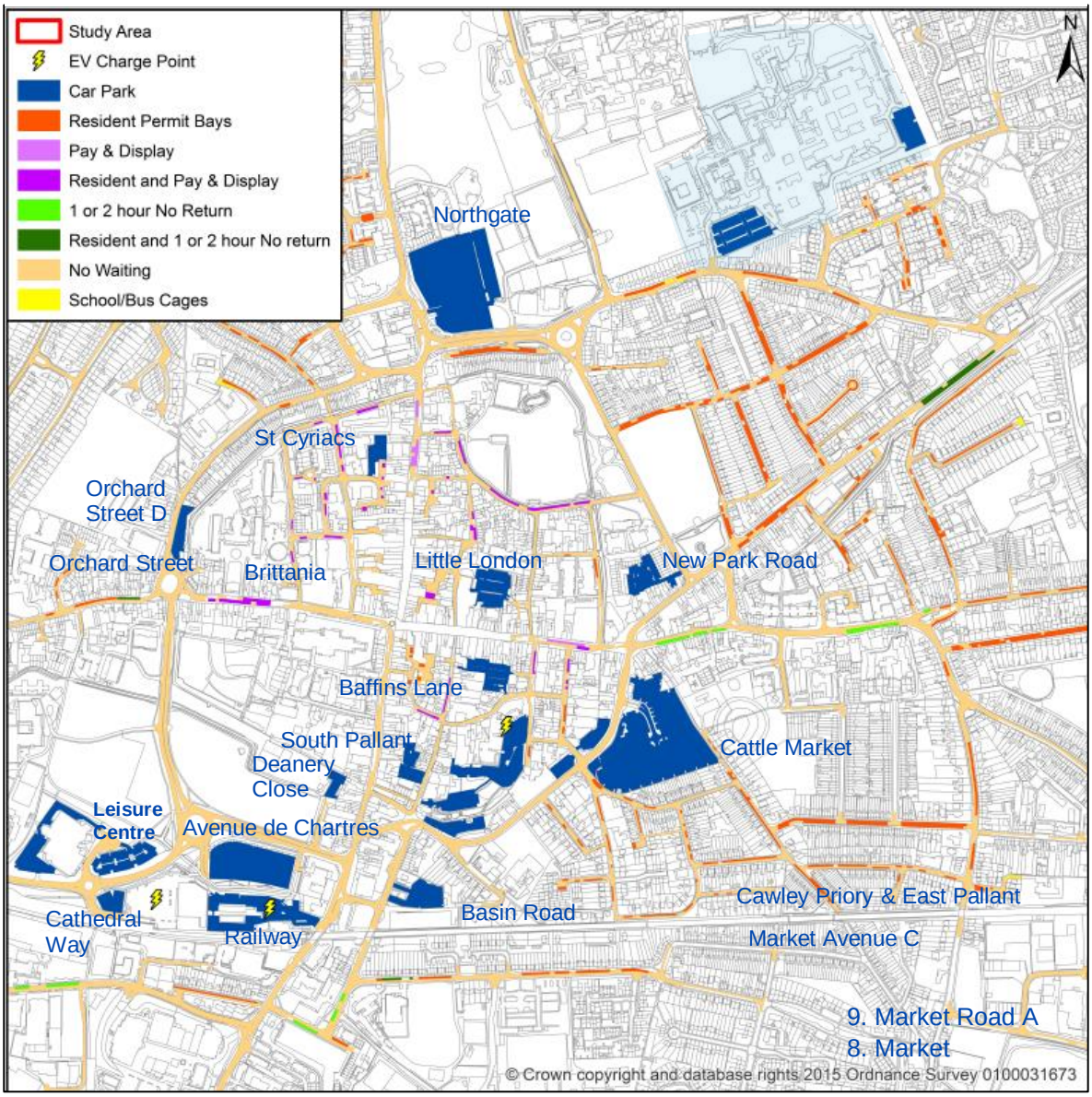
Table 5 RPS Parking Bay Utilisation Mix

Zone E	Total
Maximum Demand Short Stay Visitors in Zone E	**100**
Residents in Zone E & All other Parking in remaining RPS Areas	**859**
Maximum Demand of Cars Parked in RPS Area	**959**

3.7 OFF STREET PARKING SUPPLY AND TRAFFIC MANAGEMENT

The following figure presents the location of the principal off street parking locations in the city centre.

Figure 22 Off-street Parking Supply



Occupation Survey

During Friday 9th October we observed the occupancy of the principal car parks within the city between noon and 13:00. This period typically provides the maximum demand on a weekday. Automated counts collected for Avenue de Chartes were used.

Table 6 Off-street Parking Occupancy

Car Park	Type	Total Spaces	Peak Free Space (inc disabled)	Survey Time	Occupancy	% Occupancy
Little London	Short Stay	89	0	12:40	89	100%
Baffins Lane	Short Stay	88	8	12:45	80	91%
Orchard Street	Short Stay	26	4	11:50	22	85%
St Cyriacs	Short Stay	52	4	12:30	48	92%
South Pallant	Short Stay	54	4	12:50	50	93%
East Pallant/Crawley Priory	Short Stay	256	11	13:05	245	96%
Market Av/St Johns St	Short Stay	30	12	13:00	18	60%
Market Road	Short Stay	53	20	13:05	33	62%
Market Av/South Pallant	Short Stay	75	37	12:30-13:30	38	51%
New Park Road	Short Stay	100	24	13:30	76	76%
Deanery Lane	Short Stay	48	18	13:20	30	63%
ADC	Long Stay	899	309	12:30-13:30	590	66%
Basin Road	Long Stay	117	4	12:30-13:30	113	97%
Northgate	Long Stay	846	163	12:05	683	81%
Cattlemarket	Long Stay	913	100	12:00	813	89%
Leisure Centre	Long Stay	265	147	13:00	118	45%
Chichester		**3,911**	**865**		**3,046**	**78%**

Results

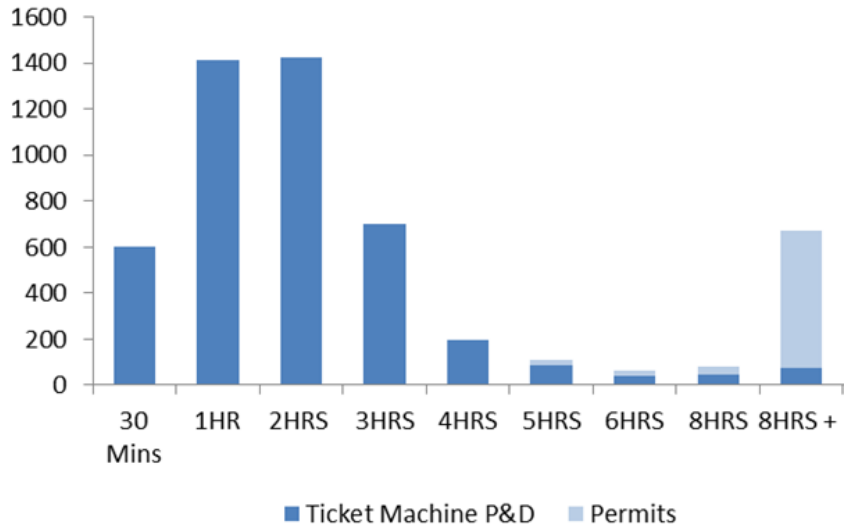
At the peak time, most of the off street capacity in the city is in use. Overall the occupancy is 78%, which as an average is high. This average includes the 147 spots spare capacity at the leisure centre and over 300 spots vacant at Avenue de Chartres. All of the central car parks were at a level in excess of 85%, with many above 90%.

PAY & DISPLAY DATA

Chichester District Council provided ticket machine audit data based on outputs taken early on **Friday 9th October** and the same time on the **Saturday 10th October**. Comparison of the two record sets provides a good indication of ticket sales for the Friday. Data was available for most locations operated by the District Council.

Analysis of the ticket data for the car parks collected provide illustration of the number of tickets sold over the day in the following figure. Observed or estimated permit volumes for those locations have been added with an assumed duration profile of around 8 hours used.

Figure 23 Sales by duration



At a car park level we have compared the car park capacity with the total ticket sales and permits counted on site. This provides an indication of the turnover of the car park.

Table 7 Off-street Parking Turnover

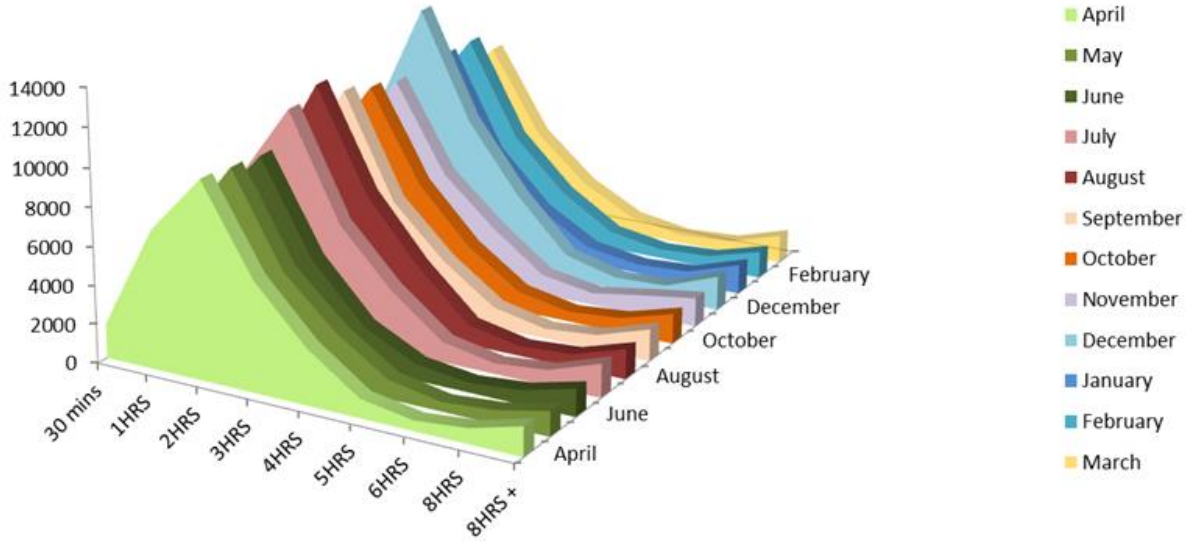
CAR PARK	EVENTS	CAPACITY	TURNOVER
Little London	416	89	4.7
Baffins Lane	456	88	5.2
Orchard Street	111	26	4.3
St Cyriacs	289	52	5.6
South Pallant	201	54	3.7
Cawley Priory (incl East Pallant)	406	256	1.6
Market Avenue	80	30	2.7
Market Road A	50	53	0.9
Market Avenue C	46	75	0.6
New Park Road	325	100	3.3
Basin Road	166	117	1.4
Northgate	854	846	1.0
Cattle market	1721	913	1.9

The turnover data reflects to a large extent the demarcation of the car parks and expected use. Short stay car parks have higher turnover; long stay car parks and those exclusive to permits have a turnover closer to 1. Even though the Cattle Market and Northgate have a significant area for short stay parking, both locations have a large area dedicated to permits (not all of which may necessarily be used) which brings the overall turnover closer to 1.

ANNUAL USE

Chichester District Council also provided aggregated Monday-Saturday ticket sales for each month. From limited examination there do appear to be some anomalies within the data at some locations with some exceptionally large values and other result groups suggesting under-reporting (perhaps through machine faults). However a plot of the Cattle Market returns appears reasonable and we have not identified any obvious data issues.

Figure 24 Cattle Market Car Park – Sales by Month



Notwithstanding that each month itself is to some extent a different length, the results (based on numbers of pay and display ticket sales only) present an increase in demand during the summer months and December. The following table sets out ticket sale volumes month on month. It supports the use of October as a typical month; August is 11% above the monthly mean and December 20%.

Table 8 Monthly P&D Sales

	Monday-Saturday P&D Sales	Monthly Mean	Variance from Mean
April	31,744	31,657	0.3%
May	29,857	31,657	-5.7%
June	29,208	31,657	-7.7%
July	34,209	31,657	8.1%
August	35,002	31,657	10.6%
September	32,256	31,657	1.9%
October	31,181	31,657	-1.5%
November	32,465	31,657	2.6%
December	37,950	31,657	19.9%
January	29,158	31,657	-7.9%
February	29,493	31,657	-6.8%
March	27,361	31,657	-13.6%

These values are aggregated monthly sales. On any day within those months there will be further variation. These values are however indicative that our observations of actual parking demand in October may be increased by 10-20% during summer months and reach values substantially greater than 20% on some days in December. The scale of the increments cannot be set out precisely as we do not know how representative our day's observation is of the aggregated value for October, nor the scale of variation within any other month.

CONCLUSION

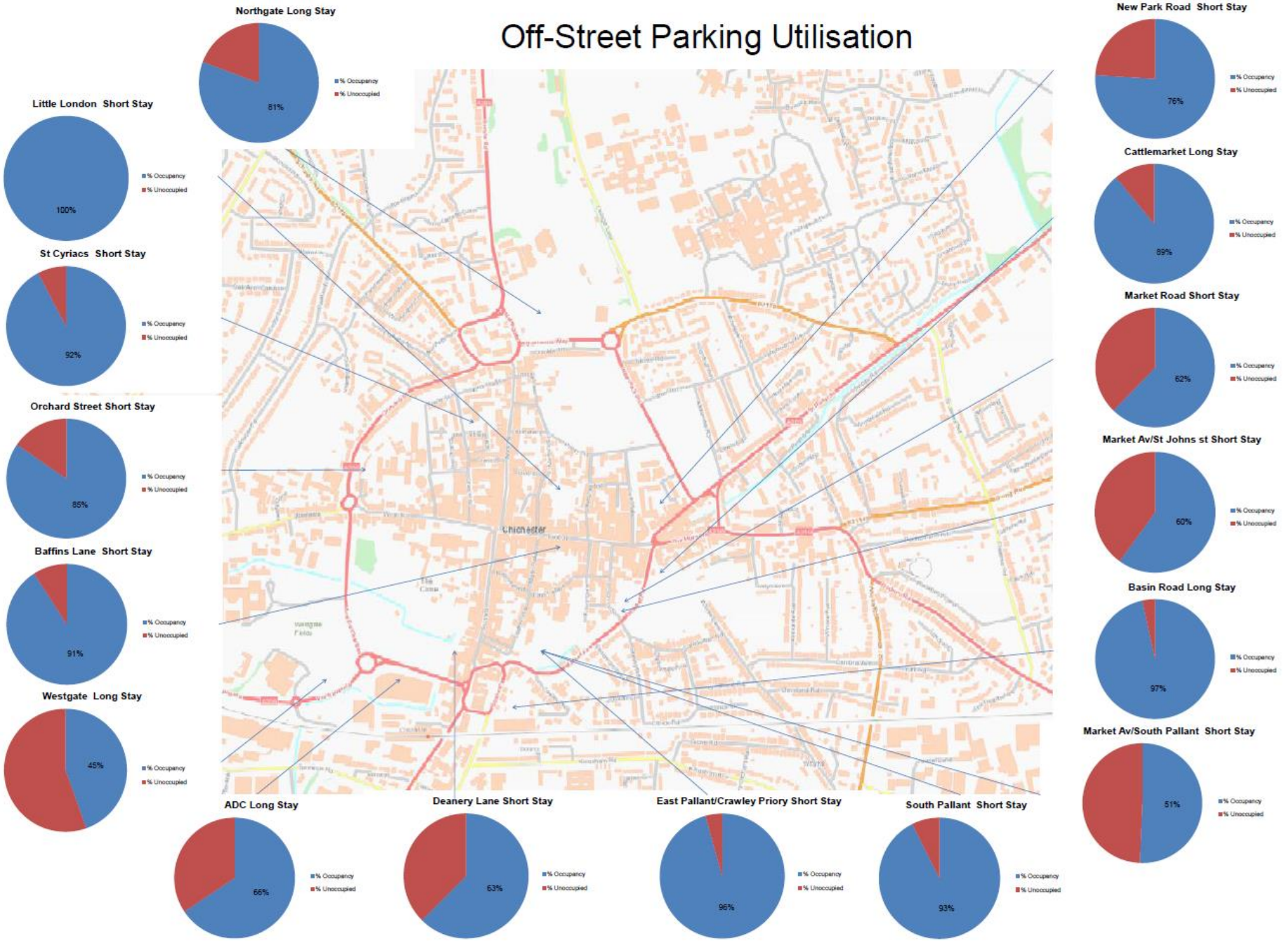
The assessment of off street parking within Chichester indicates that:

→ there is limited scope for growth in parking demand based on existing city capacity;

→ Turnover in the city centre short stay car parks is high;

→ The city sees an increase in traffic in typical seasonal months. Higher visitor demand in July and August and indigenous increase in demand in December. The range of differentiation is not excessive but supports a view that we may need to include a 20-30% margin onto those values observed in October

Figure 25 Off-street parking utilisation



SUMMARY

SHORT STAY DEMAND

With short stay parking, we observed the car parks at what is typically the peak time. We have deducted those within those car parks that are observed or assumed to be long stay users and have estimated the typical maximum demand requirement for short stay parking in the off street car parks to be currently at 1855 spots. The on-street short stay parking maximum demand is based on the morning observations within zone E

The maximum demand for short stay on-street parking within zone E is estimated to be 100 (derived in Table 3). Short Stay parking on streets outside zone E is not included as this is taken to be connected with local attractors and not general demand associated with city centre activity.

Table 9 Summary of short stay Maximum demand

SUMMARY OF SHORT STAY MAXIMUM DEMAND	VOLUME
Short Stay On Street RPS	100
Short Stay Off-Street	1855
Total City Centre Short Stay Maximum	**1,955**

LONG STAY DEMAND

Based on observation, some estimation and permits sales we have around 1300 cars parking long stay in the off street car parks in Chichester on a typical weekday. From our surveys of the unrestricted streets on the edge of the RPS zones, we have observed 399 vehicles parked that appear to be commuters. Based on aerial photography, we have estimated there to be 2,500 Private Non-Residential (PNR) parking spots for and expected to be fully occupied by workers. The capacity and usage at Britannia Car Park is included within the estimation of PNR.

Table 10 Summary of long stay Maximum demand

SUMMARY OF LONG STAY MAXIMUM DEMAND	VOLUME
Number of Long Stay in Public Parking	1300
On Street Unrestricted	400
PNR estimate	2,500
Total Long Stay Maximum	**4,200**

PARKING BALANCE SHEET

Taking the figures developed and surveyed in the preceeding text we can populate a table of the maximum demand across the city centre.

Table 11 Parking Balance Sheet – Max daytime demand

2016	Long Stay Weekday Demand	Short Stay Weekday Demand	Observed Daytime Use	Max Daytime Demand Total
Off Street	1300	1855		**3155**
RPS		100	859	**959**
On Street Unrestricted	400			**400**
PNR	2500	0		**2500**
Total	**4200**	**1955**	**859**	**7014**

The capacity of the city can be represented in a similar table. We have applied an operational capacity proportion of 85% for locations where use is ad hoc and 100% where users are frequent and regular. For the purposes of this current situation, the On Street Unrestricted capacity is set equal to current use although there is clearly more road space available throughout the residential areas and streets of the city.

Table 12 Parking Balance Sheet – capacity at operational maximum

2016	Total Capacity	Operational Capacity Value	Total Capacity at Operational Max
Off Street	3911 (Table 6)	85%	**3324**
RPS	2053 (Table 2)	85%	**1745**
On Street Unrestricted	*400*	100%	**400**
PNR	2500	100%	**2500**
Total	**9464**		**7969**

Combining both tables provides an indication of the spare capacity based on operational maximum and using maximum daytime demand.

Table 13 Parking Balance Sheet – spare capacity at operational maximum

2016	Max Daytime Demand Total	Total Capacity at Operational Max	Spare Capacity at Operational Max
Off Street	3155	3324	169
RPS	959	1745	786
On Street Unrestricted	400	400	-
PNR	2500	2500	0
Total	**7014**	**7969**	**955**

The maximum daytime demand (on a Friday in October) is just under 1000 lower than the capacity currently considered to be in use across the city.

3.1 GROWTH

GROWTH IN LONG STAY DEMAND

Long stay demand will be subject to growth in the future based on the forecast population growth within the Local Plan. By estimating the mix of demand, and growing that based on the forecast increases in households, we can predict the scale of additional demand for long stay parking in the future based on current behaviour. It suggests that there will be approximately a **19%** increase.

Table 14 Forecast growth in long stay parking demand

Total no of cars entering city for work	4,200	Table 10
No of cars from City	890	[1]
No of cars from wider area	3,310	
increase in City Population	0.32	[2]
increase in wider District Pop	0.16	
Forecast		
No of cars from City	1,170	
No of cars from wider area	3,840	
Total no of cars	**5,010**	
increase in %	19%	
increase in Long Stay Demand	**810**	

[1] Based on MSAO journey to work data
[2] Local Plan to 2029

This calculation is subject to numerous uncertainties. Another approach to forecast this demand is to refer to the demand created at the destination. Based on the number of new jobs expected in the city and applying factors to convert jobs to car trips generates an estimate of around 600. This provides some comfort for the number above.

Table 15 Calculations/assumptions for long stay parking demand forecasts

ATTRACTOR CALCULATION CHECK		
New Jobs expected for Chichester City	3200	[1]
Full Time	0.73	[2]
Proportion that are weekday	0.8	
Attendance on any one day	69%	
Proportion using car to travel	47%	[3]
Estimate of car demand	**600**	

[1]. From Chichester Employment Land Review Update (ELR)
[2] ONS data
[3] Chichester District overall car mode for those in work

FORECAST SUMMARY

Applying a growth of 31% (similar to the population growth expected in the Local Plan for 2029) to the figure of 1855 maximum short stay parkers off street and to the 100 parking on-street we can forecast the maximum short stay demand will increase by 606 to 2,561.

Table 16 Forecast maximum daytime total demand (2029)

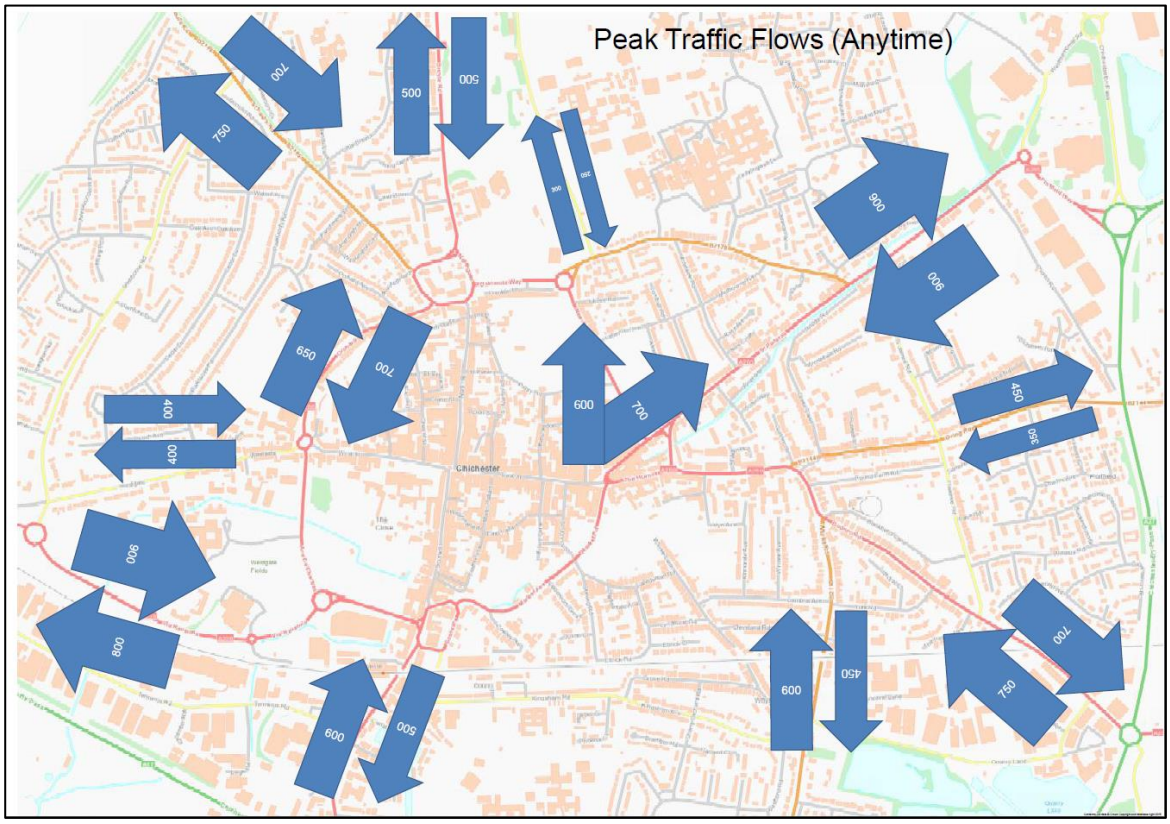
2029	Long Stay Weekday Maximum Demand	Short Stay Weekday Maximum Demand	Maximum Daytime Demand in RPS (Short Stay | Other)		Maximum Daytime Demand Total
Demand in 2016	4200	1855	100	859	7014
Growth	19%	31%	31%	0%	
Demand 2029	5,010	2,430	131	859	8430

Overall this indicates that maximum weekday daytime demand for parking will increase by around 20%, from just over 7000 now to 8400 in 2029.

3.2 TRAFFIC FLOWS

Figure 26 below provides an overview of the peak traffic flows on the core road network across the city, with scaled arrows to represent at a glance the relative weight of traffic flows on each route.

Figure 26 Typical Weekday Peak Averaged Traffic Flows (2014 Cordon Counts)



3.3 JOURNEY TO WORK

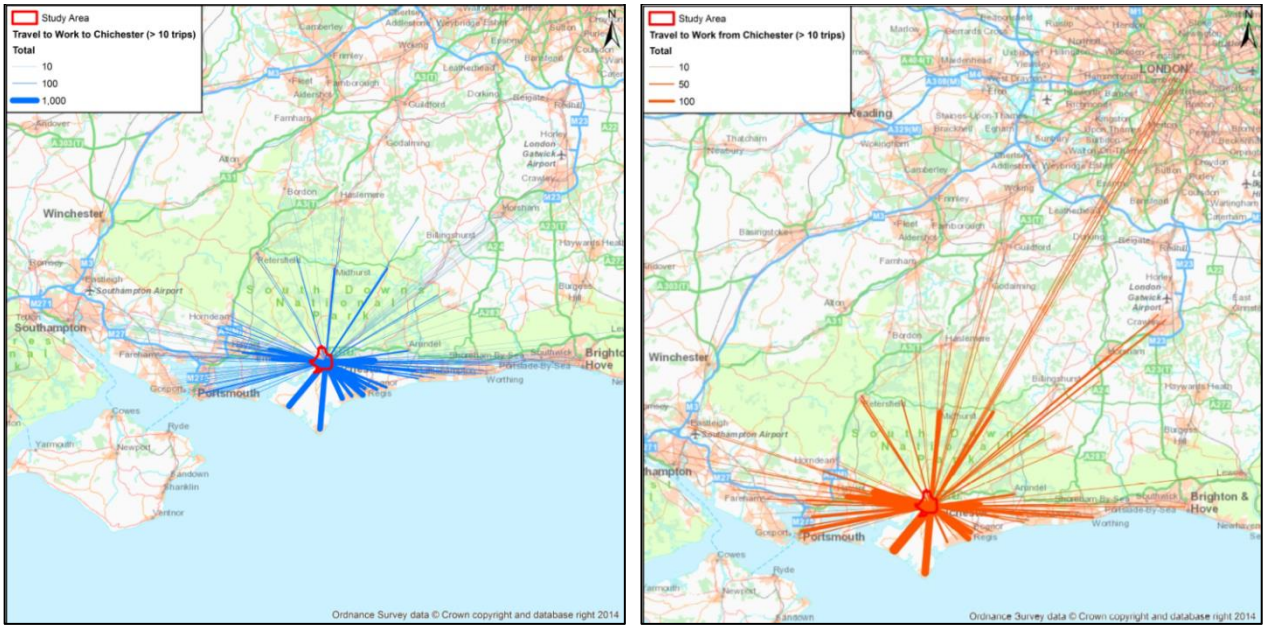
Commuters make up by far the greatest share of weekday peak period trips to and from the city, as such it is crucial to understand their existing travel behaviours, and trends between origins, destinations and their choice of travel.

The catchment for travel to workplaces within Chichester is smaller than that of the catchment for Chichester residents, which reflects the relative affluence of the resident population and their greater propensity for travelling further afield for higher paid jobs.

As show in figure 27 those commuting to Chichester are most concentrated amongst the south coast corridor, including the Manhood Peninsula, Southborne, Emsworth, Bognor Regis, Worthing and Havant.

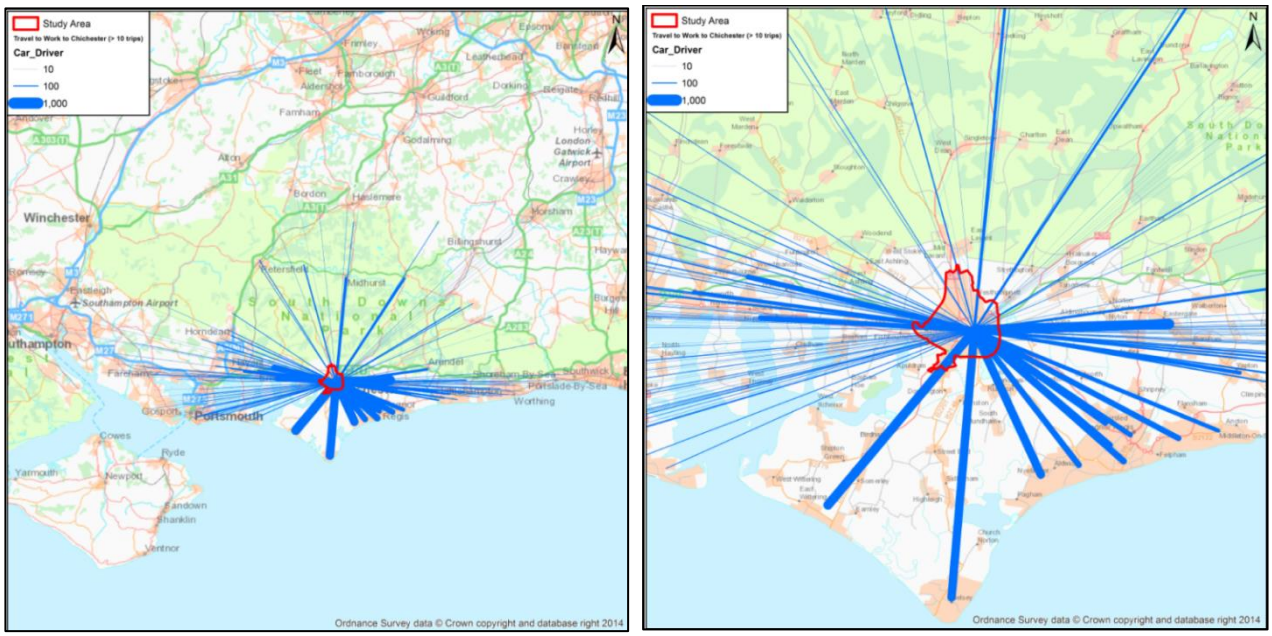
Chichester residents' commutes follow a broadly similar distribution, but are more northward facing, with more notable flows to London and Crawley.

Figure 27 Travel to Work Trip Distributions – all modes to and from Chichester (Census 2011)



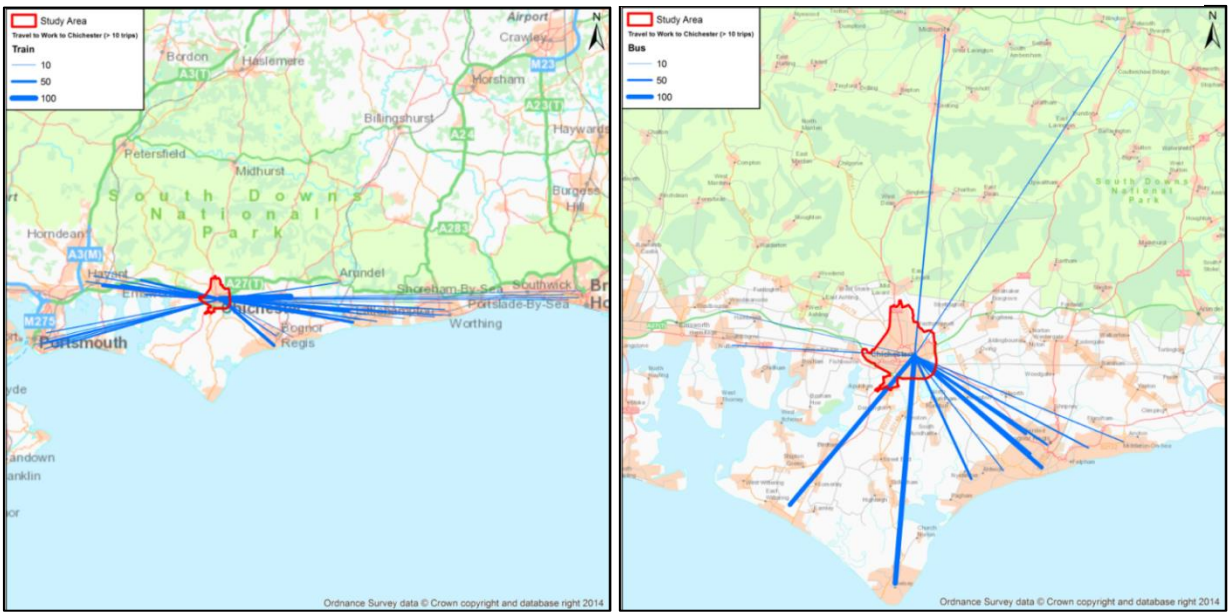
The distribution of commuters who travel by car (driver) are shown in Figure 28.

Figure 29 Travel to Work Trip Distributions – Car driver to Chichester (Census 2011)



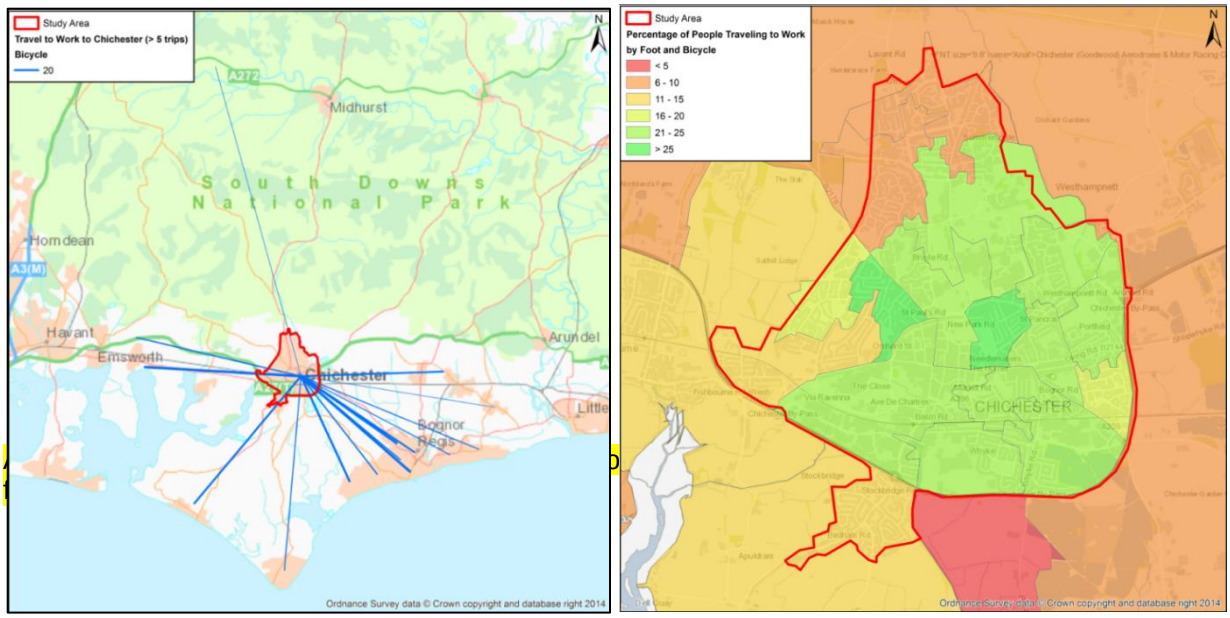
Travel to work by public transport is far more locally concentrated, highlighting the relative perceived/actual disparity in accessibility by public transport versus car journeys. As shown by Figure 30 rail trips are entirely focused on the better connected east-west coastal corridor. Bus trips are focused very much on the urban areas to the south of the City, Manhood Peninsula, Bognor Regis and Worthing.

Figure 30 Travel to Work Trip Distributions – Public transport to Chichester (Census 2011)



Journeys to work by walk and cycle are naturally limited to the immediate catchment around the City, with a the major originating from the Bognor Regis and Worthing urban areas, Emsworth to the West and Barnham to the East, though it should be noted these distributions are drawn from small samples. The greatest proportions of people travelling to work by foot or on a bike were in the area to the east of the city centre (around Melbourne Street) and to the east near Parklands Road (over 25%). The northern and eastern fringes of the city reported more modest pedestrian/cycle mode shares (less than 5%).

Figure 31 Travel to Work Trip Distributions – Cycle and walk to/within Chichester (Census 2011)



4 STAKEHOLDER CONSULTATION

The overarching aim of the consultation programme associated with this study has been to engage with a wide range of technical and community stakeholders to secure their input in developing a blueprint for the allocation of roadspace in Chichester.

4.1 STAKEHOLDERS

Stakeholders were classified into two types, as set out below (for further information see – Appendix B).

1. **Key technical stakeholders/ delivery partners**, including emergency services, WSCC internal departments (economy, strategic planning, highways, public transport, communities, behavioural change, etc.), Road Haulage Association and Freight Transport Association, District Parking Forum, bus, rail and taxi operators, public transport, walking and cycling user groups, access/disability groups and business representative groups (e.g. Federation of Small Businesses, Chamber of Commerce, Business Improvement District).
2. **Community/local stakeholders**, including major employers in Chichester, parish councils, local interest and community groups, residents' associations, neighbourhood groups and land uses such as the rugby and football clubs, Westgate leisure centre, CCG.

4.2 APPROACH

The consultation approach for each of these groups is set in Table 17 out below.

Table 17 Stakeholder Engagement Approach

ACTIVITY	DATE	DETAILS
Briefing note/ invitation	November 2015	Key stakeholders were informed about the study (aims, scope, timescales) and invited to attend a workshop in mid-January. Stakeholders were asked to consider a series of questions relating to the use of the road space in Chichester, which set the scene for the subsequent workshop.
Briefing note/ invitation	November 2015	Community stakeholders were informed about the study (aims, scope, timescales) and invited to attend a workshop in late January. In preparation, they were asked to gather the views of their community in advance of the workshop (they will be set several 'key questions' relating to the use of the road space in Chichester to consider).
Key technical stakeholder workshop	19th January 2016	Key stakeholder workshop provided an opportunity to engage directly with parties representing a range of interests to present the data gathered to date, understand their challenges, seek their concerns, gather suggestions and views on the emerging recommendations. The 2.5 hour session comprised: • Agreeing the vision and objectives for Chichester • Presentation of the evidence collected, issued identified and some key ideas for improving the use roadspace, under the themes of parking, traffic, sustainable transport and the urban realm • Break-out groups including an interactive road space allocation task, to explore stakeholders ideas for improving the allocation of roadspace based on the evidence presented and concepts introduced in the preceding session.

		• Use of Turning Point electronic polling handsets to collect feedback on the emerging ideas
Community stakeholder workshop	29th January 2016	Community stakeholders were invited to attend a workshop, structured similarly to that conducted with technical stakeholders. Following the workshop they were asked to provide any further comments within a defined period.

OBJECTIVES OF THE WORKSHOP

- → Inform evidence base
- → Present our emerging findings
- → Understand their vision and aspirations for the city - how should the streets be used?
- → Gather different perspectives on effectiveness of the existing network and parking
- → Encourage feedback and discussion by introducing some conceptual tools for tackling parking issues
- → Listen to others perspectives
- → Outputs will inform Options Development and Recommendations

The intention of the workshops was to present the emerging findings from the roadspace audit and desktop research, and to seek feedback on some conceptual tools developed as part of the more holistic approach to addressing the issues caused by the existing use of roadspace, and in particular parking. But going on to think more widely of about how roadspace might be used more efficiently, or differently to best achieve the vision for the City.

We sought to deliver an interesting and engaging session, and were keen to encourage discussion and debate amongst attendees.

The workshop featured interactive presentations and small group discussions, with the overarching aim of exploring the issue and potential solutions, reaching consensus where possible. We will make use of our 'electronic voting' handsets during the presentations to capture participants' views on key discussion topics. This is an effective system which ensures that all participants, not just the most vociferous, have had the opportunity to express their views.

The presentations focused on securing agreement over the vision and objectives for the city, including a presentation from WSCC Economic Development team to provide an update on the emerging Chichester Place Plan, which is beginning to develop a vision for the City from an economic development perspective.

This was followed by a presentation of the four conceptual tools that might be applied to overcome the identified issues and barriers to achieving the overarching vision and objectives. As the time available was limited and we were seeking to limit the amount of time we were presenting, to maximise time for groups discussion, exercises and feedback, supplementary issues and findings data sheets were displayed around the room, to afford attendees an opportunity to view them during the breaks and provide any further feedback or highlight any additional issues through written notes.

The format of the stakeholder workshops is outlined in Table 18.

Table 18 Stakeholder Workshop Format

SESSION	DESCRIPTION
REGISTRATION	Figures/Evidence displayed around the room relaying the findings of the data collection/collation. Post-it notes supplied for attendees to record supplementary issues and stick onto a map or onto the figures displayed around the room.
INTRODUCTION - VISION AND OBJECTIVES	Restate the aims and objectives of the overarching study, and the workshop itself. Present images conveying the positive and negatives aspects of city – i.e. 5 good streets and 5 where roadspace is used more poorly. Restate the vision and objectives for the City (referencing Place Plan and other documents). *TASK 1 - ask attendees for feedback, and to vote, using Turning Point electronic polling handsets, on the deliverability of the Vision (prior to understanding the tools available to reallocate roadspace).*
TOOLS FOR REALLOCATING ROADSPACE	Introduce 5 key conceptual tools for reallocating roadspace based on the findings from the data collection, analysis and review of previous studies, under the following themes: 1. Tackling parking complaints (on-street) 2. Parking supply and traffic management 3. Reallocating roadspace: improved places and sustainable transport corridors 4. Reallocating roadspace: "to, not through" Each will introduce a concept for allocating roadspace differently to achieve the vision for the City, based on the findings of the analysis, including references to future development, to solicit feedback and views from the stakeholders on differing approaches. *TASK 2 - split attendees into 5 groups, and task each with reviewing one of the conceptual tools, and identifying their pro's and con's. Each group facilitated, and a nominated member of each group feeding back to the group.*
ROADSPACE ALLOCATION EXERCISE	Revisit the streets identified in the introduction as being examples where roadspace is allocated poorly. Present a worked example for one of the 5 streets, demonstrating how some of the principles might be applied in more detail. *TASK 3 – split attendees into 3-4 groups, and task each with reviewing how the conceptual tools might be applied to one of the 5 streets highlighted during the introduction to improve the function of the street, using roadspace allocation blocks, mapping and markers. Each group facilitated, and a nominated member of each group feeding back to the group.*
VOTING PANEL	Following the preceding exercises where attendees will have considered the options and their application within Chichester, we will seek to capture feedback

	from attendees as to which tool/s they may prefer. *TASK 4- Invite attendees to vote on the effectiveness and appropriateness of the conceptual tools for reallocating roadspace in Chichester, on a sliding scale (i.e. 5 – support strongly to 1 – oppose strongly). Attendees will then also be asked to revisit the vote on the deliverability of the Vision they completed during the introduction.* A feedback form will be provided to capture any further comments – with a defined submission deadline.
SUMMARY AND CONCLUDING REMARKS	Thank all for attending and summarise the key takeaways from the session. Explain the next steps for the study How we will account for their feedback.

5 VISION AND OBJECTIVES FOR CHICHESTER

It is important to remember when developing a transport related strategy that transport in the broader context is not an end in itself, but only a means to an end. As such before setting out to develop recommendations for addressing some of the issues previously identified across the city, it is critical to understand what the wider vision and objectives are for Chichester going forwards – to ensure that any eventual proposals are consistent with achieving this vision.

By identifying and agreeing these objectives with stakeholders at the outset it also provide a useful benchmark against which the effectiveness and appropriateness of schemes can be appraised and assessed.

COLLATED VISION AND OBJECTIVES

To develop the vision and objectives we sought to draw together the most relevant and pertinent vision and policy statements related to transport from existing District and County Council policy documents, to help articulate and remind us of the aspirations for the city in the longer term.

We then distilled these down from fuller sentences or paragraphs into more concise and specific statements, retaining the sentiment of the preceding policy statement.

1. Economic growth
2. A more integrated and sustainable local transport network
3. Increasing use of sustainable modes of transport ('Smarter Choices')
4. Improve journey times
5. Improve air quality
6. Improving safety for all road users
7. Discouraging HGVs from using unsuitable roads
8. Environmentally friendly way of life
9. Healthy lifestyle
10. Vibrant historic city
11. Opportunities to choose alternatives to car travel
12. Significant shift in travel behaviour - reducing car use for short distance journeys
13. More working age people to relocate to West Sussex
14. Promotion as a tourist destination - emphasis on the ‘active outdoors’ including cycling and walking
15. Consolidating and enhancing the role of Chichester city
16. Range of opportunities for business, shopping, leisure and entertainment
17. Graduates choose to remain within Chichester and set up businesses or seek local jobs
18. New sustainable neighbourhoods
19. Homes, jobs and community facilities with good public transport, pedestrian, cycle links
20. Rich cultural and architectural heritage conserved, enhanced and promoted

These vision and objective statements were drawn from the following policy documents, selected excerpts shown in bold:

Local Plan - Vision for 2029 - the Plan area will be a place where people can:

- Follow a socially responsible and more **environmentally friendly way of life**;
- Pursue a **healthy lifestyle** and benefit from a sense of well-being;
- Enjoy **a vibrant historic city**;
- Live in **sustainable neighbourhoods** supported by necessary infrastructure and facilities;
- Feel **safe** and secure;
- Move around safely and conveniently with **opportunities to choose alternatives to car travel**

The Local Plan strategy for transport aims to **promote a more integrated and sustainable local transport network**.

West Sussex Transport Plan (2011-2026) - provides strategic direction, focusing on promoting **economic growth**;

- **increasing use of sustainable modes of transport ('Smarter Choices')**
- **improving the efficiency of local transport networks to improve journey times and air quality**
- **improving safety for all road users;**
- **discouraging HGVs from using unsuitable roads**

Vision for Places

- emphasis on **consolidating and enhancing the role of Chichester city** as the District's main centre,
- Chichester city will maintain its special significance as an economic and cultural centre **serving a wide catchment area beyond the District**.
- The city's employment base will adapt and evolve
- The city will **enhance its reputation as a University City** and **centre of excellence for higher and further education** and the arts
- with a **range of opportunities for business, shopping, leisure and entertainment**.
- The economic contribution that students make to the city will be further enhanced as graduates choose to remain within Chichester and set up businesses or seek local jobs.
- New sustainable neighbourhoods at Graylingwell Park and Roussillon Park, as well as other sites in the north of the city and around its fringe will p**rovide homes, jobs and community facilities with good public transport, pedestrian and cycle links** to other parts of the city.
- As an historic walled cathedral city dating back to Roman times, its **rich cultural and architectural heritage will be conserved, enhanced and promoted.**

'The Beautiful Outdoors' Campaign West Sussex Promotion as a tourist destination

- **Encourage more working age people to relocate to West Sussex**
- **Emphasis on the 'active outdoors' including cycling and walking**

As well as Local Plan development, it was imperative the roadspace audit recognised the wider economic ambitions for the city; as such these objectives were also developed mindful of the **Chichester Place Plan**, which at the time of writing was currently under development, and beginning to develop a vision for the City from an economic perspective.

BUY IN TO THE VISION AND OBJECTIVES

We consulted on these visions and objectives with key stakeholders at both the technical and community workshop events, at which they were agreed and accepted as being a representative set of overarching objectives against which to assess the appropriateness of any subsequent proposals.

We then asked stakeholders, based on their local knowledge and experience of Chichester, how achievable they considered the vision and objectives to be? Using the following scale of 1 to 5, where 1 = easy and 5 = very challenging.

Figure 32 Technical Stakeholder Views - How achievable are the vision and objectives under the current strategy?

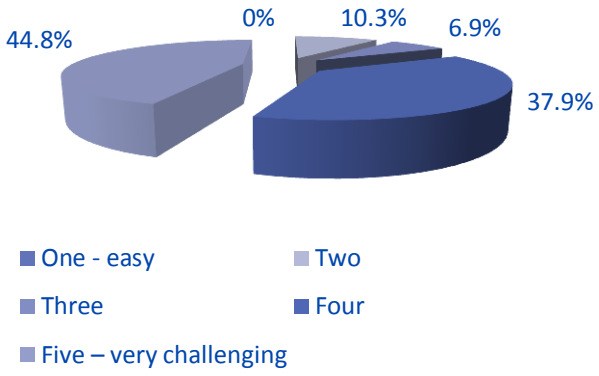
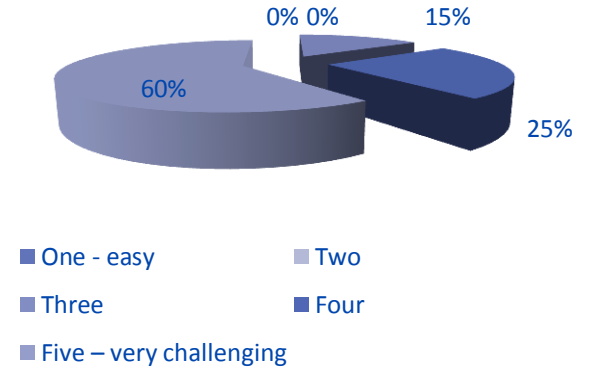


Figure 33 Community Stakeholder Views - How achievable are the vision and objectives under the current strategy



There was a clear consensus amongst both groups that these would very challenging objectives to achieve at present. By revisiting these visions and objectives it serves to frame the challenge, and informed how we approach options development.

6 OPTIONS DEVELOPMENT

6.1 CONCEPTUAL TOOLS FOR REALLOCATING ROADSPACE

Based on the findings of the roadspace audit and desktop research of planned future development and committed/proposed transport improvements, a range of conceptual tools were firstly identified to take to stakeholders for their consideration.

These conceptual tools sought to address the identified issues and realise the overarching vision and objectives for the city as set out in the preceding chapter.

Figure 34 Conceptual tools for reallocating roadspace

Determining the correct allocation and prioritisation of highway assets for the community is critical, and has been informed by the soundings taken from stakeholders as to their envisaged solutions, and more importantly what their ultimate objectives for the city are.

The conceptual tools for reallocating roadspace can be broadly grouped under 4 core themes:

- Tackling parking complaints (on-street)
- Parking supply and traffic management
- Reallocating roadspace: improved places and sustainable transport corridors
- Reallocating roadspace: "to, not through"

Each of which introduces a concept for allocating roadspace differently to achieve the vision for the City.

6.2 TACKLING PARKING ISSUES (ON-STREET)

The first core concept seeks to address the challenges posed by on-street parking provision, and better manage where it is provided to realise the wider objectives of the city.

Provide One Off Solution with RPS across whole urban area

→ Strategy to welcome and accommodate Commuters and Visitors for they bring wealth

→ Define areas within wider street that can be used by day visitors to park and that this charged for. May be one in three on some streets so that there is parking for visitors

→ Some spots only available up to 16:00 to ensure easement of evening crossover where high local residential demand

A key driver for undertaking the audit is to affirm whether roadspace is being used in the best interests of supporting the local community. A critical aspect of that is how the roadspace promotes the provision and access to goods and services. Chichester relies on a significant in-commute from other towns to provide the labour and expertise for many of its services; the hospital is a regional employer sourcing staff from across the wider hinterland. Given the high cost of housing within Chichester itself, major employers such as the hospital, the council and those providing services throughout the city are to some extent reliant on car-borne staff that commute from neighbouring lower cost towns.

Recognition of this movement of people and their needs to be able to park for long periods is fundamental to the approach that we advocate for Chichester residents to acknowledge that their well-being and quality of life in the city is dependent on these movements. Not only do commuters provide key services to the city, they also bring wealth into the city through what they spend during their working day and at other times. Those that pay to park make a not inconsiderable contribution to help with the city's transport costs.

Thus the strategy for parking on-street across the city is predicated on this assumption that commuter parking is not something that is a problem to be irradicated or prevented, but something that is not only necessary, but should be welcomed.

Where commuter parking is seen as a problem is where it is un-managed; policy responses are typically reactive and thus compound this impression of action being a response to a problem.

For this reason we propose that a Residential Parking Scheme covering the whole urban area of Chichester is defined and prepared for implementation. It may be appropriate for the city-wide RPS to be applied in a progressive way over time, both for reasons of local sensibility and resourcing, but the outline plan and its terms should be defined and agreed as a whole.

The terms for the city-wide RPS, and this is to include extant zones, is that in providing the safeguard for residents that their streets will not be overwhelmed with commuter and visitor parking, their streets will be assessed for the suitability and introduction of allocated parking spots for such use. The evidence has indicated that many residential streets carry surplus capacity at all times. Sections of kerb that are not relied on by residents may offer a number of parking spots suitable to be allocated for daytime use by commuters. On other streets parking spots for commuters could be provided but should be distributed and

spread across the entire street, reducing the situation observed with all the commuters parking at one end of a street and thereby presenting a problem.

The restrictions governing the use of these commuter and visitor parking spots would be sensitive to the needs of the local residents and retain the philosophy that residential parking will be safeguarded when requried and commuter parking will occupy capacity that is otherwise spare. For this reason it may be appropriate for some (but not all) of the commuter and visitor parking bays to be available only up to 15:00 to avoid creating problems with the late afternoon peak. Other spots would and could be available at all times from early morning until the late evening. Outside the time allocated for visitor parking, the spots would be available for those with a residents' parking permit for that zone.

The philosophy would extend to those streets and avenues in the outer reaches of Chichester that have plentiful off street parking. Within the outline RPS a number of spots should be included for visitor parking.

It is important that the restrictions and terms of the current RPS zones are re-examined and included into this new approach. Many of the RPS zones restrict all parking to residents only, yet during the day the residential demand is extremely low. Notwithstanding the need to apply suitable safeguards to ensure that adequate capacity remains and is available across the length of the street, that roadspace could otherwise be opened up for use by visitors or commuters. Certainly many of the residential zones close to the city could provide some areas of on-street weekday parking between 09:30 and 15:00 without any interference or inconvenience to residents who have taken their vehicles away during the daytime.

- → Use Virtual Permits and sell spots on annual contracts
- → Maximise Utility – Option on Spot held up to 10 AM
- → Maintain process of controlling total number of residential permits sold based on kerb length ratios
- → Visitor revenue subsidises RPS permit costs
- → Performance pricing

There are some further considerations for introduction of any RPS. They do generate additional signing and the potential to create unwanted clutter. To the extent possible, the use of controlled parking zones signed at all entries offers a solution to negate unnecessary signing within the zone.

It may also be that some residential areas deem the introduction of an RPS unnecessary and, because of the street furniture, undesirable at this time. It would be our recommendation that the outline plan and principles of allocation of commuter or visitor parking is however agreed as a single policy across the city, regardless of whether at that time a specific scheme is introduced. This approach establishes a city-wide solution and establishes the terms with all residents regarding how the roadspace in their area will be used for the wider needs and success of the city.

As part of the RPS outline plan principles we would recommend some discussion is held regarding allocation, payment and enforcement for commuter and visitor parking spots. An

approach that may be considered would be for the commuter parking spots to be available for use based on an annual permit linked to a specific location and vehicle. These permits may be virtual – that is the vehicle allocated to any spot and status of the permit is held electronically – and administration of the permit may be largely self-served via web services to minimise administration costs.

For commuters, this provides the level of consistency and reliability they require, and to a large extent the spot would be self-enforced by those that had paid for it. Issues of specific enforcement could thus be carried out in response to a complaint from a permit holder. The specific allocation of a permit to a defined parking spot is different to the current sale of permits for residential zones to commuters where availability allows. With the current system, there is little control or management preventing specific streets within a zone receiving all the commuter demand causing localised issues; the principle of the city-wide RPS is to embrace a level of commuter parking that can be tolerated and to manage and control that such that at a local level the commuter parking does not create nuisance.

Use of an annualised approach would negate the need for payment machines. The revenue from the permit could be used to contribute to (but not remove) the charges applied to residents or specifically used to provide local environmental improvements, further reinforcing the concept that such parking is to be welcomed and has direct benefit to the neighbourhood.

The annual charge for the permit may be linked to other prevailing charges or subject to the demand. It seems sensible that existing users are granted the first option to renew any permit they have to support consistency in their travel choices and habits. However a range of methods to ensure roadspace remains suitably priced and appropriately allocated, including the use of changes to the annual charge, should form a key part of the discussion. The agreed terms of the city-wide RPS should be integrated into the overall scheme design such that the temptation or scope to make short-term political or financial gains via amendments to charge-setting are reduced.

Those that are visiting the city will not wish or be able to commit to an annual permit. It may be appropriate that any commuter spot that is not occupied by 10:00 becomes available for use by a visitor. This measure itself will open up a number of parking spots on any given day across a zone. It is also to some extent a self-correcting approach. Many of the weekdays selected by annual permit holders for annual leave (especially school breaks and the summer weeks) will correspond to those days of higher daytime demand for short and medium stay parking.

We would suggest that payment for these shorter and ad-hoc stays is collected by methods that do not require infrastructure. The infrequent use and dispersed nature of these spots would make the use of pay and display machines unwarranted. Subject to the Council's policies it may prove realistic to permit use of and payment for these spots by phone or mobile device only, with user's registrations assigned to a specified spot or location.

Noting that the principle of the city-wide RPS providing spots for commuter and visitor parking is that the current levels of access to on-street parking for residents is not compromised, we would commend the continued application of controls on the numbers of residential permits sold based on available kerb length ratios. It may be that with some spots dedicated to commuter parking, the available kerb length reduces. Any future growth in applications for residential permits, should these occur, may thus be curtailed earlier since the available kerb length will be reduced. This is not inconsistent with a wider ambition to encourage those living within the city to choose less car dependent travel habits.

ENHANCING ON STREET PARKING IN THE CITY CENTRE

Throughout Zone E on-street parking provides a key service for those wishing to gain access to commercial premises. The availability of parking in close proximity to a specific location is a key desire of many visitors and the ease of being able to drive to that location, park outside or very

close to it on-street and then depart after a short visit has often huge utility for the user. Contrasting such a stop with one that involves parking in an off-street location that is some distance from the point of interest indicates how much more convenient and time-saving a supply of on-street dispersed parking can be for visitors. For these reasons on-street parking is valued, and should typically be priced higher than off street parking.

However insomuch that the parking offers great benefits for the users, those benefits or utility can only be achieved if a parking spot is available at the time required and somewhere close to where it is needed. It was tackling this issue and recognition that *availability* was the core requirement for on-street parking for the social and economic success of a city centre that underpinned the ideas of performance pricing.

PERFORMANCE PRICING

A desirable occupancy rate is typically around 85-90% for on-street parking. This creates the optimal balance between ensuring that those wishing to visit shops and businesses can find somewhere to park while maximising the remaining use of roadspace for those that are already in town doing business. The cornerstone of Performance Pricing is based on adjusting the tariff paid to park based on expected demand to achieve the 85-90% occupancy at all times. At times and locations that demand is high, the price to park is increased and where there is high availability, the price is reduced. We should stress that the parking tariff does not change in real time. Changes are made at set times at regular intervals based on historical data.

In San Francisco the tariff was adjusted every two months in response to measuring occupancy for the preceding period. Where occupancy was seen on average to be above 80%, and thus empty parking bays limited, the hourly parking tariff was adjusted up by 25c. If the average occupancy was lower than 60% the tariff was reduced by 25c or if lower than 30%, by 50c. For those blocks with an average occupancy between 60-80%, no change was made.

SFPark Performance Pricing Tariff Change Regime				
Average Occupancy in preceding period	<30 %	<60 %	60-80%	>80 %
On Street	-50c	-25c	No change	+25c
Off Street	-50c		No change	+50c

While San Francisco used parking bay sensors to determine parking occupancy there are a range of lower cost solutions being used in other cities and under development to establish a measure of occupancy and thereby inform price changes under Performance Pricing.

ENABLING STEPS

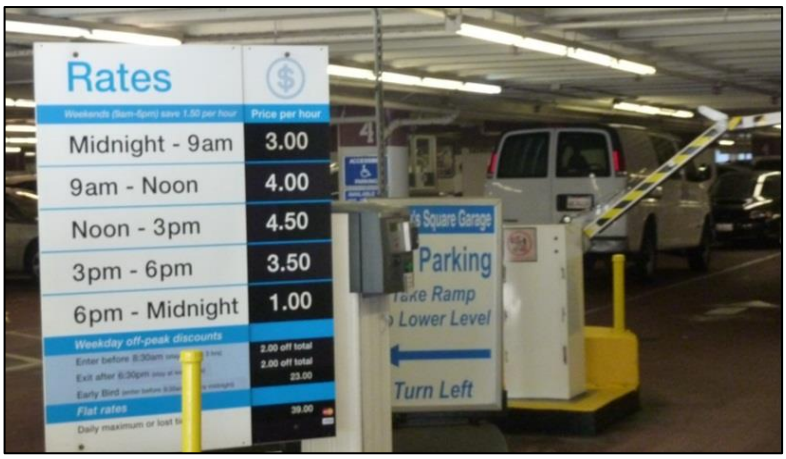
We consider that there are potentially **four key enabling steps** that would set the foundations for West Sussex to introduce and operate performance pricing in an effective and efficient way.

First, where on-street parking is not currently charged for but may only be subject to Traffic Regulation Orders (TROs) limiting stay by duration, a further new TRO will be required to implement charging at those on-street locations. The process may typically take six months to implement.

The second key enabler is internal to the authority but essential for the good governance and consistency of process associated with the approach. A distinct policy must be written to embody the aims of achieving a given level of parking occupancy and that the tariffs will be amended

based on prescribed actions to achieve that target. The policy and any associated schedules stipulating the period for policy review, the mechanism and frequency of occupancy measurement, the tariff adjustment responses to be executed and if required, any minimum or maximum levels of control either on individual tariffs or overall revenue requirements, may appropriately require full Council approval. Thereafter the standing orders should delegate responsibility for executing the policy and signing off any tariff changes to a Senior Officer. This long-term direction setting by the politicians who then are removed from the execution of each step is an imperative requirement to separate any short term political or financial concerns within the Council from the necessary steps of good consistent government and acceptability to the public.

The third enabling step refers to making the process of making changes efficient. Once the TRO with the charging schedule is established, the process to make amendments to the tariff does not require the same process. Changes to the tariff may be effected by a Notice of Variation. Those affected are informed rather than consulted. The local authority is required to give at least 21 days' notice prior to implementation. The cost of publicising each tariff change should not become a barrier to, or an unacceptable financial drain, on making price changes. It should be noted that there is no requirement to undertake frequent reviews, but the frequency of the review process (taking account as necessary of short term seasonal influences) will more rapidly bring about a stable and suitable tariff in many areas to achieve the parking strategy objectives.



SF Park Rates in off street car parks operate the same tariff periods and are amended every two months based on previous demand

The fourth enabling step is not imperative but advantageous. It will assist the public offer and service if the District who provide a significant amount of public parking were to adopt a commensurate approach and adapt its off-street pricing in concert with those applied to the highway.

CHANGING PARKING DURATION CULTURE

The other key change for parking in the city centre stems from how users plan and pay for their parking. While Pay and Display provides a tried and tested method of payment collection that is widely understood by the public, and vouchers (scratchcards) offer significant cost savings and negate the requirement for much street furniture or maintenance, both systems depend on users pre-determining their length of stay in advance. This presents a major drawback for users and can lead to trips being curtailed when visitors or shoppers may have been in the process of further business. Most major commercial retail operators that provide parking with their malls have moved to pay on foot car parking charging. This is in direct recognition that a parking time limit should not curtail those shopping within the premises.

Emerging technologies and user acceptance of third party operating accounts will enable increased use of pay by phone and more particularly back-office accounting processes. Already users are able to park on street and use their mobile device to commence their parking stay by pressing a button on-screen, and finish their stay by pressing another button. Charging for their

stay, based on the prevailing tariff and duration of stay is calculated as a transparent yet back-office function.

In the near future much wider use of mobile devices and mandatory inclusion of in-car GPS and communication systems in new vehicles from 2018 will enable many more users to set up open accounts for automatic payment of parking charges and tolls from their car dashboard. Booking parking, navigation to and parking charges will be deducted based on data collected automatically regarding length of stay and location. We anticipate that users will be presented with a consolidated bill on a monthly basis, but will see and embrace greater flexibility in the charges made based on a more dynamic and market-based pricing model. The back-office functionality will enable charges to be determined based on actual length of stay, time of day, user status and will offer linkage to other transport and personal transactions as well as being linked to promotions.

Thus on-street furniture and more traditional methods of paying for parking at the point of use could to a significant degree diminish in importance over the next five years. This may have a bearing on the life expectancy of any on-street equipment and the density of deployment, or indeed any decision regarding which payment mechanisms to introduce.

Notwithstanding, with performance pricing established, the need to control duration of stay using time limits should diminish. So long as the price has managed demand at all times to ensure that there is availability**, there is no need to limit users' length of stay**. By design, performance pricing ensures availability and ensures that anyone wanting to park on-street and who is willing to pay the charge prevailing at that time, can do so. Evidence in Westminster, Los Angeles and San Francisco, where time limits have been either removed or relaxed in concert with other mechanisms to manage availability, indicate that compliance with rules and payment for parking increase.

The principal consideration for enforcement is that it should be proportionate and sufficient. The emerging trends see a move away from civil enforcement officers undertaking a punitive role to job titles and descriptions that are designated to assist users find parking and provide a valuable public service.

HIGHWAY REALLOCATION

Observations of the highways within Chichester indicate that carriageway capacity can be significantly greater than the junction capacity. In a number of instances roads are wide and even dual carriageway but the junctions into which they discharge are limited to one lane. Other than providing stacking capacity at peak times and encouraging higher speeds between the queues at the junctions, which in turn makes the road more difficult to cross for pedestrians and intimidating for cyclists, it appears that these wider roads add little to the overall journey time or the efficiency of the road network.

AVENUE DE CHARTRES

Avenue de Chartres is a dual carriageway with a single lane narrowing at its northern end. This brings into doubt the benefit of the dualling and suggests that subject to closer inspection, one carriageway could be given over to parking without significant detriment to the movement of traffic in the city. Options could include taking the carriageway closest to the city and using it as a slow lane with parallel parking on one side and as necessary retaining access to the existing bus /coach drop-off pick. This slow lane would also be attractive for cycling.

VIA RAVENNA

Via Ravenna is a wide carriageway. Subject to further inspection and controls afforded from a lower posted speed limit, it offers the potential for parallel parking along its northern edge between the junction at Sherbourne Road and the Leisure Centre.

WESTGATE

Much of Westgate is a wide road that historically has been traffic calmed from an array of build-outs and speed cushions. The parallel parking is permitted along the street, leaving much of the central street open and clear. It was noticeable during site visits that under these conditions and in particular in the evening when opposing traffic was limited, vehicle speeds were perhaps higher than desired. This street offers the potential to provide both more parking capacity and ambient traffic

calming through an arrangement of perpendicular parking at staggered intervals along the street.

It would be appropriate for revenue earned from on-street charges or use to be deployed in historic areas such as these to improve public urban realm. As an existing major thoroughfare for Bishop Luffa school and potential development to the west, the ambience and safety of it as a pedestrian route should be considered in any future design.

There appears to be scope for the effective capacity of these roads to be maintained and subject to local design and safety considerations, some of the kerb length to be made over for on-street parking. The reduction in road width and kerbside activity will reduce link speeds and generate a calmer traffic flow more conducive to the city. The provision of additional on –street parking offers the city more parking capacity and users greater locational choice.

CAPACITY

For Westgate a changed configuration is likely to generate much additional parking capacity. However it would offer the opportunity to improve the arrangement of the parking and the accommodation of cars and other aspects of urban realm in this area.

Our estimates of additional parking on the highway on Via Ravenna and Avenue de Chartres are subject to consent and acceptability. Furthermore a more precise investigation of the available kerb length is required. For the purposes of this audit, we have made some preliminary estimates that 150 parking spots could be provided.

HIGHWAY REVENUE

Payment for the parking at rates compatible with the city or based on demand will likely provide the County with additional revenue and a surplus over their operational costs. Any surplus can only be spent as defined in Section 55 of the Road Traffic Regulations Act 1984 on transport or environmental works, and this hypothecation is not only appropriate but potentially easier to sell to the public.

As part of the programme to convert any road space and make charges for parking, potential revenues should be brought forward to make significant improvements and investments in the urban realm that are recognised by the public as evident and visible re-investment of the parking charge.

In summary these proposals mean that road space otherwise of limited virtue even for those in motor vehicles can be re-specified to benefit car users seeking available parking and provide significant urban improvements for the wider city populous through the generation and direct re-investment of revenue surplus.

6.3 PARKING SUPPLY AND TRAFFIC MANAGEMENT

The second core concept complements the first, which seeks to better manage where parking is provided on -street, by reconsidering where off-street parking and the associated traffic might best be located to realise the wider objectives of the city.

On the October Friday lunchtime observed, most of the off street capacity within the city was in use. Occupancy was 78%, including spare capacity in the Avenue de Chartres and Leisure Centre car parks. This level of occupancy is high for a city average and this view is supported by the city centre car parks showing levels at or close to 100%.

The assessment of off street parking within Chichester indicate that there is limited scope for growth in parking demand based on existing city capacity.

The city also sees an increase in traffic in typical seasonal months. Higher visitor demand in July and August and indigenous increase in demand in December. This means the observations we not necessarily at the peak time and it may be prudent, subject to an accepted objective to provide sufficient parking capacity, for further capacity to be identified for use on a seasonal or temporary basis.

CITY CENTRE TRAFFIC

Examination of the ticket sales data for Little London shows that there were over 400 tickets sold on the day of survey. Thus this one car park is attracting over 400 movements in and 400 movements out. Little London is part of the historic centre of the city and an area is designated for development of independent shopping.

Figure 35 Little London car park vehicle movements

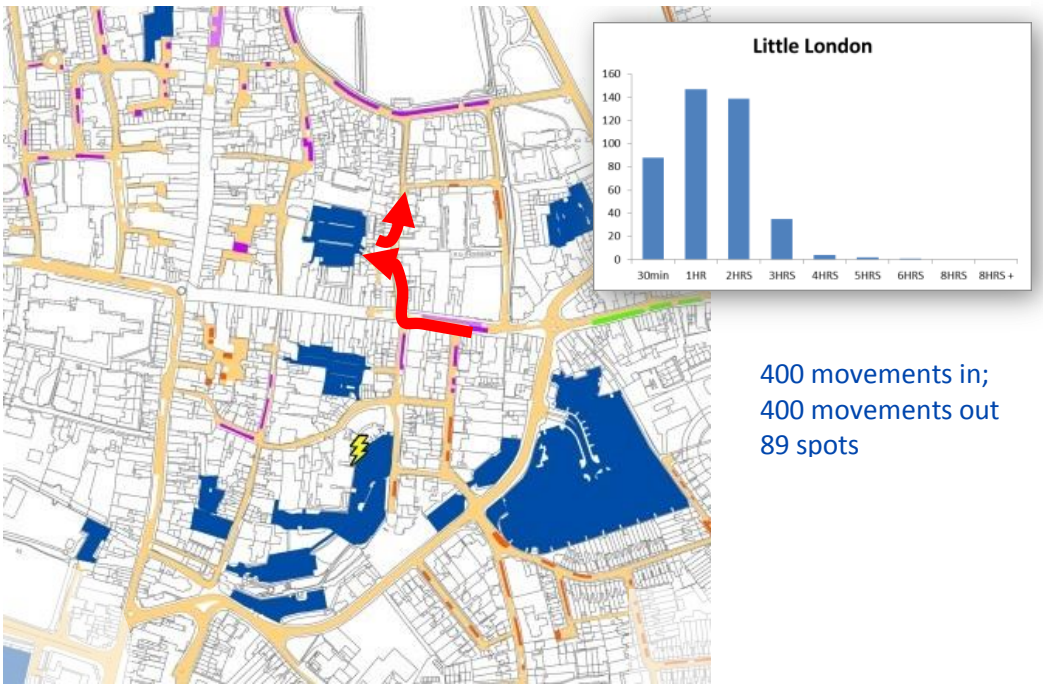
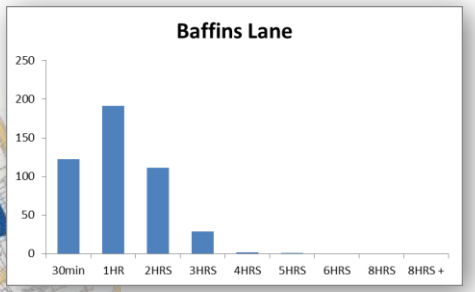


Figure 36 Queuing for Little London car park

The car park generates a large queue that compromises the ambience of the space and no doubt generates pollution. The photograph was taken at around 09:30.

The same applies to Baffins Lane. That too attracts a large number of vehicle movements into the core of the city.

Figure 37 Baffin's Lane car park vehicle movements

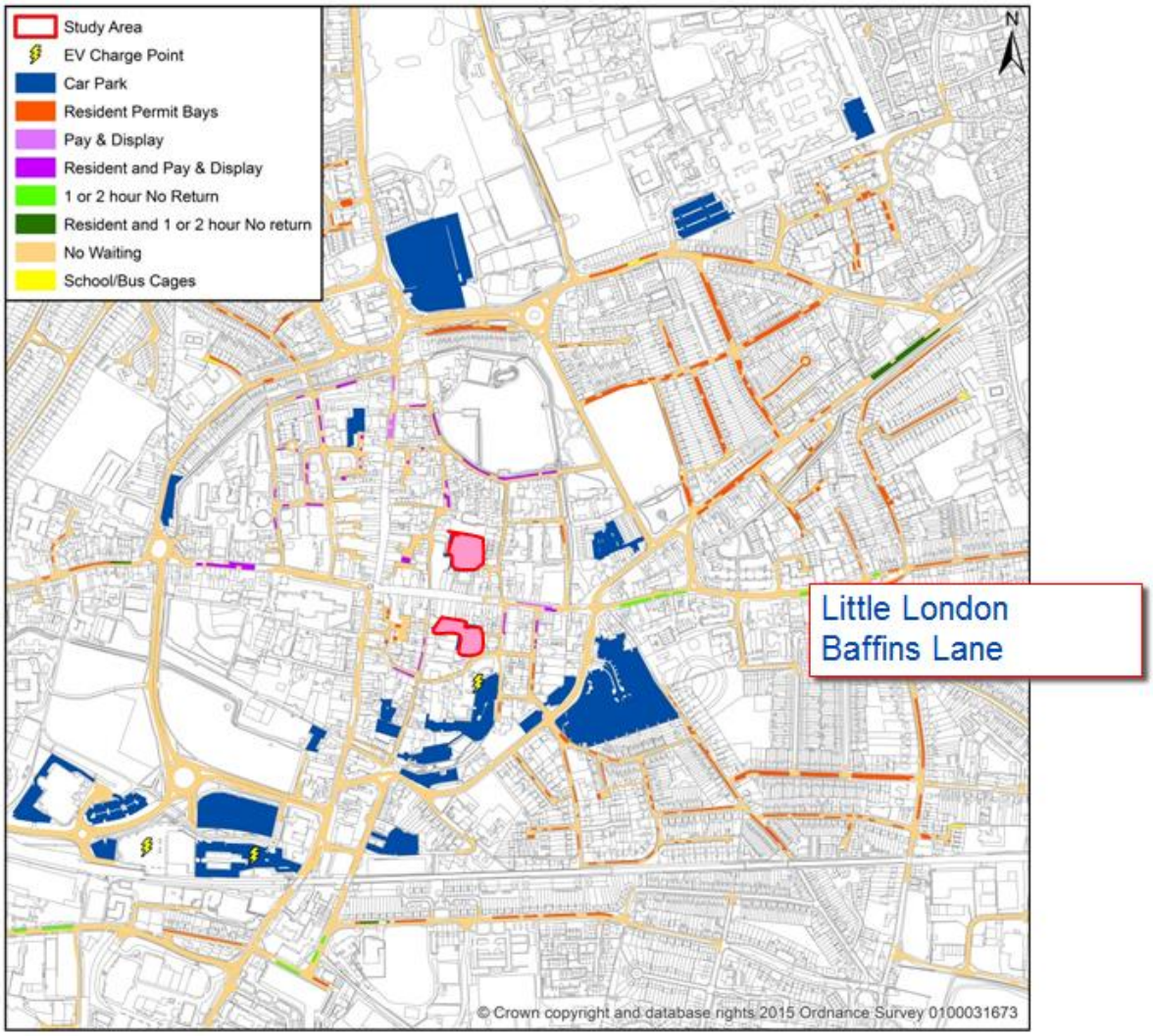


450 movements in;
450 movements out
88 spots

Combined, these two car parks alone have only about 170 spots. Yet they generate over 800 car movements in and another 800 car movements out of the core city centre streets every weekday.

If those 170 spots could be relocated elsewhere, the impact on traffic in this part of town will be substantial.

Figure 38 City centre parking provision – short stay car parks at the heart of the city



The District Council are executing a plan to raise the cost of parking at these two locations. As a minimum this increase should aim to achieve a situation that removes the queuing. We would suggest that the tariff increase should be set and re-set on a frequent basis until and for the purpose of achieving this objective.

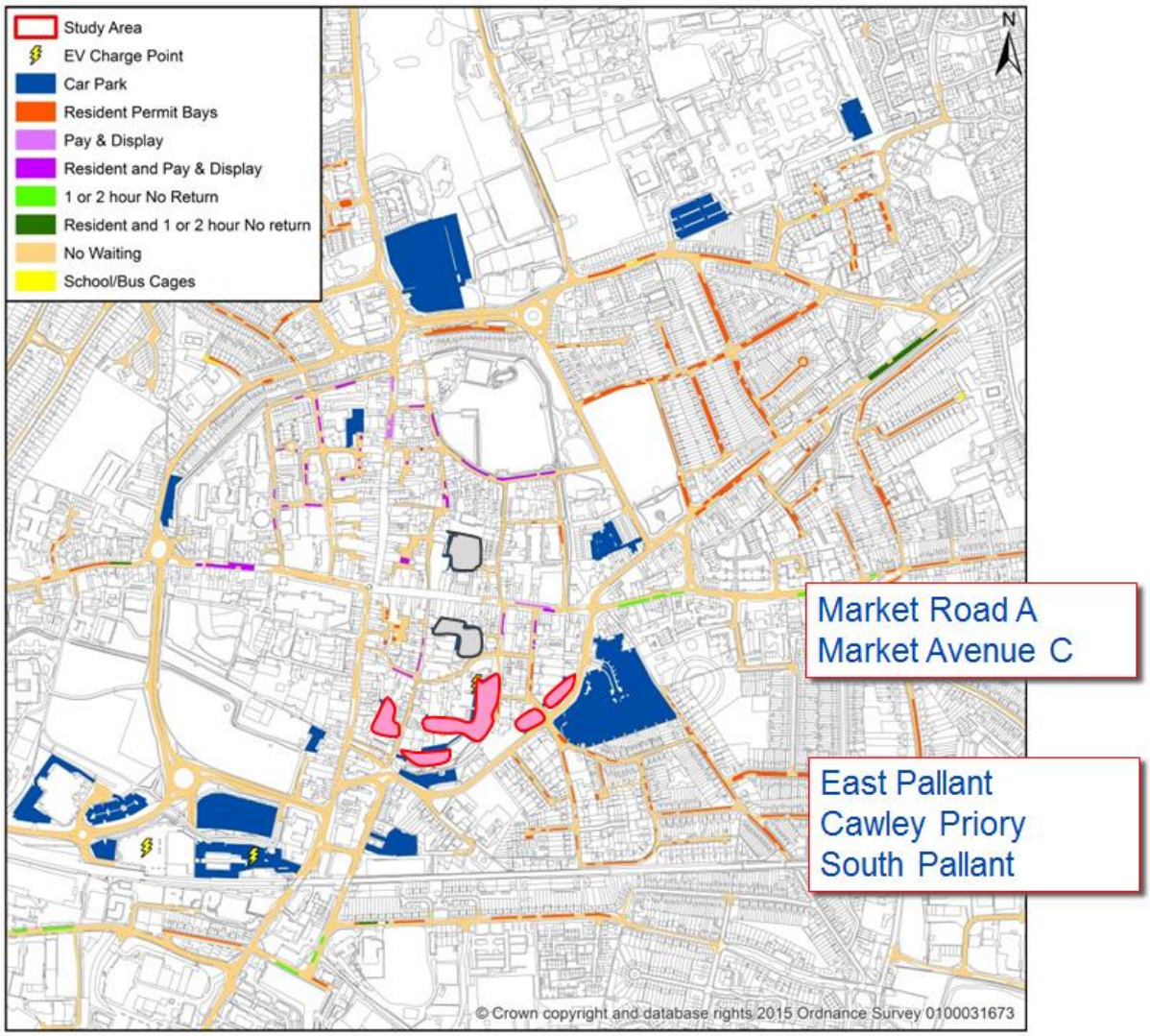
We would also suggest that the current tariff regime, which is based on length of stay, be re-examined to consider the environmental cost of each visit to the car park. On this basis, a very short stay in either of these car parks would still incur a base charge of potentially several pounds to reflect the social cost to others of someone driving into the city centre; the noise, the severance, the lost amenity of that street to be used as a social space and the pollution are the same whether that person stops for 10 minutes or 4 hours. Thus the charge for parking may be set as a composite charge made up of an “access charge” and a charge based on duration of stay.

The use of both of these locations as car parks in their current form is detrimental to an otherwise historic and potentially attractive extension of town centre. The access to these locations is via streets identified for occupation by independent retailers and a natural extension of the retail and commercial environment of the city. The activity and success of businesses in this area is impacted by the traffic. Thus consideration should be given to limiting occupation to Blue Badge and operational necessity only (releasing spare capacity for other purposes)

A further stage of this approach would be to consider the role and requirement for the long stay car parks at Market Road A and Market Avenue C. Both offer permit parking at a very central position which attracts vehicles onto the main routes around the city centre.

Medium term the option to consider a new use for East Pallant, Cawley Priory and South Pallant to enhance the city rather than provide short stay parking may be suitable. The car parks are accessed from South Pallant and so are not too intrusive to town but do create in all likelihood vehicle trips on Market Road and other approaches to the city.

Figure 39 City centre parking provision – short stay car parks within the wider historic city centre



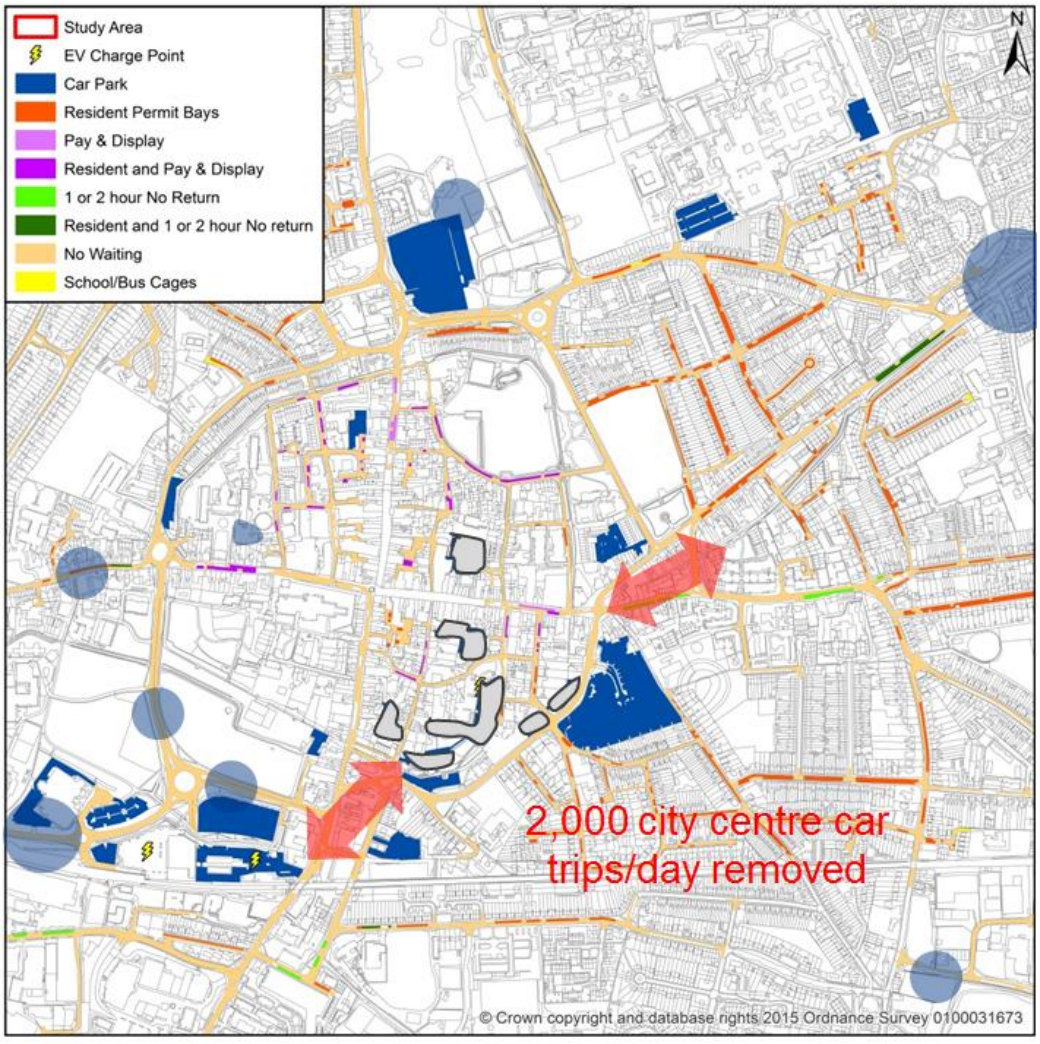
Based on the implementation of the closures to the off street car parks proposed above, the off street capacity will reduce by 645 spots.

Table 19 Off-street Parking Closures Proposed

Car Park	Type	Total Spaces
Little London	Short Stay	89
Baffins Lane	Short Stay	88
South Pallant	Short Stay	54
East Pallant/Cawley Priory	Short Stay	256
Market Av/St Johns St	Short Stay	30
Market Road	Short Stay	53
Market Av/South Pallant	Short Stay	75
Total		**645**

The closure and redevelopment of all of these sites would remove a significant need for vehicle movements into this south-east and southern quadrant of the city. Combined they account for around 2,000 vehicle trips per day in and out of the city. The strategic approach suggested is for further short stay capacity to be provided in the current cornerstone car parks of Northgate, Cattle Market and Avenue de Chartres by reducing the space given over in these locations to long stay permit use.

Figure 40 Reducing city centre short stay car parking provision



Additional parking long stay capacity should be sought, over time and based on opportunity, in locations further out from the city centre but still within reasonable walking distance. These purely illustrative locations are shown with blue circles in Figure 40. The intention would be for more commuter and long stay car trips to be captured and parked in locations beyond the commercial and more historic areas of the city centre. Long stay parking displaced from the cornerstone car parks would allow those to accommodate and become the principal short stay locations serving the city.

A BALANCE SHEET FOR THE FUTURE

In section 3.1 we presented a balance sheet of the parking capacity in the city against an indication of demand. Based on the current capacity, we have applied some changes using the discussion above:

→ Off street parking capacity in the city centre is reduced by 645 spots.

→ The current on street capacity of the RPS is unchanged

→ On-Street Unrestricted capacity (streets not currently within the RPS) could provide 1000 or more spaces. Currently our surveys show that 400 vehicles are already using this type of parking for long stay use).

→ The availability of PNR will reduce by 20%. This is to recognise that as land value increases some businesses may look to develop land currently given over to staff parking.

In addition to changes to existing capacity, there is additional capacity labelled "Off Street Distributed" This is parking at non-city centre location(s). This may represent parking sites towards the edge of the city or the use of highway parking. It could include park and ride.

Table 20 Future scenario balance sheet – total capacity at operational maximum

2016	Total Capacity in 2016	Forecast Change		Forecast Capacity in 2029	Operational Capacity Value	Total Capacity at Operational Max
Off Street	3911	Reduction of car parking around Market Street	-645	3266	85%	2776
Off Street Distributed	-	Highway Parking & Peripheral City Off Street	+1150	850	100%	1150
RPS	2053	No change to capacity of area currently within RPS	-	2053	85%	1745
On Street Unrestricted	*400*	City wide RPS with provision of 1000 formal spots for visitors/commuters	+600	1000	100%	*1000*
PNR	2500	Reduction by 20%	-500	2000	100%	2000
Total	**9464**		**-245**	**9169**		**8671**

In the following table we have distributed the 2029 demand derived in Table 16 to the available and proposed capacity in the shaded area. The volumes distributed are adjusted such that the totals in the columns match the future demand. This is not a definitive solution, but illustrates how the demand may be catered for in the future.

Table 21 Future scenario balance sheet – total capacity at operational maximum by type

2029	Long Stay Weekday Demand	Short Stay Weekday Demand	City Visitor Short Stay Demand	Other RPS Demand	Max Daytime Demand Total
Off Street	500	2230	31		2761
Off Street Distributed	1100				1110
RPS	400	200	100	859	1559
On Street Unrestricted	1000				1000
PNR	2000	0			2000
Total Demand	**5010**	**2430**	**131**	**859**	**8430**

An exercise such as this has to be seen as illustrative and only indicative of how future demand is accommodated. However comparison of the two tables indicates the overall city surplus subject to provision of some distributed capacity and greater use of existing residential streets.

Table 22 Future scenario balance sheet – total spare capacity at operational maximum

2029	Max Daytime Demand Total	Total Capacity at Operational Max	Spare Capacity at Operational Max
Off Street	2761	2776	15
Off Street Distributed	1110	850	40
RPS	1559	1745	186
On Street Unrestricted	1000	*1000*	0
PNR	2000	2000	0
	8430	8671	**241**

There are approximately 270 unrestricted streets in Chichester. Providing 1,000 formal spots for commuters means that on average each street will provide 3.7 commuter/visitor spots for daytime use. This average has to be seen in context; residential streets that are further from the city centre will have less competition for road space as residents will have their own off street parking and streets may be typically wider and less trafficked. Thus those streets, subject to a requirement to manage volumes and provide parking in a sympathetic and proportionate way, may be able to accommodate more than the average in a way that is neither intrusive nor a nuisance.

PARK & RIDE

The District's parking strategy is based on retaining current provision as it stands pending the need to investigate park and ride should demand approach available capacity. The strategy is in our view prudent and appropriate but we would suggest that the contingency solution should not be seen specifically as park and ride but rather a plan to support a distributed parking solution (of which park and ride would be an option if a bus was provided as the onward mode from the parking area to the city).

Chichester is not an extensive city and it is our view that the parking volumes, distances nor city centre parking cost are immediately sufficient to operate a park and ride without significant cost subsidy. For park and ride to be attractive the service must be frequent and the costs low compared to a city centre location. Many park and ride services and sites opened over the last ten years have stopped operating or now do so on only a limited basis. Cities operating financially independent park and ride such as Cambridge are characterised by central parking charges for long stay of in excess of £15 per day. These levels are required such that the park and ride bus fare can be set sufficiently high to cover costs yet still provide adequate discount on the costs of parking all day in the city centre.

We would suggest instead that provision of parking areas at locations that are middle distance at low rates could work for long stay frequent users. Expecting commuters to opt to walk in from a mid-distance location is not unrealistic due to the distances involved. Based on a perceived value of in-vehicle travel time savings of £8.21/hour for a commuter (TAG Databook 2015, DfT), the distance from somewhere out on Westhampnett Road to the city centre is around 1000 metres. At a typical walk speed this will take 12 ½ minutes to walk in each direction. Applying a factor of four to the time reflects users' willingness to pay twice as much to avoid walking than in-vehicle time and a further doubling for the return trip. This yields a time cost of 50 minutes or the equivalent of £6.84 per day. This provides an indication of the scale of charge differential that may encourage transfer to a peripheral parking location. A more reliable estimate, and understanding of the volumes likely to shift for different tariffs would require a more specific investigation.

6.4 REALLOCATING ROADSPACE IMPROVED PLACES AND SUSTAINABLE TRANSPORT CORRIDORS

The third core concept builds on the previous two, which seek to better manage where parking is provided on and off-street, to realise the wider objectives of the city.

This concept looks to then reallocate some of the roadspace in line with those proposals, and promote improvements to the urban realm and greater travel by sustainable modes. The concept is summarised below:

→ Reallocating parking to the City centre periphery affords significant opportunities

→ Traffic drawn into the centre by parking lessens the attractiveness of local environment (noise, emissions, severance)

→ By making some streets car free or lightly trafficked (local access, delivery/servicing only), foster an improved sense of place

→ Places where people want to linger, spend time, spend money

→ Well planned improvements to public spaces can improve retail sales by 30% and retail footfall by 10-25%[5]

→ Frees up land for redevelopment, creates opportunities to strengthen the city centre offer

→ Allows pedestrians to reclaim the streets – public realm improvements, public spaces

→ Creating an improved pedestrian and cycling environment – a virtuous circle

Link and Place

The approach to roadspace allocation promoted within this study is underpinned by an improved understanding of the competing needs of street users, based on the principles of "Link" and "Place". *Link and Place: A Guide to Street Planning Design*[6] was published to provide a new tool for planning and designing streets, recognising both its function as a link – where users pass through – and as a place – somewhere that is a destination in its own right. Streets within the network have a differing balance between Link and Place status, which in turn shapes the priorities for individual parts of the network, reflecting the differing requirements of users.

The Link and Place concept was first devised by the University of Westminster's 'Arterial Streets Towards Sustainability' (ARTISTS) project and was further developed in the document "Link and Place: A Guide to Street Planning and Design" (Jones et al., 2007). Subsequently it was adopted by Transport for London (TfL).

As described in the preceding chapters, the role of the high street is changing, with an ever greater emphasis being placed on the quality of the urban environment, in order to attract people to a place and make them want to linger, spend their money and boost the local economy, rather than necessarily prioritising traffic movements. The vision and objectives for the city further reinforce this as 'attracting visitors to the city' is a key objective.

[5] Living Streets
[6] Jones, P.; Boujenko, N.; and Marshall, S. (2009)

Determining Places from Links

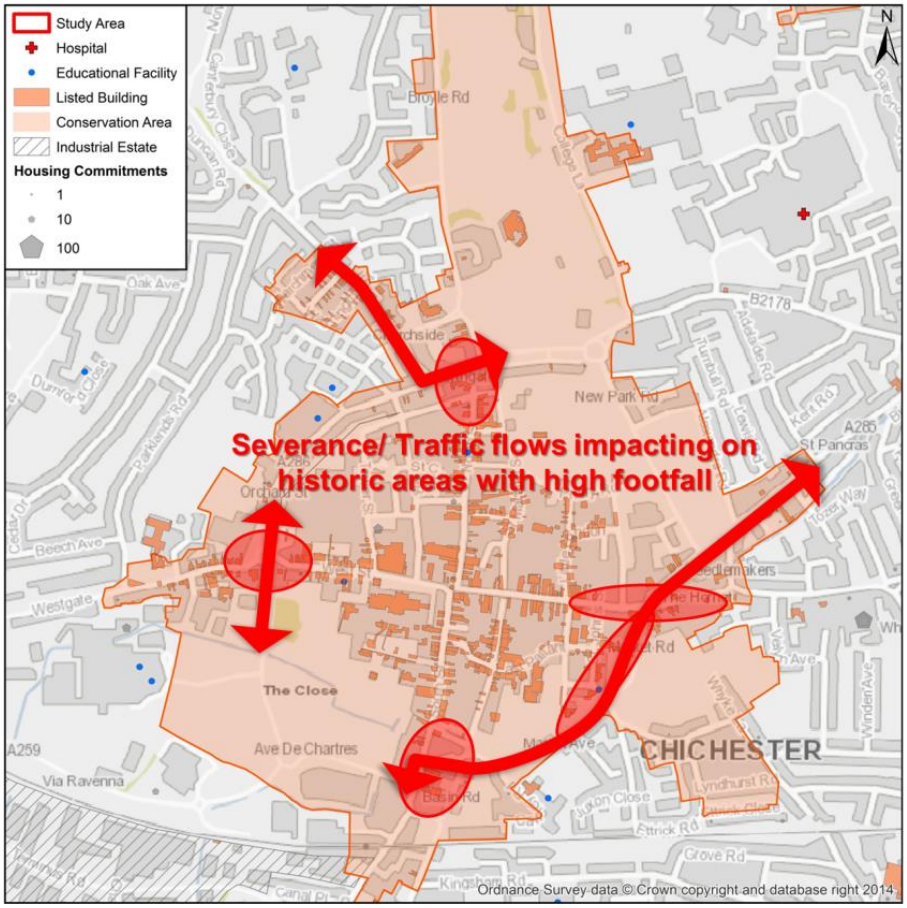
- Historic core is a natural focus when identifying key places
- Conservation Areas and Listed Building status
- Encompasses the whole of the Roman town
- Areas where place function perhaps should take priority over traffic access/parking
- Visual intrusion and severance evident in places, impacting on place quality
- Elsewhere some streets are underselling the local attractions

Each part the cities network of streets has a different role to play, including a differing balance between its Link and Place status functions. A street like West Street in the heart of the historic city centre for example, has high volumes of pedestrian footfall and is a natural focus of visitor trips. Therefore it has a high place function. Its link function is important as far as pedestrians are concerned, yet in terms of traffic it is not intended to serve through traffic, only some local access and buses.

Key planning policy documents like the emerging Chichester Place Plan can be referred to determine the relative importance of different areas of the city when it comes to their place function. One approach can be to use existing planning designations, such as conservation areas and listed buildings, to quickly and unambiguously identify key areas for fostering a high quality urban realm, which complements the nature of the existing built environment.

As illustrated in Figure 41, by highlighting these areas, it is clear there are number of streets where high place functions come into conflict with high traffic volumes, and are blighted by highway dominated environments and severance.

Figure 41 Areas of high place status impacted by highway dominated



Reallocating Roadpsace

In practice what is achievable within each of these areas in design terms within the available roadspace would need to be determined using professional judgement, mindful of the local conditions, such as:

→ **Feasibility of shifting traffic to an alternative route** (e.g. operational constraints, downstream obstacles or barriers, the need for public transport to directly link major trip attractors along a route);

→ **Place types** and the extent to which user functions are fixed within a place, movable or in any way changeable, and whether there are key growth plans or aspiration; and

→ Requirements to maintain **'access requirements'** to local properties by delivery vehicles, taxis, etc. – without them necessarily being able to use the full street section as a Link.

The means by which link and place principles are translated into physical roadspace allocations is through the re-design of street layout and the application of suitable transport schemes, initiatives and urban design elements. This is delivered through a tool kit of measures as summarised in the following section.

Tool-kit of Options

A wide ranging toolkit of measures can be called upon to deliver the principles for roadspace reallocation, many of which contribute to accommodating multiple user groups' requirements, some examples of which are listed below, though these are by no means intending to be definitive:

Traffic Management/Traffic Calming

→ Lane removal

→ One-way operation

→ Road closures

→ Junction rationalisation

→ Banned right turns

→ Congestion charging zones

→ Dynamic lane assignment – ITS

→ Re-routing traffic/ freight/ cyclists/ PT

→ Speed humps, speed cushions

→ Raised tables

→ Gateway treatment

→ 20mph zones/ speed limits

→ Banding of setts to slow vehicles

Pedestrian Environment

→ New crossings

→ Raised crossings

→ At-grade crossings

→ Count-down timers

→ Build-outs - reduce crossing distances, slow vehicles, frame parking

→ Footway expansion

→ Median crossing strips

→ DDA Compliance - dropped kerbs, tactile paving

→ Shared space

Parking Management

→ Discourage undesirable parking – bollards, street furniture

→ Parking bay relocation – side roads

→ Parking regime changes - short stay parking etc.

Urban Realm

→ Footway widening

→ Surfacing improvements, quality materials

→ De-cluttering and guard rail rationalisation

- Priority parking/dedicated bays - EV's, Car Sharing Bays, Car Clubs
- Removal of unrestricted parking

Cycle Infrastructure

- Dedicated cycle lanes
- Removal of cycle pinch points, minimising deflections
- Cycle parking hubs
- Cycle lanes with floating bus stops
- Island protected junctions
- Cycle contra-flow lanes
- Advance Stop Lines

Freight Management

- On-footway loading bays
- Freight management/ consolidation schemes
- Traffic Management measures/ restrictions to prevent HGVs through routing
- Freight Priority measures at lights
- Relocation of loading bays onto side roads

- Introduction of street trees, planters, street art
- Creation public spaces, squares, parks
- Streetscene re-design to frame character buildings

Public Transport and Priority Measures

- Bus lanes
- Bus gates
- Bus-Only sections
- Bus priority
- Inset bus bays for existing services

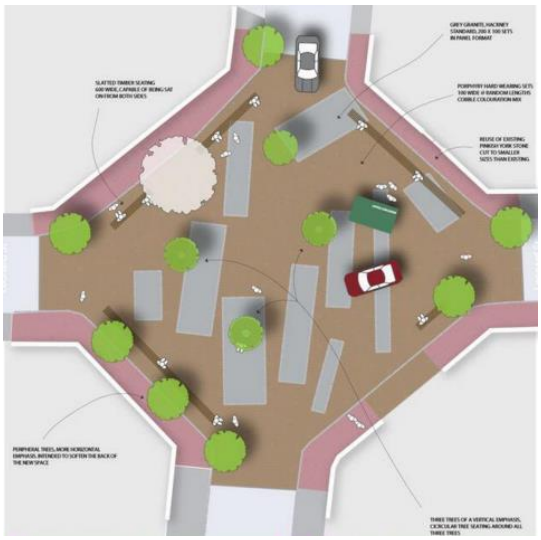
Emissions Reduction Measures

- Low emission Zones
- Zero emission zones

Examples of effective roadspace reallocation

In Shoreditch in Inner London a previously traffic dominated junction was transformed into what has become a well-used public space, through the introduction of an innovative shared space scheme. The scheme enables traffic to continue to pass through the space, but the use of irregular tree planting and surface treatment serves to slow drivers down to a walking pace.

Figure 42 Leonard Circus (Shoreditch, London) - a progressive shared space scheme



In New York significant roadspace allocation has been undertaken over the past decade, to transfer large swathes of what were previously wide highway dominated spaces for use by pedestrians and cyclists.

Figure 43 Manhattan (New York) - a progressive approach to reallocating roadspace

A similar transformation has taken place in streets across the UK, including the example below, where a street with an important 'place function' has been enabled to better perform that role by removing traffic and allowing a 'café culture' to spill into the newly traffic free public streets.

Figure 44 De-trafficked streets reclaimed a communal space

Figure 45 provides an example of how parking bays can be relocated to enable streets to better fulfil their place function.

Figure 45 Parking bays converted to restaurant use in Stratford upon Avon

REALLOCATING ROADSPACE: IMPROVED PLACES

A number of examples were considered where roadspace reallocation might be appropriate to enable an improved urban realm and better achieve the vision and objectives for the city.

The Hornet – conservation area and gateway to the city centre

The Hornet, to the east of the city centre core, is currently characterised by high traffic volumes and its very narrow footways, providing limited space for pedestrians. The street features on-street parking and two lanes of traffic. Yet the street itself falls within the central conservation area, with a rich variety of historic buildings and number of characterful boutique shops. The street is severed from the core of the city centre by the passing traffic, presenting a hostile space to pedestrians and cyclists travelling into the city or from the city centre core.

Figure 46 The Hornet – East Street - high traffic volumes, limited pedestrian space

One approach could be to build on some of the concepts presented in Concept 2, for removing parking supply and its associated traffic from East Street. This would enable the eastern end of East Street to be closed during core shopping hours, except for local access and servicing, so that it can become a destination rather than a heavily trafficked street that people struggle to park in.

By significantly reducing the demand for traffic to access East Street via The Hornet, it may possible to remove a traffic lane, but preserve some on-street parking, and reallocate the space to considerably wider footways and wider urban realm improvements. These could be incorporated with greater pedestrian priority and improved crossing provision to reduce severance from the city centre. This approach would enable the Hornet to function as a destination in its own right as character area and gateway to the city centre.

West Street opposite the Cathedral – could the space be better used?

Elsewhere streets are underselling their local attractions. One such example is the section of West Street immediately adjacent to the Cathedral, the jewel in the cities crown.

West Street as currently configured in this section features an especially wide carriageway (9.5m), to accommodate parallel bus stops. Whilst it is desirable for the bus stops to be placed in highly central location such as this, it does necessitate a very wide road width, and other locations appear equally suitable. A wider section of footway is provided, segregated from the main street by planters, and fronts onto the cathedral. But the buildings across the road have limited scope to make the most of the fine vista of the cathedral, in what might otherwise be amongst the most picturesque spots in the city to take in the view, with cafes/ bars where seating spills onto the pavement.

One approach could be to relocate the bus stops to another premier location on West Street or South Street. Bus access could be retained, but without the parallel bus stops the carriageway width and crossing distances could be reduced considerably, allowing for generous footways and improved urban realm throughout the street, and perhaps an attractive shared space area, which would reclaim a vast expanse of space back for use by people rather than vehicles.

Figure 47 West Street – underselling the Cathedral

North Street and the gyratory – poor linkages onto Festival Theatre

The northern section of North Street provides a further example of a street where place function appears to significantly outweigh its link function, yet the majority of what is a very wide street is preserved as carriageway, leaving pedestrians with very limited footway space and extended crossing distances. Furthermore this street serves an important pedestrian link between the city centre core and the Festival Theatre.

Figure 48 North Street and the gyratory – poor linkages onto Festival Theatre

Here an approach could be to simply reallocate some carriageway width to the pedestrian footways, potentially paired with some build-outs to double as safe crossing points between parking bays, and featuring trees or planters to green the street and enhance the urban realm.

REALLOCATING ROADSPACE: SUSTAINABLE TRANSPORT CORRIDORS

As well as improving the urban realm, roadspace reallocation can serve as a crucial tool in providing a more conducive and appealing environment for walking, cycling and travelling by public transport. As described earlier, in combination with the parking measures and smarter choices package proposed as part of the Local Plan transport strategy, it is essential to 'lock in' the benefits of car based trip reductions, by correspondingly removing some of the associated highway capacity, so that the space is not simply reoccupied by a new car driver drawn to the quieter roads.

In our view Chichester is potentially ideally configured towards promoting sustainable transport.

Potential

→ Chichester has real potential as an exemplar city for walking and cycling.

→ Scale is suitable – short walk/cycle times cover most of the urban area

→ The makings of a good cycle network, with proposals for significant number of additional routes.

→ Constrained historic city environment, more suited to human scale than motor car

A number of factors and considerations also appear to present further opportunities to promote sustainable transport, or underline the necessity of doing so:

Opportunities

→ A27 improvements

→ Relocating parking supply, and more significantly the traffic accessing the parking in the centre

→ Links to new strategic developments

→ Health and air quality objectives

→ High proportion of local residents work locally

→ Growing education sector, a large local population commuting short distances (35% car driver)

Relocating the parking supply affords opportunities to improve the walk, cycle and bus network, by reallocating the space occupied by parking, and more significantly the space occupied by traffic on route towards that parking.

The review of existing travel to work by bus activity highlighted a number of key corridors where public transport use is particularly concentrated, and so merits greater priority along these routes.

In addition sustainable transport links proposed as part of the new strategic development sites present an opportunity to future proof those developments, and provide improved connectivity to the city centre and rail station, encouraging new residents to travel sustainably, and capitalising on the 'change opportunity' as people are forming their new travel behaviours.

Health and air quality are prominent amongst the key objectives for the city, and so underline the importance in promoting improved sustainable travel alternatives, and better managing vehicles entering the most sensitive areas when it comes to air quality.

Ultimately reallocating roadspace to create better walk, cycle, urban realm and public transport, whilst simultaneously removing or relocating provision for car based travel can create a virtuous circle, where more people chose to walk and cycle because there is less traffic on a particular route, which justifies further measures, further reducing demand for travel by car. A step change from seeking to continually invite more vehicle traffic into the city centre and cater for it by increasing highway capacities at the expense of the other roles streets play and the contrary to the overarching vision and objectives for the city.

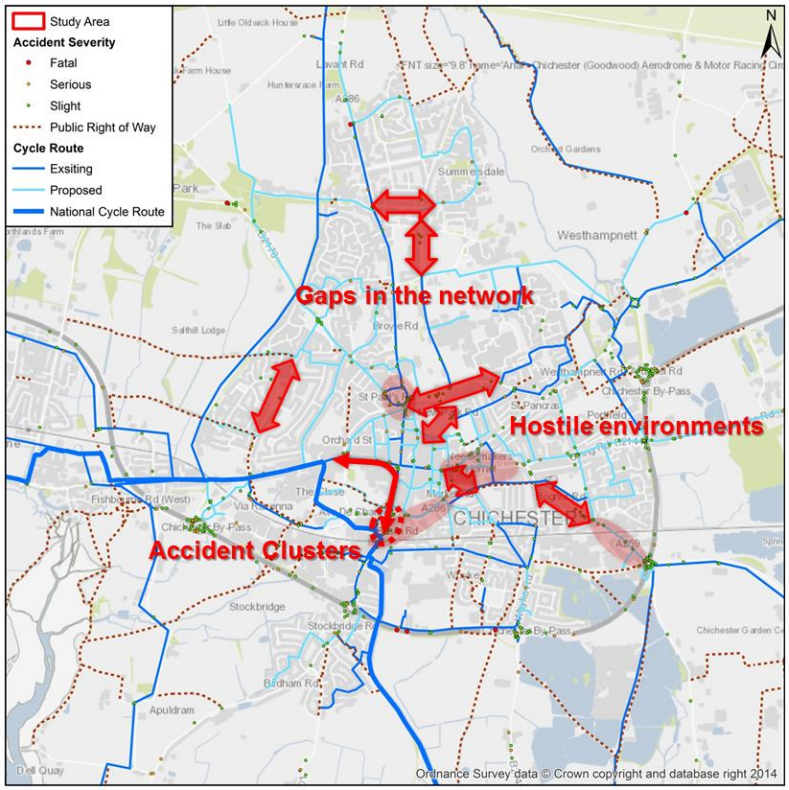
Challenges

However a number of challenges are also evident and it is these barriers which must be overcome if the vision and objectives for the city are to be achieved.

- → High proportion of commuters arrive from further afield, greater car dependency (60% car driver)
- → Poor links to the station
- → Limited bus priority and variable bus journey times
- → Number of gaps in walk and cycle networks
- → Severance caused by busy/wide roads
- → Traffic speeds and volume
- → Accident clusters
- → Some Intimidating roads for cycling
- → A27 improvements inviting more cars into the city

Figure 49 highlights some key challenges to promoting sustainable transport identified through our observations and desktop reviews as being; gaps in the walk/cycle network, hostile environments and accident clusters.

Figure 49 Key challenges in promoting sustainable transport



Approach

An approach to overcoming some of these challenges would be to focus the reallocation of roadspace from highway dominated uses to promote improved walk and cycle environments in areas of high place function, and a greater priority for walk, cycle and public transport on key links to attractors and public transport interchanges.

A large proportion of Chichester's daytime population who work in the city commute from further afield, and so considerable emphasis should be placed on ensuring access by public transport and complementary measures to manage parking supply, with practical measures including:

- → Improved pedestrian and cycle links to the station
- → Greater bus priority and improved waiting facilities
- → Focus new employment (office/retail/residential) in areas highly accessible by public transport, i.e. around the railway station and on key bus corridors to enable improved frequencies

A number of examples were considered where roadspace reallocation might be appropriate to enable improved sustainable transport corridors and better achieve the vision and objectives for the city.

Take the NCN route through the heart of the city

There is potentially an opportunity to achieve a number of key objectives at once by re-routing the key national cycle route number 2 that runs east-west along the south coast between Dover and St Austell via the City's main attractions. As shown in Figure 11 its current alignment takes riders as far as Westgate before directing them south towards the railway station and onto Stockbridge. Instead visitors and residents, including those in the new West of Chichester developments, could be actively encouraged to visit the city centre, via a reimagined use of roadspace on West Street and South Street, and taking in the sight of the Cathedral.

Figure 50 – Westgate roundabout – a barrier to an otherwise attractive cycling route

A notable barrier along this route however is the roundabout at the junction of Avenue De Chartres and Westgate. The introduction of a turbo roundabout scheme or some form of segregated cycle track would provide improved safety and reassurance and to cyclists crossing this busy intersection, whilst serving as clear gateway into the city centre. On-street parking

Figure 51 Example of segregated roundabout from Irish cycle design manual

on Westgate and West Street, and the risk posed by reduced visibility, pinch points and opening doors, could also be remedied through a rationalisation and reconfiguration of parking provision, whilst also slowing traffic discouraging further rat running.

Southgate – reimagining the cities southern gateway and rail access

The rail station serves as a key gateway into the city for those travelling from further afield, and has an important role to play in maximising travel by sustainable modes.

At present the pedestrian route from the station to the city centre via Southgate and South Street is a car dominated space, with up to four traffic lanes and comparatively narrow footways on key pedestrian desire lines. The urban realm is poor, and an accident cluster is evident at a number of the crossing points, underlining the severance posed by the current arrangement.

The station access arrangement is particularly poor as far pedestrian movements are concerned. The highway arrangement is expansive and occupies a significant amount of space, in what should be a prime location between the railway station and the city centre.

Figure 52 Southgate to South Street – poor urban realm on route to station

Emerging proposals for how the area is reshaped and redeveloped, including the potential for land assembly for the Courts building, bus station and the sorting office, will have a significant bearing on any schemes as they emerge, as these may in turn present further possibilities for reinventing how this crucial space is designed.

A number of options might be considered for this area. In the shorter term consideration might be given to removing a traffic lane and reprofiling the street to accommodate wider footways where demand is greatest on the west. In the longer term, a more radical change could be to break up the gyratory and revert to two-way operation, with a bus gate to provide some priority and advantage to buses. This concept is explored further in the next section as part of the fourth key theme.

Bognor Road – smooth the way for buses and cyclists

The Bognor Road route is a key a public transport corridor for the city to the areas of most concentrated bus trip demand in Bognor Regis and Worthing, via Quarry Lane industrial estate, and is the route for the Coastliner 700 service. As such measures that can be implemented to improve bus journey time reliability and potentially greater frequencies are likely to yield the best returns on this corridor. A number of significant barriers are evident however, including the delays encountered at the Bognor Road roundabout, and various pinch points along the route, particularly where on-street parking constrains the passing room for larger vehicles (buses, HGVs etc.).

Bus accessibility to St Richards Hospital from the south is limited outside peak periods, with those who travel to the hospital from Bognor Regis often required to walk the final 0.7 miles as bus services do not go via the hospital. Yet a significant proportion of the hospitals workforce resides in the coastal towns to the south.

Figure 53 Bognor Road – pinch points delay buses on a key public transport corridor

One approach might be to prioritise public transport on this corridor, and restrict on-street parking at pinch points, at least during peak hours, and require residents to use rear parking or nearby off-street parking where available. These initiatives coupled with other measures, like the bus gate described for Southgate, and the reduced provision of longer stay parking from the heart of the city centre would serve to greatly improve the relative appeal of travelling by bus, and could then begin to justify further priority measures, increased service frequencies and new routes, particularly if coupled with the introduction of a park and ride scheme.

Market Avenue/Cattle Market car park – severing key pedestrian/cyclist desire lines

Market Avenue and the Cattle Market car park present a major barrier and hostile environment to pedestrian and cyclist movements to and from the city centre. Both the car park and the road itself draw significant volumes of traffic through the area.

A shorter term approach to alleviating this issue might be to introduce a combination of traffic calming measures, footway widening and improved cycle provision (marked cycle lanes and advanced stop lines), to begin to re-emphasise the space as being a city centre street, with cars moving more slowly and creating a less hostile environment to pedestrians and cyclists.

The next concept goes onto a present a bolder longer term vision which then seeks to significantly reduce the throughput of traffic through the space, building on some of the parking concepts presented, including a revised parking access arrangement for the Cattlemarket car park, and filtered priority, such as a bus gate. These interventions enable a wider reimagining of the roadspace a more radical reallocation of roadspace to promote more sustainable travel.

Figure 54 Cattle market car park/ Market Avenue – inner ring road strangling the city centre

6.5 REALLOCATING ROADSPACE: "TO, NOT THROUGH"

The fourth concept builds on the previous ones, which seek to better manage where parking is provided on and off-street, and reallocate roadspace to create improved urban realm and a better environment for travelling by sustainable transport.

This final concept looks to then go a step further, by thinking about how in the longer term traffic might be progressively and proactively managed away from the city centres core areas to enable a greater emphasis on key place functions (visitor attractions, shopping, restaurants, bars etc.). The concept is summarised below:

→ Planned capacity improvements to A27 present an opportunity to remove some through traffic

→ Presently an attractive and direct route is provided through the city, inviting through traffic into the city

→ Sat-nav's often route traffic via the cities inner ring road when the A27 is congested

→ Wide roads promote speed and reinforce their role as strategic routes, inevitably drawing additional through traffic and cross city movements that would preferably route via the A27

The consequences of this are:

→ Inner ring road strangles the historic city centre core

→ Limits scope for new development and bolstering the city centre 'offer'

→ Creates severance between the railway station and the city centre

→ Large areas in prime locations are dedicated to highway - Southgate gyratory

Figure 55 illustrates the expansive nature of the road network passing through the heart of the city, and occupies a significant amount of space in what should be a prime location between the railway station and the city centre.

Figure 55 Southgate – highway dominated environment at the heart of the city

A consequence of the road network being configured in this way is that the capacity is inevitably utilised by traffic movements. Figure 56 below highlights a significant volume of traffic passing through the heart of city, severing parts of the historic city and conservation areas and severing the railway station.

Figure 57 Traffic flows invited into the heart of the City

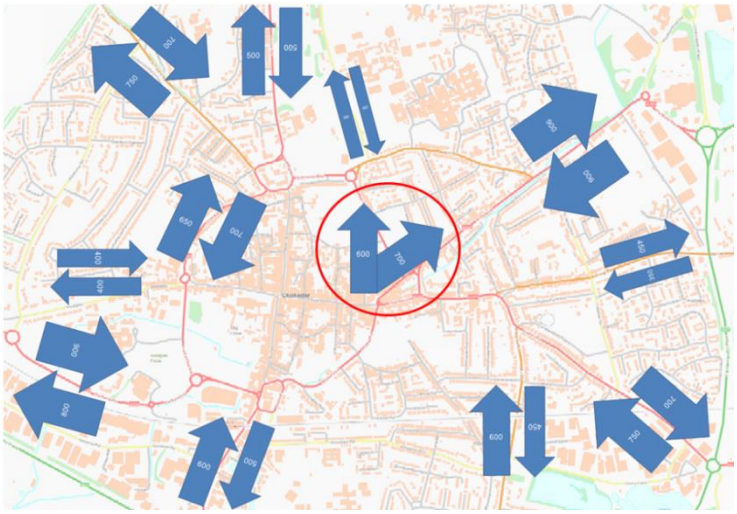


Figure 56 Discouraging through traffic, promoting a 'to, not through' network

A bold approach would be to sever part of the ring road

- → Intercept traffic
- → Long stay parking is relocated to the periphery
- → Short stays on city centre periphery – i.e. Northgate, Avenue De Chartres, Cattle Market
- → Retain local access, filtered access, to retain access to the railway station, avoid unduly inconveniencing local residents
- → But sufficiently indirect to deter strategic traffic

The overall strategy for this concept is therefore to reduce the attraction of using the inner ring road as a way to pass through the city, and instead prioritise only those trips that are to a destination within the city centre, or are being made by sustainable modes with less negative impacts on the precious city centre environment.

The planned capacity improvements to the A27 present a rare opportunity to encourage strategic movements to rerouted back onto the strategic road network, and taken out from the city.

This is a bold proposal and would require extensive optioneering, conceptual design, feasibility assessments and traffic modelling to determine its viability, and how best it might be implemented. At a strategic level an initial concept we have considered for how such a measure might be implemented was to dismantle Southgate gyratory and introduce two-way operation, with a bus/cycle/taxi only restriction to prevent through movements between Avenue De Chartres and Market Avenue, subject to what scope there is to reshape the highway network as part of any wider regeneration proposals for the area.

But what is becoming increasingly accepted within the transport planning fraternity, is that in combination with measures to make travel by sustainable modes more appealing, it is necessary to introduce some restraints to vehicular access. With the inner ring road, the closures above create disruptive moves to reduce the attraction of driving through the city where there is a more suitable route or option. The expectation is that drivers able to use the strategic highway will be encouraged to do so where they are making significant trips across town or beyond.

For those within the urban form the reduced access and volume of vehicular traffic creates greater permeability for cycling and walking, making walking and cycling the natural choice for residents travelling within Chichester, and that it feels safe and natural to do this. This culture and choice need not be borne of significant cycle infrastructure engineering, but by a progressive and clear reduction in vehicular traffic on the roads within the city core and the provision of obvious routes in those areas away from the core.

For motor vehicles, the strategy is based on creating clarity that any trip into the core must return by the same route that it entered, and Chichester is not a through route for motor traffic. This, along with a progressive reduction in more central parking destinations will significantly reduce the traffic demand and open up clear opportunities beyond the initial years to reallocate roadspace used for wider highways just outside the city walls.

"Road Diet"

→ would serve to greatly reduce traffic volumes

→ Lock in benefits of Smarter Choices

In the US this approach has become known as a Road diet - taking lanes out to remove the attraction to cars, particularly in more central areas where the place function of a street is more important.

Market Avenue/Cattle Market car park – severing key pedestrian/cyclist desire lines

Market Avenue and the Cattle Market car park presents a major barrier to growing the city centre offer and promoting walking and cycling. The car park occupies a large space at a prime city centre location, and both the car park and the road itself draw significant volumes of traffic through the area.

Figure 58 Market Avenue – car dominated environments on key pedestrian and cyclist desire lines

The previous section outlined a shorter term approach of introducing a combination of traffic calming measures, footway widening and improved cycle, to begin to re-emphasise the space as being a city centre street, where cars move more slowly and foster a less hostile environment to pedestrians and cyclists.

A longer term aspiration might be to take a bolder approach which seeks to significantly reduce through traffic, building on some of the parking concepts presented, including a reduction in centrally provided parking, particularly long-stay, and a revised parking access arrangement for the Cattlemarket car park.

Opens up significant opportunities to grow and expand the core city centre

- → Unpick southern gyratory
- → Better links between the station and the City centre
- → Opportunities to deliver bus/ taxi priority – bus gate
- → Enable Redevelopment and regeneration opportunities near the railway station

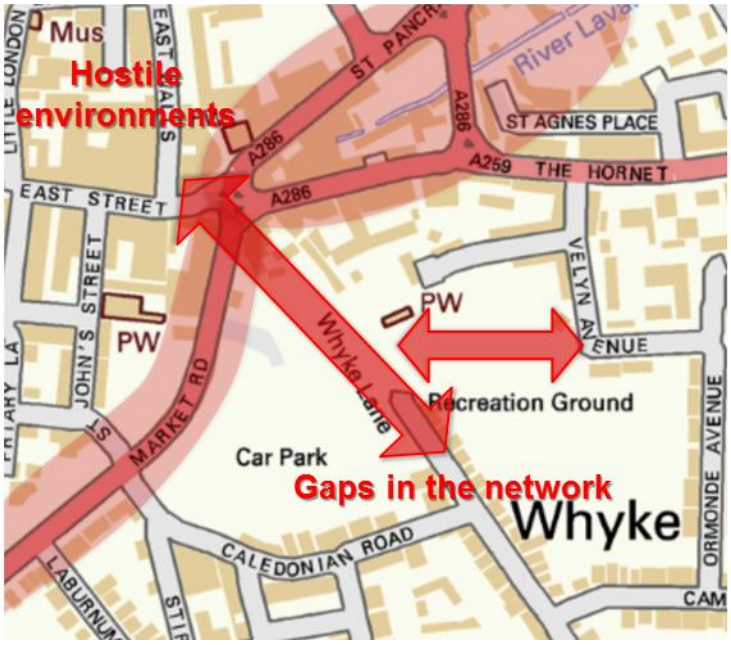
Figure 59 Examples of filtered permeability – bus gate in Oxford, cycle street in Hackney

Figure 59 showcases some examples of the effective use of bus gates and filtered permeability in the form of cycle only access, both of which are highly effective means in promoting sustainable modes and reducing traffic flows.

Creates greater permeability for cycling and walking

- → Walking or cycling may increasingly become the obvious choice
- → Feels safe and natural to do this
- → Culture of choice is not necessarily borne of significant cycle infrastructure engineering, but by a progressive and clear reduction in vehicular traffic on the roads within the city core, and the provision of obvious routes in those areas away from the core.

Figure 60 Market Avenue - Barriers to walking and cycling



6.6 STAKEHOLDER FEEDBACK

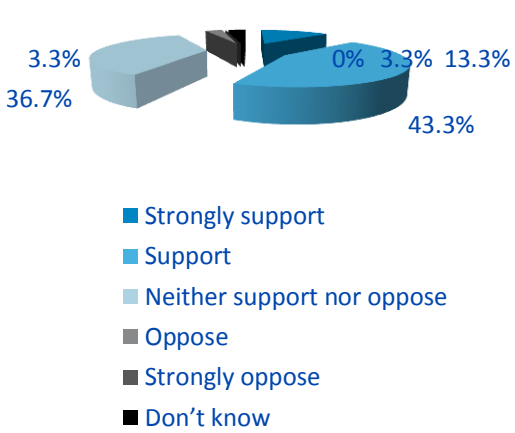
The two stakeholder workshops with a wide range of technical and community representatives provided valuable steer and feedback on the range of initial concepts we presented.

After each concept was presented attendees were asked to vote for one of a range of responses to when asked whether they would support applying the principles in Chichester.

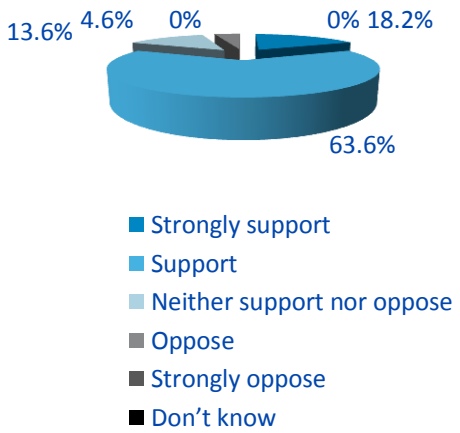
A summary of the feedback is provided below – see Appendix B for further feedback.

Would you support or oppose applying the principles of "tackling parking issues (on-street)" in Chichester?

Figure 61 Technical Stakeholders



Community Stakeholders



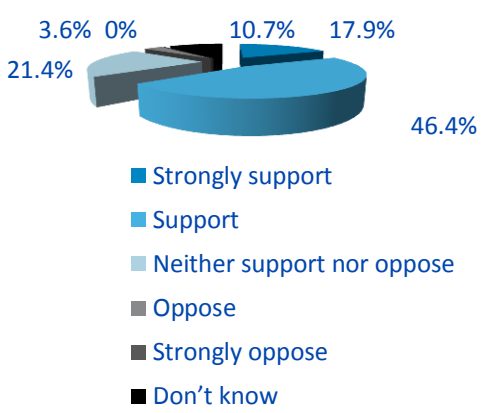
57% of technical stakeholders and **82%** of community stakeholders were supportive of the concept of introducing a city wide RPS with managed visitor parking provision.

Only **3%** of technical stakeholders and **5%** of community stakeholders opposed the concept, and none strongly opposed it. Some specific feedback included:

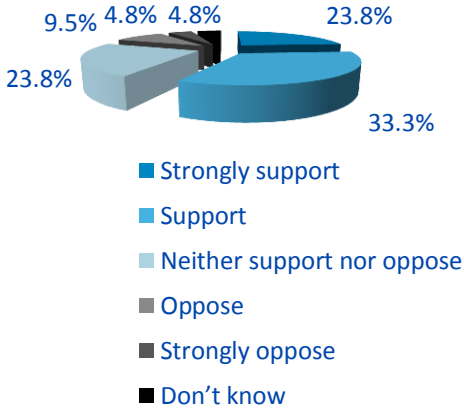
"I'm buying into a lot of this" – though some concerns were raised over the risk of residents and commuter overlapping on occasion, as well as comments about signage clutter.

Would you support or oppose applying the principles of "parking supply & traffic management" in Chichester?

Figure 62 Technical Stakeholders



Community Stakeholders



64% of technical stakeholders and **57%** of community stakeholders were supportive of the concept of reducing very central city centre parking and promoting the use of Northgate, Cattlemarket and Avenue De Chartres for short-stay car parking. Only **4%** of technical stakeholders and **14%** of community stakeholders opposed the concept. One community stakeholder strongly opposed it.

Some specific feedback included:

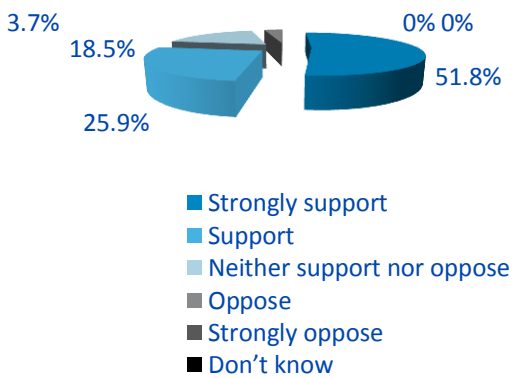
Audible gasps around the room when people heard how much traffic Little London car park generated.

Some felt there would be a number of non-blue badge holders who would find the walking distance from Cattlemarket car park and others too far. Others disagreed with this and felt only blue badge holders really required more central parking provision.

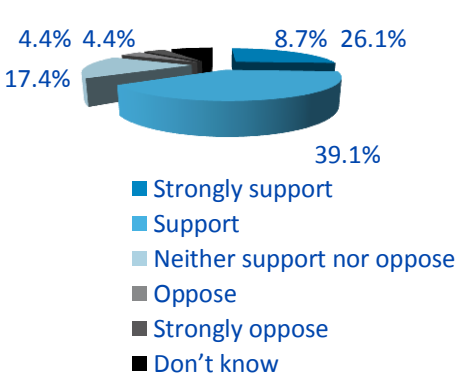
Some discussion around the role of Park and Ride.

Would you support or oppose applying the principles of "reallocating roadspace (sustainable transport/improved places)" in Chichester?

Figure 63 Technical Stakeholders



Community Stakeholders



78% of technical stakeholders and **65%** of community stakeholders were supportive of the concept of reallocating roadspace to promote improved urban realm and sustainable transport. Only **4%** of technical stakeholders and **9%** of community stakeholders opposed the concept. One community stakeholder strongly opposed it.

Some specific feedback included:

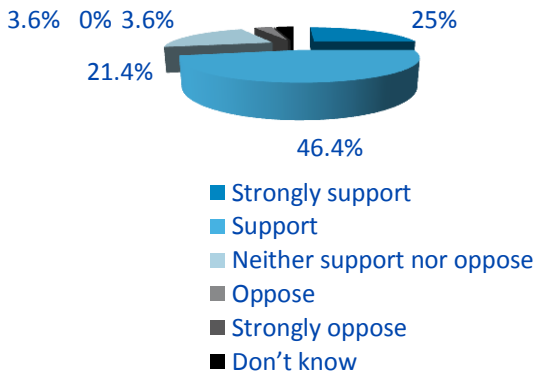
"I have a dream, to make Chichester attractive like continental cities, with improved streets and HGVs limited to certain times only"

Some felt extending the pedestrianised area along East Street and asking people to walk from the Cattlemarket car park was too far.

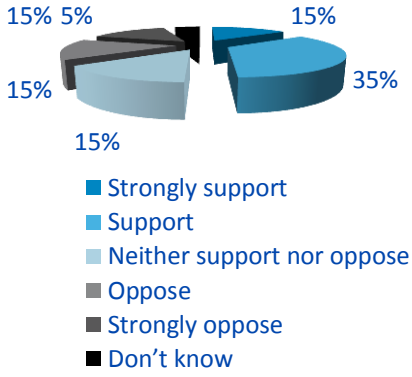
"I don't feel there's a choice. If it's to retain its character and experience and not become like everywhere else on the south coast, we need to reclaim street space for people and buildings"

Would you support or oppose applying the principle of "to not through" in Chichester?

Figure 64 Technical Stakeholders



Community Stakeholders



72% of technical stakeholders and **50%** of community stakeholders were supportive of the concept of introducing a city wide RPS with managed visitor parking provision. Only **4%** of technical stakeholders opposed the concept, although **30%** of community stakeholders opposed it, with three strongly opposed. Some specific feedback amongst community representatives was that they felt through traffic predominantly travelled via Avenue De Chartres/Orchard Street rather than Market Avenue.

We then asked attendees to revisit the vision and objectives presented earlier in the session, and consider how achievable they felt they would be were the concepts presented taken forwards. This provided an ideal mechanism for understanding whether the stakeholders felt as an overall package the concepts would better delivery the overarching vision for the city.

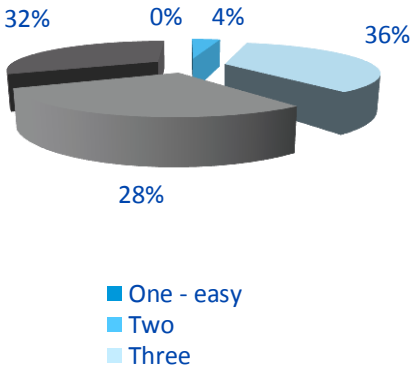
Some specific feedback included:

"Some reservations, needs more work to better understand viability"

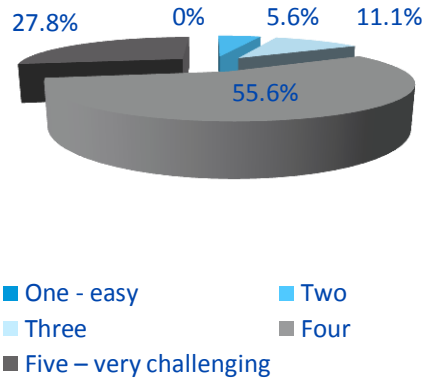
Some commented that they felt through routing traffic predominantly travelled via Avenue De Chartres/Orchard Street rather than Market Avenue.

Based on your local knowledge and experience of Chichester and what we've discussed today, how achievable do you consider the vision and objectives to be?

Figure 65 Technical Stakeholders

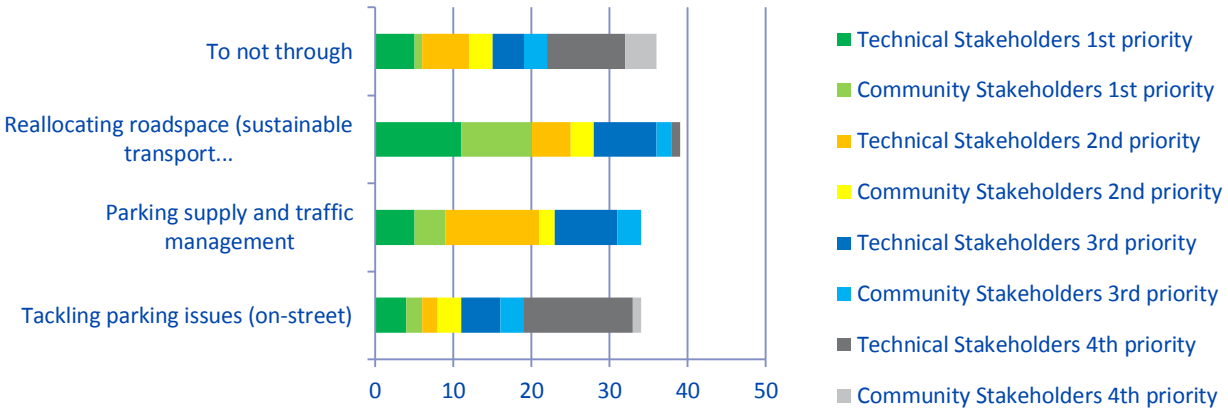


Community Stakeholders



The results were encouraging, with a 23% reduction amongst technical stakeholders who felt achieving the vision would be challenging or very challenging, and a 32% drop in the number of community stakeholders who felt it would be very challenging, and clearly demonstrates a broad acceptance that the overall strategy would help contribute towards realising the overarching vision for Chichester. We the asked stakeholders to put the conceptual tools in order of preference. In reality we would suggest that most of the concepts are fundamentally interrelated and would be interdependent on one another to be successful. But for the purposes of the workshops it was helpful to gauge where stakeholders preference lay.

Figure 66 Order of preference for Conceptual Tools



As shown in Figure 66 the reallocating roadspace was the preferred concept, both amongst the technical and stakeholder groups. The concept of relocating off-street parking supply was the 2nd priority amongst technical stakeholders, whilst community stakeholders were evenly split between several options for both their second and third priorities. A city wide RPS with visitor parking bays was a lower priority amongst technical stakeholders, whereas the 'to, not through' concept was the lower priority amongst community stakeholders.

It should also be noted that a number of stakeholders from both the technical workshop and community representatives workshop commended the approach taken by WSCC and CDC in taking a more holistic approach to assessing parking issues, and commented that they had enjoyed the workshop sessions.

7 RECOMMENDATIONS AND NEXT STEPS

Based on the findings of earlier chapters, including the evidence base informed buy the roadspace audit and feedback from a wide range of stakeholders to the four key concepts presented at the workshops, a range of recommendations were developed for how roadspace might be most effectively allocated throughout the city.

These recommendations have been distilled into a package of specific solutions that make up an outline programme of short, medium and long term actions – see Table 24.

These constitute a phased approach to realising the wider vision for Chichester, with schemes and initiatives in each stage building on one another and moving towards an optimised transport network by 2030.

Given the strategic nature of this study it is important to note that at this stage these schemes and measures should be treated as early conceptual proposals only, to illustrate the wider strategy being proposed. Each proposal would require further more detailed design, feasibility assessments and traffic modelling to determine their viability and how best they might be implemented.

7.1 OUTLINE RECOMMENDATIONS

FOR ON-STREET

The key approach has been for management of the wider city area such that parking on street is designed to support the economy and those working in it while preserving the amenity and environment for residents. The street use is reallocated to be for all and for the benefit of the wider community. This application will apply to existing RPS zones.

Within the city centre the on-street parking has an important function to serve the commercial premises and provide a very local and accessible spot to park for those requiring a high level of convenience. This may be due to time pressures or because of what has to be transported between the vehicle and location visited. For these people the over-riding requirement is availability of somewhere suitable and permissible to park for the length of time required to fulfil their business. Based on recognition of this, parking within the city centre core should be designed and operated to achieve this goal.

FOR OFF STREET

Demand for city centre parking is close to capacity. There is some capacity in car parks outside and on the periphery of the city centre. It is likely that with further growth in demand a strategy and plan to implement changes to improve parking availability will be required.

A number of off street car parks are within the core historical area of the city. These locations have high turnover generating a large number of vehicular trips into the city throughout the day. Little London attracts a large queue for the morning, with consequent impact on pollution and the local environment.

Many of the larger car parks on the edge of the city centre accommodate a significant number of long stay parking. There is scope for these users to be displaced in order to generate sufficient capacity for short stay car parks in the central area to have a reduced role and allow for demand growth and urban improvements. Options to find parking locations for long stay users on parts of the highway that are not required or in sites that become available in the future further out from the centre may be appropriate. This would remove many vehicular trips from and circulating around the central area, offering the chance for the ambience and attractive aspects of the city to expand beyond the constraints of the old walls.

ROADSPACE REALLOCATION

IMPROVED PLACES

The third core concept builds on the previous two and proposes a number of approaches for reallocating roadspace to promote improved urban realm in areas of high place functions, and to promote improved sustainable transport more widely, with a particular focus on links to key destinations across the network.

A number of areas where place function should take priority over traffic access/parking were identified, which in our view give undue priority to traffic over their importance as places. High traffic volumes, highway dominated environments and vehicle speeds create visual intrusion, noise, emissions and severance, impacting on place quality. Elsewhere streets are underselling the local attractions through poor urban realm or narrow footways.

We recommend that WSCC and CDC adopt a policy of delivering improved urban realm in areas with high place functions, with the emphasis being on improving the quality of the street as a destination in its own right, prioritising pedestrians. The degree to which these priorities should be compromised by the streets role as a link should be governed by its Link status. In some places it may be that a link status can or should be downgraded from a primary route for vehicular traffic.

We suggest that this is done through the application of the Link and Place principles set out in Chapter 6 – i.e. linked to planning designations such as conservation areas and listed buildings to indicate high place function areas. This should be developed in close co-operation with, and informed by, planning and economic development officers and other key stakeholders. We suggest an exercise is undertaken to classify the network and place status of different areas along these lines on a simple 5x5 matrix as per Link and Place principles. Going forwards this provides an unambiguous and consistent steer for how roadspace would be most effectively be allocated, guiding future transport investments, masterplanning and regeneration.

We have identified a number of illustrative conceptual schemes which we suggest be given further consideration and taken forwards for more detailed design, mindful of the local conditions, such as:

→ **Feasibility of shifting traffic to an alternative route** (e.g. operational constraints, downstream obstacles or barriers, the need for public transport to directly link major trip attractors along a route);

→ **Place types** and the extent to which user functions are fixed within a place, movable or in any way changeable, and whether there are key growth plans or aspiration; and

→ Requirements to maintain **'access requirements'** to local properties by delivery vehicles, taxis, etc. – without them necessarily being able to use the full street section as a Link.

SUSTAINABLE TRANSPORT CORRIDORS

As well as improving the urban realm, roadspace reallocation is a crucial tool in promoting walking, cycling and travelling by public transport. It is also an essential part of 'locking in' the benefits of car based trip reductions derived from behaviour change programmes, so that the space is not simply filled by new car drivers.

We would suggest that Chichester can afford to be bold. It is ideally configured for sustainable transport; by virtue of its compact scale walk/cycle times cover most of the urban area. It has the makings of a good cycle network, and proposals for significant number of additional routes. Equally the constrained historic city streets in many places are more suited to the human scale. Importantly it is sufficiently attractive appealing destination that in our view it can and should strive to be a quality destination, with an emphasis on the experience rather than competing on how close to the shops visitors can park – this will never be Chichester's competitive edge, its unique character and charm is.

The feedback from stakeholders largely echoed these sentiments, with most strongly in favour of the concept. One attendee made a particularly eloquent observation:

"I don't feel there's a choice. If it's to retain its character and experience and not become like everywhere else on the south coast, we need to reclaim street space for people and buildings"

A number of challenges to encouraging more sustainable travel were identified, and our recommendations and scheme proposals set out in Table 24 and introduced in Chapter 6 seek to address these. We suggest the streetscape is reconsidered at a number of key locations to provide greater priority for pedestrians, cyclists and those using public transport, to create sustainable transport corridors, and around areas of high place function and transport interchanges, which bothy typically equate to high footfall.

A number of schemes were developed to illustrate how roadspace reallocation could be implemented. As a large proportion of Chichester's daytime population commute from further afield emphasis should be placed on ensuring access by public transport, with complementary measures to manage parking supply, while improving pedestrian and cycle links to the station and across the city more widely, plugging gaps in the cycle network, improving links to the rail and bus stations, widening footways, traffic calming, traffic reduction and reduced severance. Greater bus priority and improved waiting facilities on key corridors.

TO, NOT THROUGH

The fourth concept builds on the previous ones, by thinking about how in the longer term traffic might be progressively and proactively managed away from the city centres core areas to enable a greater emphasis on key place functions.

The ring road strangles the historic city centre core, limits the scope for bolstering the city centre 'offer' and creates severance between the railway station and the city centre, with large areas occupied by highway surface car parks.

Following on from the recommendations for parking supply, we propose a bold approach be considered whereby the longer term objective is for traffic to be intercepted at the re-purposed principle car parks (Northgate, Avenue De Chartres, Cattle Market), which may then enable part of the ring road to be downgraded. The strategy being to reduce the attraction of using the inner ring road as a route through the city, whilst still providing access to trips that are destined for the city centre.

We recognise this is a bold proposal and would require extensive optioneering, conceptual design, feasibility assessments and traffic modelling to determine its viability, and how best it might be implemented. But we would advocate that the concept be explored further, as it could contribute significantly towards realising the vision and objectives for the city.

At a strategic level an initial concept we have considered for how such a measure might be implemented was to dismantle Southgate gyratory and introduce two-way operation, with a bus/cycle/taxi only restriction to prevent through traffic between Avenue De Chartres and Market Avenue, subject to what scope there is to reshape the highway network as part of any wider regeneration proposals. An alternative 'lighter' option might instead be to simply apply extensive traffic calming and management techniques to slow vehicles and lessen its appeal as through route without severing the link entirely. The prize being that reduced access and volume of vehicular traffic creates greater permeability for cycling and walking, making walking and cycling the natural choice for residents travelling within Chichester, and that it feels safe and natural to do this. This culture and choice need not be borne of significant cycle infrastructure engineering, but by a progressive and clear reduction in vehicular traffic on the roads within the city core and the provision of obvious routes in those areas away from the core.

OVERARCHING STRATEGY

A long term strategy is key, so that the package of measures proposed to promote sustainable transport can be delivered in a co-ordinated fashion, so that improvements to for example public transport, do not simply encourage new trips and substitute pedestrians and cyclists for public transport users, without reducing car driving.

In summary our recommended strategy is based on the concept of Link and Place, to recognise the role of streets as places with wider functions than transport alone.

We propose tackling the challenges posed by existing on-street parking management by implementing a city wide RPS. This can also serve as a platform for introducing the innovative concept of visitor parking bays within the RPS, enabling suitable locations to be utilised by commuters who bring wealth to the city, but without resulting in areas of concentrated parking demand and conflict with residents.

A next step then seeks to reduce parking provision in areas of high place function within the heart of the city centre, and instead look to accommodate short stay car parking on the periphery of the city centre, in car parks like Cattlemarket, Northgate and Avenue De Chartres. Long stay parking can be re-provided less centrally through a combination of the new visitor bays within an expanded RPS, new on-street bays on wide city centre roads and new sites outside the city centre.

Figure 67 Collated vision and objectives

1. Economic growth
2. A more integrated and sustainable local transport network
3. Increasing use of sustainable modes of transport ('Smarter Choices')
4. Improve journey times
5. Improve air quality
6. Improving safety for all road users
7. Discouraging HGVs from using unsuitable roads
8. Environmentally friendly way of life
9. Healthy lifestyle
10. Vibrant historic city
11. Opportunities to choose alternatives to car travel
12. Significant shift in travel behaviour - reducing car use for short distance journeys
13. More working age people to relocate to West Sussex
14. Promotion as a tourist destination - emphasis on the 'active outdoors' including cycling and walking
15. Consolidating and enhancing the role of Chichester city
16. Range of opportunities for business, shopping, leisure and entertainment
17. Graduates choose to remain within Chichester and set up businesses or seek local jobs
18. New sustainable neighbourhoods
19. Homes, jobs and community facilities with good public transport, pedestrian, cycle links
20. Rich cultural and architectural heritage conserved, enhanced and promoted

These measures enable significant volumes of traffic associated with the parking supply to be reduced or relocated, and these reduced car trips can be 'locked in' by reallocating roadspace to promote walking, cycling and public transport, all of which are conducive to an improved urban realm, and to achieving the vision and objectives (see Figure 67). This approach fits with Chichester's vision as a high quality destination with an emphasis on reinforcing its unique character and experience.

Connectivity and integration between walking, cycling and public transport is key to promoting an effective sustainable transport network. This strategy proposes a longer term progressive reduction in the access and volume of vehicular traffic permitted into the city centre, and by doing so creates greater permeability for cycling and walking, making walking and cycling safe and more appealing. This culture and choice need not be borne of significant cycle infrastructure engineering, but by a progressive and clear reduction in vehicular traffic on the roads within the city core and the provision of obvious routes in those areas away from the core, enabling cars to travel to the city, but discouraging them from through it.

Table 23 Outline Scheme Programme

Theme	Scheme/ Measure	Description	Delivery timescale	Delivery risks	Indicative fee Level	Contributes to vision and objectives
Tackling parking complaints (on-street)	Trial RPS Zone with visitor parking bays	Trial RPS zone (new or existing) with visitor parking bays	Short	Low	Low (< £250k)	1, 10, 15
	City wide RPS	Roll out a city wide RPS scheme	Medium	Low	Medium (£250k to £1m)	1, 6, 10, 13, 15
	Visitor parking bays in RPS	Introduce visitor parking bays at appropriate locations across the RPS where there is spare capacity and it will not obstruct or inconvenience residents.	Medium	Medium	Included within the above scheme	1, 6, 10, 13, 15
	Performance Pricing	Introduce performance pricing in off-street car parks across the city	Medium	Low	Medium (£250k to £1m)	1, 4, 5, 10, 15
	Smart ticketing	Implement smart ticketing across the city	Long	Low	Medium (£250k to £1m)	1, 10, 15
	Provision of additional parking on wide roads	Conversion of a traffic lane on Via Ravenna and Avenue de Chartres to on-street parking bays.	Included within Reallocating roadspace theme package			
Parking supply and traffic management	Remove Little London short stay car park	Close Little London surface car park, except some provision for Blue Badge holders	Medium	Medium	Low (< £250k)	1, 4, 5, 6, 9, 10, 14, 15, 16, 19, 20

	Remove Baffins Lane short stay car park	Close Baffins Lane surface car park, except some provision for Blue Badge holders	Medium	Medium	Low (< £250k)	1, 4, 5, 6, 9, 10, 14, 15, 16, 19, 20
	Re-purpose Northgate, Cattlemarket and Avenue De Chartres car parks as short stays	Focus short stay provision in Northgate, Cattlemarket and Avenue De Chartres	Medium	Medium	High (£1m >)	1, 4, 5, 6, 9, 10, 14, 15, 16, 19, 20
	Identify sites for long stay parking capacity at the periphery	Focus long stay provision in visitor bays within RPS, additional spaces provided on-street and identify new sites for parking at periphery.	Short	Low	Low (< £250k)	1, 4, 5, 6, 9, 10, 14, 15, 16, 19, 20
	Re-route NCN through the city	Re-route NCN route through City along Westgate and West Street	Medium	Medium	Medium (£250k to £1m)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
Reallocating roadspace: improved places and sustainable transport corridors ”	East Street - pedestrianisation	East Street pedestrianisation	Medium	Medium	High (£1m >)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20
	The Hornet footway - widening and urban realm improvements	The Hornet - lane removal and footway widening	Long	High	High (£1m >)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20
	Cattlemarket car park - revised access via The Hornet	Cattlemarket car park - revised access via The Hornet	Medium	High	Medium (£250k to £1m)	5, 6, 10, 14, 20
	Westgate/ Avenue De Chartres - Cycle friendly roundabout	Westgate/ Avenue De Chartres - Cycle friendly roundabout (i.e. turbo roundabout, segregated cycle lanes)	Medium	High	High (£1m >)	2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

West Street - urban realm improvements	West Street Bus stop relocation, footway widening and urban realm improvements, potentially a transformative shared space scheme	Medium	Low	Medium (£250k to £1m)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20
Westgate - traffic calming and improved cycle provision	Westgate traffic calming, cycle route improvements link to the West of Chichester strategic development site, perpendicular parking	Short	Low	Medium (£250k to £1m)	2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
Via Ravenna - lane removal and on-street parking	Conversion of traffic lane on Via Ravenna to on-street parking bays with safe crossing points and traffic calming	Short	Medium	Low (< £250k)	2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20
Avenue de Chartres - lane removal and on-street parking	Conversion of traffic lane on Avenue de Chartres to a slow lane with on-street parking bays, improved cycle provision and safe crossing points	Short	Medium	Low (< £250k)	2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20
North Street - footway widening and urban realm improvements	North Street footway widening and urban realm improvements	Medium	Low	Medium (£250k to £1m)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20
Oaklands Way - At-grade crossing	At-grade crossing on Oaklands Way linking to North Street	Short	Low	Low (< £250k)	2, 3, 4, 6, 8, 9, 10, 11, 12, 14, 15, 16, 19
Bognor Road - Parking relocation	Investigate feasibility for alternative parking provision where resident parking on Bognor Road currently causes a bottleneck for buses and cyclists	Short	High	Low (< £250k)	3, 4, 6, 8, 9, 11

Market Avenue - traffic calming and improved cycle provision	Traffic calming, cycle lanes, ASLs and improved crossing facilities on Market Avenue	Short	Low	Low (< £250k)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 15, 16, 19, 20
Southgate gyratory - footway widening on Basin Road/ Southgate	Southgate gyratory - remove a traffic lane and widen footway between city centre and station	Medium	High	Medium (£250k to £1m)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 14, 15, 19, 20
Southgate gyratory - dismantle gyratory and revert to two-way operation. Pedestrianised section opposite Crown Court	Dismantle Southgate gyratory - revert to two-way operation with an all movements junction at the intersection of Market Avenue/Basin Road, and a pedestrianised section on Southgate Street opposite the Crown Court - possibly incorporating a bus gate and filtered permeability for cyclists.	Long	High	High (£1m >)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20
Station Approach - improve pedestrian crossing and gateway improvements	Improve pedestrian crossing on Station Approach, narrow crossing distances and improve urban realm/gateway	Short	Medium	Medium (£250k to £1m)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20
Secure cycle parking	Additional secure cycle parking	Short	Low	Low (< £250k)	3, 5, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19
Car Club bays	Additional car club bays/vehicles	Short	Medium	Low (< £250k)	3, 5, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19
Electric vehicle charge points	Additional electric vehicle charge point provision	Short	Medium	Low (< £250k)	3, 5, 8, 9, 10, 11, 12, 14, 18, 19
Freight consolidation centre and last mile	Introduce a freight consolidation centre, perhaps	Medium	High	Medium	2, 4, 5, 6, 7, 8, 10, 14, 15, 16, 20

	deliveries	in one of the principle industrial estates, with last my consolidated deliveries, potentially via electric LGV or cycle freight. Subject to feasibility assessment and business model with acceptable ongoing revenue support implications.			(£250k to £1m)	
	Restrictions on freight movements within historic city centre	Restrict larger vehicles from high place function streets during core hours and from narrow city centre streets entirely.	Short	Medium	Low (< £250k)	5, 6, 7, 10, 20
	Trial road closures (i.e. Market Avenue)	Trial road closures - Ciclovia inspired road closures on selected days (i.e. Sundays or public holidays)	Short	High	High (£1m >)	2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20
Reallocating roadspace: "to, not through	Southgate gyratory - dismantle gyratory and sever through route with a Bus gate	Dismantle Southgate gyratory and introduce a bus/cycle/taxi only restriction to prevent through traffic between Avenue De Chartres and Market Avenue	Long	High	High (£1m >)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20
	Cattlemarket Car Park - revise layout to include segregated shared use cycle path and urban realm improvements	Cattlemarket car park - revise layout, possibly an MSCP utilising a smaller footprint to enable redevelopment, perhaps making a feature of the Amphitheatre site as a new visitor attraction, provision of continuous segregated shared use cycle path onto Velyn Avenue	Long	High	High (£1m >)	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20

Notes:
Short = 2016-2018, Medium = 2019-2022, Long = 2022 onwards
Low = <£250k, Medium = £250k to £1m, High = £1m >

7.2 FUTURE SCENARIOS

This chapter forecasts what Chichester might look like in short-medium and longer term scenarios.

FUTURE TRAVEL TRENDS

The estimated future mode shares were informed by a review of prevailing and projected trends in travel behaviours and technologies.

Commuting Patterns - Over the past twenty years the distance people commute to work has increased slightly. However, there has also been a decrease in the number of commuter trips made. This combination of fewer, but longer commutes is likely due to several factors, including more opportunities to work from home and increasing suburban house prices which force commuters further from city centres.[7]

A further trend is that the proportion of jobs situated within city centres is rising as the number of jobs in knowledge-based industries (typically located in city centres) increases. This puts increasing demand on public transport in cities and may increase congestion on the roads and competition for urban space from car parking.[8]

However new behavioural trends are also emerging amongst young adults (18-34), with a greater proportion in further education and having families later.[910], which in turn has increased the number of leisure trips by young adults.[11]

Car Usage - Whilst the total number of miles driven by car has increased over the past twenty years, the average number of UK car journeys per person decreased by 12% from 1995. This had led some academics to suggest that the average number of miles driven by car per person per year has reached a peak ('peak car'), and will remain static in the future or begin to decline.[1213]However, whether this trend will continue is unclear. The National Transport Model forecasts that car miles will begin to grow again.[14]

Notable changes are also occurring with regards vehicle ownership and usage models, with a trend away from vehicle ownership, with a rise of car clubs.[15] The use of car clubs alongside public transport constitutes an emerging form of intelligent mobility, with the use of Apps and new technologies enabling platforms such as Uber growing rapidly and changing the transport landscape.

Since 2008 24,500 electric vehicles (including hybrids) have been registered in the UK, with over half of those registered in 2014 alone.[16]

[7] National Travel Survey 2013, Department for Transport, 2014
[8] Fast track to growth - transport priorities for stronger cities, Centre for Cities, 2014
[9]Trends in young participation in higher education, HEFCE, 2013
[10]Marriages in England and Wales, 2010, UK Office for National Statistics, 2012
[11]Travelling with Millenials, Boston Consulting Group, 2013
[12]Goodwin & Van Denker (2013), "Peak Car" – Themes and Issues. Transport Reviews, 33 (3)
[13]Grow, peak or plateau: The outlook for car travel, Lyons & Goodwin for New Zealand Ministry of Transport, 2014
[14]Action for Roads: A Network for the 21st Century, Department for Transport, 2014
[15]Car-sharing in London – Vision 2020, Frost & Sullivan for ZipCar, 2014
[16]EV Registrations 2010-2014, SMMT, accessed online Feb 2015

The comparative improvement in access to the city centre by sustainable modes versus access by car was also a significant factor in informing our estimates.

Buses - Bus use across the UK has declined for a number of decades, though in London factors such as the congestion zone charging and the introduction of Oyster cards has led to patronage doubling since 1995. [17] There has also been a large increase in the number of hybrid buses. 15 In 2014, these made up 2% of the UK fleet.[18]

Cycling - Cycle journeys have been increasing, particularly in flat, dense urban areas such as London, Cambridge, Oxford and Brighton[19].

Rail - The annual number of rail journeys has doubled over the last 20 years with the fastest increase on commuter routes.[20] This growth has been attributed to a range of factors including the trend for an increasing proportion of jobs to be situated in city centres, decreasing car use and improved reliability. [2122]

Freight - The number of light goods vehicles on the roads has increased steadily, linked to the rise in deliveries from internet shopping.[23]

Demographic Changes and Population Growth - The significant growth planned for the city and its resident population was a key consideration when deriving these figures, as much of the districts growth is focused on sites with the potential to be highly sustainable urban extensions, well integrated into walking, cycling and public transport networks.

Additionally the growing College and University populations will likely present significant opportunities for promoting further sustainable travel initiatives, building on the successful LSTF programme delivered in the city.

LONGER TERM PARKING TRENDS

There are other trends that cause us to support a wait and see approach by the District with respect to parking supply. While demand management and other trends may see peak car translate into peak parking, we can look further ahead to changes to car technology that may impact on what parking is required and how it is used. A recent report by WSP|Parsons Brinkerhoff and Farrells[24] has considered how autonomous vehicles may begin to remove the extent to which much city centre parking is required. Rather cities will be served by large edge of town autonomous vehicle servicing and storage hubs and vehicles will visit the centre but won't be kept there.

In an interim period the connected vehicle will allow control and management of traffic to be undertaken using virtual infrastructure. Signs and restrictions can be stored remotely and referenced via GPS positioning, removing the need for physical controls and much of the street furniture used to navigate or manage traffic. Not only that, but traffic orders may become more temporal and vehicle-specific.

[17] Local bus passenger journeys, statistical set, Department for Transport, 2014
[18] Investing in the low carbon journey, LowCVP, 2014
[19] Transport Statistics Great Britain, Department for Transport, 2014
[20] Transport Statistics Great Britain, Department for Transport, 2014
[21] Britain's Future, Britain's Railway, Rail Delivery Group, 2015
[22] On The Move: Making sense of car and rail trends in the UK , Le Vine and Jones (ORR and RAC Foundation)
[23] On the Move, Jones and Le Vine (RAC Foundation), 2013
[24] "Making Better Places. Autonomous vehicles and future opportunities, WSP|Parsons Brinckerhoff & Farrells

Recent initiatives will see the driver informed by the vehicle's on board system as to the restrictions prevailing for parking, and it is likely will manage and execute any remote payment from a central account to service providers.

The self-parking technologies and some form of self-driving may also open up more immediate savings. Without the need to open car doors once parked, and potentially with vehicles able to self-arrange, car parks could be far more intensively used.

The speed and extent to which these changes will impact Chichester are very unclear. The momentum and scope of technology to impact parking and demand for driving into the city centre does mean that prudent approaches to effect strategy progressively appear sensible. The new technologies offer the prospect of greater control and reduced street clutter which used in the right way can facilitate an overhaul of the urban environment in Chichester's centre to reinstate the prominence of historical buildings and a scale appropriate to them.

SMARTER CHOICES AND THE ROLE OF ROADSPACE REALLOCATION

Smarter choices have a major role to play as part of the existing transport strategy for delivering the Local Plan developments proposed across the city. Our recommendations seek to support and enhance this approach, and contribute towards achieving the 7% *reduction* in trips to / from Chichester city centre and *5% reduction* in trips to / from Strategic Development sites it envisages.

The transport strategy associated with the Local Plan includes cycle route improvements and bus priority measures, but to achieve and lock in the reduction in car trips envisaged requires transformational change by 2029. As described in Chapter 3, in our view these changes in mode share are achievable, but this kind of step change requires a bold new approach, with measures to 'lock in' and sustain reductions in car based trips.

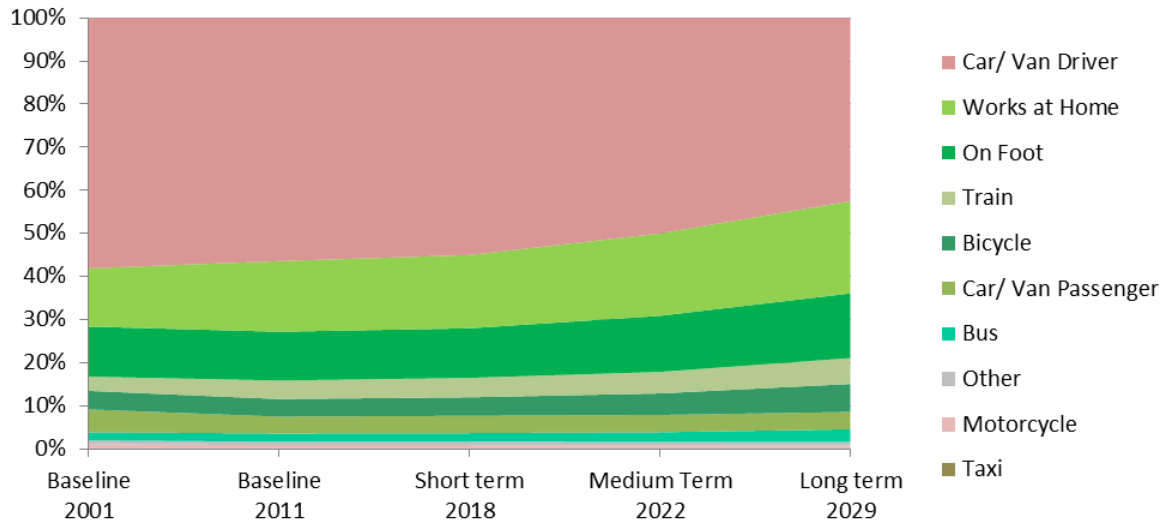
Based on the programme of schemes outlined in Table 25 we have estimated the possible future mode shares achievable for travel to work in Chichester. These estimates are based on our review of the existing transport network, prevailing transport trends and our professional judgement of the scale of change achievable through the strategy outlined in this report.

Table 24 Possible future mode shares for Chichester (journeys to work in Chichester

Mode of Travel	Baseline		Short term	Medium Term	Long term
	2001	2011	2018	2022	2029
Works at Home	13.50%	16.40%	17%	19%	21%
Train	3.30%	4.30%	4.50%	5%	6%
Bus	1.90%	1.90%	2%	2.25%	3%
Taxi	0.20%	0.20%	0.20%	0.20%	0.20%
Motorcycle	0.90%	0.70%	0.70%	0.65%	0.60%
Car/ Van Driver	58.10%	56.40%	55.00%	50%	42.5%
Car/ Van Passenger	5.30%	3.90%	4%	4%	4%
Bicycle	4.30%	4.10%	4.30%	5%	6.50%
On Foot	11.60%	11.30%	11.50%	13%	15%

Baseline = Census data

Figure 68 Possible future mode shares for Chichester (journeys to work in Chichester



These projected future mode shares of journeys to work in Chichester over the short, medium and longer term, amount to a change in mode share against 2011 levels of:

- Car/van drivers- reduction of 2.5% by 2018, 11% by 2022 and 25% by 2029
- On foot – increase of 2% by 2018, 15% by 2022 and 33% by 2029
- Bicycle – increase of 5% by 2018, 22% by 2022 and 59% by 2029
- Bus – increase of 5% by 2018, 18% by 2022 and 58% by 2029
- Rail – increase of 5% by 2018, 16% by 2022 and 40% by 2029
- Working from home – increase of 3.7% by 2018, 16% by 2022 and 30% by 2029

7.3 NEXT STEPS

We would suggest that the next steps following on from this study would be to:

- Undertake further feasibility studies of the proposed schemes/measures
- Consult with stakeholder groups for feedback on the more detailed scheme proposals as they are developed
- Complete the updated parking strategy informed by this study

8 EVALUATION OF APPROACH

Throughout the duration of the study we have maintained a log to capture our experiences, to serve as an evaluation of the approach. These serve as lessons learnt to inform how the approach might be adapted and refined for future application:

Suitability of Scope and additional considerations

→ We are highly supportive of the overall approach and methodology. In our view it is a commendable and progressive approach which recognises that parking issues, which were the initial driver for the study, cannot be remedied in isolation.

→ We also feel the study is right to review more widely how roadspace is used, the role of streets beyond just transport, and in putting sustainable transport and urban realm improvements at the heart of the strategy.

→ Positive feedback was also received from stakeholders, commending the holistic approach and format/content of the consultation events.

→ There is however a risk with a study of this nature that, because it is so broad in its scope, it is seen as a panacea to all the cities problems. Whilst the study can seek to identify a strategy for remedying problems at a strategic level, it must be recognised that more localised issues require more detailed consideration; conceptual design, feasibility assessments, modelling etc.

→ Differing interpretations of the scope meant at times there was some uncertainty over the extent to which the study was intended to be parking focused or with a wider strategic remit concerning roadspace allocation.

Difficulties encountered

→ Some delays were incurred while the streets to surveyed were confirmed, followed by a need to rapidly mobilise the early round of summer surveys before schools went back.

→ Severe weather forced the cancellation of parking survey, delaying data collection.

→ Data collection was delayed further so the term time surveys could also capture University activity, which only opened fully after fresher's week in mid-October.

→ Some issues with data consistency amongst parking data provided

→ Stakeholder list was extensive and took an extended period of time to be finalised and inform the development of a Stakeholder Engagement and Communications Plan.

→ The stakeholder workshops presented some challenges as they required the team to convey a lot of information on the findings of the roadspace audit and the conceptual tools developed. This meant there was less time for questions and discussion than would have been desirable during parts of the technical stakeholder workshop. The format was changed to ensure more time was set aside for discussion during the community representatives workshop.

Limitations of the approach - reliability/clarity of data

→ Parking data collected was a comparatively small sample, and whilst we feel it is sufficiently robust for a study of this nature, ideally the occupancy surveys would have been undertaken over a longer period.

→ Ideally a Link and Place classification would have been undertaken for the city, to provide a framework against which existing and proposed street performance could be assessed.

→ In addition to the detailed roadspace audit of parking supply and usage, it may be desirable to assess the respective walk, cycle and public transport infrastructure to a similar level of scrutiny.

→ While the workshops gathered input from organised groups such as residents' associations, the views of these representatives will not necessarily be aligned with those of other residents, particularly younger people, who seldom contribute to formal consultation exercises.

→ Visitor's views were not sought directly, only indirectly through the feedback provided by representatives from major visitor destinations.

Deliverability within budget

→ Challenging. The breadth of the study and delays described earlier resulted in an extended programme and additional costs.

→ The approach to data collection proved efficient and effective and was delivered within budget.

→ The stakeholder workshops were a major undertaking and more costly to plan and deliver than anticipated.

→ Assembly of data, background studies and policy documents and GIS layers also took longer than anticipated.

Timescales

→ Following the delays in completing the data collection, the subsequent analysis was completed in mid-November. It was agreed that the turnaround time to issue invites to stakeholders and undertake the workshops in late November was too short, and would likely result in poor attendance, as would events hosted in December over the festive period. In addition key project team members were on extended leave during December. So it was agreed the stakeholder workshops would be rescheduled to January, with reporting to be concluded in spring.

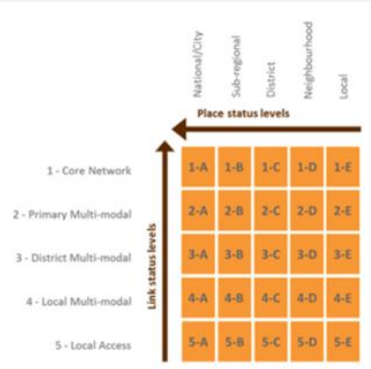
→ For a study of this nature a 6-9 month delivery timescale would probably be appropriate to enable comprehensive stakeholder engagement and data collection, particularly when it spans the Christmas period.

Recommendations for future improvement/refinement

→ Invite stakeholders to contribute or comment on the selection of streets to be surveyed, this was commented on at the community representatives workshop.

→ Close working with the District Council's Parking team and Planning and Economic Development teams from the County and District Councils is essential.

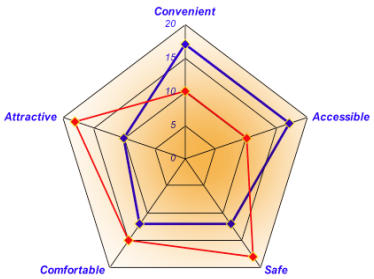
→ Undertake a Link and Place classification to provide a framework against which existing and proposed street performance could be assessed. This would enable a more holistic consideration of other modes. This would account for 'place' explicitly as part of the assessment process in line with the Place/Locality based approach. By classifying a streets role as a place, it is possible demonstrate to stakeholders a clear rationale for prioritising more sensitive design solutions in particular locations, as well as prioritising footway widening, traffic calming and urban realm improvements over additional traffic lanes or parking bays for example. A high level Link and Place classification could be developed relatively simply for the study area.



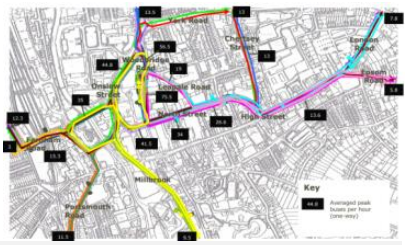
→ Parking data - if possible additional budget to enable a larger sample of parking data to be collected, ideally over a multiple days.

→ PERS, CERS and Bus Route Audits - In addition to the detailed roadspace audit of parking supply and usage it would

be desirable to assess the respective walk, cycle and public transport infrastructure to a similar level of scrutiny. Pedestrian Environment Review System (PERS), Cycling Environment Review Systems (CERS) and Bus Route Audits. PERS and CERS assessments are a nationally recognised approach for undertaking qualitative assessments of pedestrian and cyclist environments to a consistent format against a range of criteria. The output of which are a series of scores that attribute an overall quality rating for each defined area.



→ Bus Route Audits entail a review of the core bus corridors throughout the study area, including passenger waiting infrastructure provision and quality, bus priority measures and key bottlenecks or caused of poor journey time reliability. The audit would include an analysis of bus per hour movements along each core corridor. This would provide important data when considering roadspace allocation and the scope for increased travel by public transport and options such as Park and Ride.



→ Focus Groups would help capture the views of groups not typically represented by established residents associations, particularly younger people, who seldom contribute to formal consultation exercises. By recruiting residents according to demographic criteria using standard market research methods, focus group discussions could be conducted with a small sample of the 'average' local population.

→ Gathering Feedback from a Wider Audience – in parallel to the engagement sessions separate online surveys could be developed for residents, business and visitors to gather input to the study from a wider audience. These could be promoted by WSCC Communications and CDC teams through existing media platforms and channels of communication (e.g. networks) and businesses contacts from the business engagement elements of West Sussex's LSTF programme.

→ Engaging with Visitors - Exhibition Consultation Format - visitors are typically the hardest group to engage, as they are transient and have to be approached directly to participate. As such face to face interviews in areas of high foot-fall for visitors are essential.

→ Based on our experience of delivering this study and the recommendations for future refinements we would suggest an appropriate budget for undertaking a future Roadspace Audit for a town/city of the scale and complexity of Chichester would be circa £50k.

Appendix A

SUPPORTING PARKING ANALYSIS

	Car Park	Type	30 Mins	1 hour	2 hours	3 hours	4 hours	5 hours	6 hours	8 hours	> 8 hours	Permits	2 way trips/day
1	Little London	Short Stay	88	147	139	35	4	2	1	0	0		416
2	Baffins Lane	Short Stay	122	191	111	29	2	1	0	0	0		456
3	Orchard Street	Short Stay	15	42	33	17	3	1	0	0	0		111
4	St Cyriacs	Short Stay	47	123	93	24	2	0	0	0	0		289
5	South Pallant	Short Stay	41	75	62	21	1	1	0	0	0		201
6	East Pallant	Short Stay											0
7	Cawley Priory	Short Stay	67	149	132	45	6	6	1	0	0		406
8	Market Avenue	Short Stay	11	28	28	12	1	0	0	0	0		80
9	Market Road A	Short Stay										*50*	50
10	Market Avenue C	Short Stay										*46*	46
11	New Park Road	Short Stay	50	127	97	48	3	0	0	0	0		325
12	Deanery Close	Short Stay					- - -	*- no data -*	- - -				0
13	Avenue De Chartres*	Long Stay	*13*	*43*	*60*	*37*	*15*	*7*	*3*	*3*	*9*	*400*	590
14	Basin Road	Long Stay	16	39	22	6	3	0	0	0	0	*80*	166
15	Northgate	Long Stay	33	138	215	155	48	23	12	16	12	202	854
16	Cattle Market	Long Stay	96	311	434	270	111	48	25	25	54	347	1721
	Chichester		**599**	**1413**	**1426**	**699**	**199**	**89**	**42**	**44**	**75**	**1125**	**5711**
					Short Stay	4137		Med Stay	330		Long Stay	1305	

** Data profile estimated & controlled to observed maximum values*

Appendix B

STAKEHOLDER ATTENDANCE AND FEEDBACK

Appendix C

CASE STUDIES