

**PARKING RESTRAINT  
MEASURES  
AND THEIR  
IMPLEMENTATION**

**Transfund New Zealand Research Report No 145**



# **PARKING RESTRAINT MEASURES AND THEIR IMPLEMENTATION**

**BOOZ.ALLEN & HAMILTON (New Zealand) LTD**

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## EXECUTIVE SUMMARY

### INTRODUCTION

The project objective was to ‘provide guidance on the development, specification and implementation of parking restraint policies for the major urban centres in New Zealand’.

The project focused on:

- Developing measures and mechanisms to ensure the effective implementation of parking restraint policies in the main urban centres in NZ;
- Identifying impediments to the extension of peak period parking restraint measures, and developing proposals to overcome these impediments;
- Analysis and policy development for parking in the CBD/inner areas of Auckland, Wellington and Christchurch; and
- Peak period parking issues: this resulted in a focus on commuter parking measures.

### REVIEW OF INTERNATIONAL EXPERIENCE

Part of this project was to ‘Review practice and experience in selected cities internationally with the adoption and effects of parking restraint policies’. The review was to particularly examine constraints/impediments to implementation and how these may be overcome. The review focused on CBD parking, and restraint of commuter parking in particular.

The main conclusions derived from the international review were:

- The main limitation with parking measures as traffic restraint instruments relates to the difficulties involved in controlling privately owned parking, primarily privately controlled (commercial) parking garages and existing Private Non Residential (PNR) parking.
- Parking taxes can be levied with relatively little difficulty on commercial parking operations. Attempts to exert further control over their operation, (eg require long-stay to be more expensive than short-stay parking) however, have had only limited success.
- Possible mechanisms to control the supply and price of existing PNR parking are available. It has been demonstrated that parking levies can be successfully applied. Political opposition has hindered implementation of further measures.
- Several other factors affect the effectiveness of parking measures in restraining overall traffic levels: the extent of employer parking subsidies; the level of public transport provision; and the volume of through-traffic.



## NEW ZEALAND POLICY AND PRACTICE

A review of the parking policies and practice for Auckland, Wellington and Christchurch was undertaken. The main points noted were:

- In all three centres the majority of CBD parking stock is in private ownership. This limits the ability of local government to control parking supply and pricing.
- The proportion of on-street spaces which are controlled or charged varies considerably, with Wellington having a much higher proportion controlled and charged than the other centres.
- Wellington has done the most to introduce a parking restraint policy specifically aimed at decreasing commuter road traffic (the Wellington Regional Council sets a limit on long-stay carparks in major urban centres, and the Wellington City Council has reduced the availability of free long-stay parking through its coupon parking scheme). However, both the Auckland and Wellington city councils have set a maximum parking limit for new developments.

## POTENTIAL MEASURES, IMPEDIMENTS AND IMPACTS

The impediments to implementing different parking measures were identified, and the scope for overcoming these assessed. The likely impact of each of these measures was also assessed. The following conclusions were drawn from this analysis:

- The parking measures available can be differentiated by the likely degree of difficulty in implementation, the expected effectiveness in restraining CBD traffic, reducing commuter parking and increasing public transport usage.
- Measures involved with controlling or charging for on-street parking are the easiest to implement. Most of the available measures have already been implemented in Wellington. These will have a small effect in restraining CBD traffic. Overall, they will result in a net revenue gain for the council. The effectiveness of these measures will depend to a large extent on the level and type of enforcement resources provided.
- Imposing a levy on publicly available CBD parking, in public and private carparking buildings or lots, is likely to be the most cost-effective measure. It can be implemented by a differential rate, and will achieve significant decreases in commuter parking. The greatest impact, under present conditions, would occur in Wellington where 90% of CBD on-street parking is controlled (compared to Auckland and Christchurch where only 45% is controlled). Substantial net revenue should be achieved for the councils involved.
- Implementing charges and greater controls on private parking for private use (Private Non Residential – PNR) would have the greatest impact on CBD traffic levels given that PNR parking comprises around 60% of the CBD parking stock. However, these measures would be the most difficult to implement, and may require enabling legislation, particularly if they were to be used to fund public transport.

### ABSTRACT

This project aimed to provide guidance on the development, specification and implementation of parking restraint policies for the major urban centres in New Zealand. The focus of the project was on peak period parking, and specifically on identifying impediments to the extension of parking restraint measures at peak times, and developing proposals to overcome such impediments where feasible.

The project included an investigation of the supply and demand characteristics for parking in the CBD/ inner areas of New Zealand's three largest urban centres (Auckland, Wellington and Christchurch); a review of international experience with the adoption of parking restraint policies; a review of traffic restraint related parking measures implemented in New Zealand; and, an assessment of impediments to extending peak period parking restraint measures in the three New Zealand centres. A non-quantitative assessment of the likely impacts of parking restraint policies was also included; however, the project did not compare the merits of parking restraint with other types of traffic restraint.

## 1. INTRODUCTION

### 1.1 Objectives

The overall objective of the project was to provide guidance on the development, specification and implementation of parking restraint policies for the major urban centres in New Zealand, to be achieved through:

- Investigating the current supply and demand characteristics for parking in the central business district (CBD)/inner areas of New Zealand's main urban centres;
- Assessing the effects of recent New Zealand efforts to impose parking pricing/supply mechanisms as a means of traffic restraint;
- Reviewing experience in selected cities internationally with the adoption of parking restraint policies;
- Assessing impediments to the extension of peak period parking restraint measures in the main New Zealand urban centres;
- Developing proposals to overcome such impediments where feasible;
- Assessing the likely impacts of more extensive parking restraint policies.

### 1.2 Research Focus

The project was focused on:

- Developing measures and mechanisms to ensure the effective implementation of parking restraint policies in the main urban centres in New Zealand;
- Analysis and policy development for parking in the CBD/inner areas of Auckland, Wellington and Christchurch; and
- Peak period parking issues (this resulted in a focus on commuter parking measures).

The project was not concerned with comparing the merits of parking restraint with other types of traffic restraint policies; nor with providing a detailed quantitative assessment of the traffic and economic impacts of parking restraint measures.

### 1.3 Consultation

A liaison group was established for the project, comprising representatives from:

- Auckland City Council
- Auckland Regional Council
- Wellington City Council
- Wellington Regional Council
- Christchurch City Council
- Canterbury Regional Council.

In addition, representatives from other local authorities in the three centres provided comments and information in the initial stages of the project.

The liaison group provided much of the New Zealand data, reviewed the draft report, and provided comments on the report's findings. In addition, officers of the Ministry of Transport provided comments on the draft report.

In preparing this report, we had access to the 'Report of the Working Group on Demand Restraint and Regional Funding of Community Passenger Transport Services'. This was relevant in as much as it assessed the scope for the use of parking restraint policies to assist in the funding of public transport.

#### 1.4 Report Structure

The remainder of the report is structured as follows:

- Chapter 2 - provides an overview of parking restraint measures
- Chapter 3 - summarises the review of international practice and experience
- Chapter 4 - provides a parking profile for the three centres
- Chapter 5 - summarises the present parking policies in these centres
- Chapter 6 - outlines New Zealand legislative and regulatory issues
- Chapter 7 - identifies potential parking policy proposals
- Chapter 8 - provides an assessment of each of the policy proposals
- Chapter 9 - provides overall conclusions
- Appendix A - sets out results of the review of international practice /experience with parking restraint measures
- Appendix B - outlines the parking policies in each of the three centres.

## 2. OVERVIEW OF PARKING RESTRAINT MEASURES

Parking policy operates through the control of the quantity of parking supply and its operation (although in practice there is not a clear distinction between the two). Table 2.1 shows a range of policy measures that can be used to exercise control over quantity and price (Bennett and Ogden, 1984).

**TABLE 1 Parking Policy Instruments**

Type of Parking	Dimension of Control	Policy Instrument
On-Street	Price	Charge for parking previously free Increase parking tariffs Introduce parking permits with a fee
	Supply	Ban parking (totally or at specific times) Ban parking with exceptions for special groups Adjust permitted duration of stay
Off-Street	Price	Increase parking tariffs Adjust tariffs - discourage long-term use - encourage HOV vehicles Introduce a parking tax
	Supply	Prohibit or slow new parking development Reduce existing parking stock Adjust operating regimes Relocate parking

### 2.1 Pricing

Some techniques for implementing parking restraint involve the regulation of price.

#### 2.1.1 Parking Price Increases

These actions include increasing rates at municipality owned and operated parking stations, installing meters, pay-and-display, voucher systems and placing restrictions on parking duration.

#### 2.1.2 Parking Rate Structure Revision

This generally involves changing pricing structures to favour short-term parkers. Structures can also be altered to favour carpools over single occupant vehicles.

#### 2.1.3 Tax on Parking Garages

Parking taxes are levied on non-residential parking facilities.

### **2.1.4 Parking Surcharge**

A parking surcharge is applied to all non-residential car parks, or to car parks used by particular groups within a specified area, including private non-residential parking.

## **2.2 Supply Restraint**

The control of the parking supply can be subdivided into control of aggregate supply; control of parking access and control of spatial location. The techniques for implementing regulation of parking supply are discussed below.

### **2.2.1 Control of Aggregate Supply**

Control of the aggregate supply of parking can be carried out by a number of constraints.

#### **2.2.1.1 Depletion of existing inventory**

This involves the removal of parking spaces, placing a complete moratorium on new development or removing a specified number of spaces for particular periods of time.

#### **2.2.1.2 Freezing the number of parking spaces**

Parking supply can be regulated by freezing the inventory of parking spaces. The existing inventory can be upgraded over time by replacing obsolete facilities with peripheral parking garages or underground parking structures.

#### **2.2.1.3 Constraining normal growth**

The third approach is to constrain the volume of new parking facilities provided to less than would be provided under existing growth expectations.

#### **2.2.1.4 Other measures**

On-street parking bans, short term leases for publicly owned facilities, non-parking use of vacant development parcels and reduced public investment in downtown parking.

### **2.2.2 Control of Parking Access**

Another dimension of parking supply control is parking access. Control of parking access can be carried out using permits, restrictions, meters, coupons etc.

#### **2.2.2.1 Residential parking permits**

Residential parking permits have been implemented to reduce parking by commuters on residential streets located adjacent to a congested commercial or employment centre in which either insufficient parking is provided or available parking is expensive. Special permits can be issued to residents for periods (for example, 7.00am to 10.00am or 7.00am to 6.00pm) where prohibitions hold. This ensures residents can get parking during these periods. The price of the permits can vary from nominal fees to quasi-commercial rates.

#### **2.2.2.2 Restricting facility use**

Restrictions, such as duration limitations, can be placed on the use of existing facilities. Parking may be changed from long to short-term parking or certain types of vehicles (carpools) can only enter at particular points in time.

**2.2.2.3 Other measures**

Retailer issued parking coupons, preferential parking for High Occupancy Vehicles (HOV), duration controls, short-term meters, time of day metering and odd-even license parking.

**2.2.3 Control of Spatial Location**

Fringe and transport corridor parking may allow each transport mode to be used to the best of its advantage. Fringe parking should be located so that it intercepts home to work trips destined to the CBD. The promotion of Park-and-Ride needs to be supported by an ample supply of well-located fringe parking and high quality transit. Other measures include localised zoning requirements, control of distribution of replacement parking, control of structural form of replacement parking, incentives for air-rights or sub-surface parking, joint use agreements and kerb side restrictions.

### 3. REVIEW OF INTERNATIONAL PRACTICE AND EXPERIENCE

Part of this project was to *review practice and experience in selected cities internationally with the adoption and effects of parking restraint policies.*

The review was to particularly examine constraints/impediments to implementation and how these may be overcome. The review focused on CBD parking, and restraint of commuter parking in particular. The main findings are presented below.

A more detailed summary of experience with parking restraint in selected international cities is attached as Appendix A.

#### 3.1 CBD Parking Policies

Generally, comprehensive analyses of the implementation and impact of parking in particular cities do not exist. However, examination of a cross-section of cities in the United Kingdom, Europe, the United States and Australia has revealed similar issues. The results of the review are outlined below.

##### 3.1.1 United Kingdom

###### 3.1.1.1 London

Parking has been a critical issue in London for over 30 years, with parking meters being introduced in 1958 and the first residents' parking scheme in 1967. Maximum parking standards have been in force since 1969, and public off-street carparks have been licensed since that time. In the 1970s options for controlling Private Non-residential Parking (PNR) in London were examined; however, no powers were introduced. Illegal parking has been a major problem in London, and since 1982 provision for wheel-clamping offenders has been available. In 1984 licensing of publicly available, privately-run, off-street parking was enabled (allowed regulation of number of spaces, scale of charges, split between spaces for different times and types of customer etc). However, the requirement to pay compensation to operators for foregone revenue has meant that these powers have rarely, if ever, been used.

Despite these measures traffic flows entering London City centre have continued to rise. Key reasons cited for this have been:

- The high proportion of PNR parking in central London,
- Eighty percent of car commuters have all parking or mileage expenses covered, and 50% of cars travelling in the peak have a space provided,
- Company cars are 53% of total am peak cars, and
- Through traffic are not controlled.

###### 3.1.1.2 Outside London

Although some degree of parking control has been implemented in all cities outside London (meters etc), more severe restraint measures have not been used as extensively outside of London. The main cities where these have been implemented are the historic cities such as Oxford and Canterbury with narrow streets and restricted city centre areas, and larger cities such as Sheffield. The parking approach adopted has generally involved providing Park and Ride (P&R) outside the city centre, residents parking zones and no long-stay on street parking in the city centre, and some pedestrian only streets. Minimum and maximum parking



requirements are often set for new central city developments, with commuted payment schemes in several cities (developers pay a fixed amount per car space not provided below minimum requirement; funds used for P&R). Where cities have control of public car parks the price of long stay parking is increased relative to short stay.

The impact of these measures has been mixed, with the variance mostly related to the proportion of PNR parking in the city centre. Canterbury, where 28% of the city parking stock is PNR, has achieved good results in terms of displacing long stay parking out of the city centre, whereas no discernible impact was observed in Cambridge with 65% PNR. Enforcement is also an issue, and parking offences have recently been 'decriminalised' in an attempt to improve enforcement by allowing cities to take responsibility for this. The need for effective public transport as an alternative to the car has been recognised, and cities such as York have felt restricted by the legislation and finances available. P&R has, however, achieved good results in some places (eg Canterbury).

### **3.1.1.3 Future Directions**

In recent years the UK Government has been encouraging cities to use restrictions on the availability of parking, and reduce parking provision in new developments in particular, as a means of encouraging the process of reducing reliance on the private car and encouraging less environmentally damaging alternative transport modes. PPG13 specifically recommends that 'local planning authorities should adopt parking standards based on maximum values'. This has subsequently been clarified to highlight that it refers to commuter parking rather than town central retail parking.

The Government has also been reported as proposing maximum PNR parking at new business developments in London. However, it appears that control of existing PNR is not currently on its agenda, with officials citing practical issues such as the need to provide rights of access and inspection for assessment and enforcement (raised when the subject was debated in the mid-1970s), and the possible impact on companies' location decisions.

## **3.1.2 Europe**

The application of parking restraint measures varies widely throughout Europe: countries where it has been applied with some intensity include the Netherlands, Switzerland and Germany.

### **3.1.2.1 The Netherlands**

The Central Government 'location policy' includes the 'SVV-parking norms' which set maximum and minimum numbers of parking spaces for businesses and facilities in A or B locations. These parking norms range from 10-40 spaces per 100 employees. Travel Demand Management is actively fostered by the Government, with employers encouraging their staff to use the most appropriate travel mode according to environmental criteria. In addition, local authorities are encouraged to develop a 'Coordinated Parking Policy' using a mix of parking measures appropriate to the city.

### **3.1.2.2 Switzerland**

In both Zurich and Berne central city parking is tightly controlled, and commuters are encouraged to use public transport to get to work. Maximum parking levels have been set,

and Zurich has forbidden provision of spaces in new buildings in certain parts of the city, and withdrew 10,000 spaces over several years up to 1995. Parking prices are set high, strict limits are set on parking time, and a very high level of public transport service is provided. The result has been a very high proportion of peak journeys into the city centre being made by public transport (85% in Berne).

### 3.1.2.3 Germany

Several German cities (including Frankfurt) have introduced 'Parking Concepts'. These are area-wide parking schemes that seek to balance demand by residents, customers, visitors and employees with supply. Parking instruments used include residents' permits, pricing strategies in public parking garages, and parking meters. Thus, Parking Concepts only influence directly the public parking volume, around half the total volume.

Other parking-related measures used include P&R provision, which has been increased in many cities; and, Parking Guidance schemes that have been introduced in several cities (eg Frankfurt). The Parking Guidance schemes appear to have had some success in reducing parking search times.

Illegal parking is a major problem: in many German cities it is estimated to be in the order of 50% of total parking.

### 3.1.3 USA

A number of US cities have set planning limitations on city centre parking for many years: for example, in 1975 Portland set a ceiling of off-street and on-street parking in the city centre; and Boston froze CBD off-street parking spaces at the 1972 level. Maximum parking requirements are often set on new developments, with different levels according to proximity to public transport. In some cases (eg Seattle), minimum requirements are set which can be reduced if parking spaces for carpool vehicles or free public transport passes are provided. In San Francisco, new city centre buildings must have an approved parking plan before receiving an occupancy permit; and, in some cases only short term parking is approved, or long stay parking must be charged at a higher rate than short stay.

In public car parks spaces are often reserved for carpools, and long stay parking is charged at a higher rate than short stay parking. Several cities have also promoted peripheral parking in an attempt to displace commuter parking out of the city centre.

Parking taxes for use of public car parks have been implemented in several areas, including Baltimore, Chicago, Los Angeles, New York, Pittsburgh, San Francisco and Washington DC. In most of these cases a percentage has been added to the parking charge and collected by the parking operator directly from the person or the entity purchasing the parking. In Chicago and Baltimore a fixed fee has been charged. In all cases the tax has applied to all parkers, and the fees have gone into the jurisdiction's general fund.

The imposition of planning limitations on parking over a long period of time appears to have had some success in retaining a high modal share for public transport (Portland and Seattle).

However, difficulties have been experienced with a number of the measures introduced, and these are discussed below.

### 3.1.3.1 Planning Provisions

- In some cases buildings have been approved with considerably less than the maximum parking spaces. The issue of whether the maximum has been set too high.
- Few developers opting to provide less than the minimum parking requirements as a trade-off for providing additional carpool stalls, public transport pass sales or contribution to in-lieu fund.
- Developer opposition to carpool set-aside policies.
- Developers object to regulation of parking pricing.
- Developers and commercial parking operators often comply with the letter of the parking code on pricing rates, but sidestep discouraging long-term parking in favour of short-term parking.

### 3.1.3.2 Public Carparks

- Low utilisation of carpool set-aside spaces.
- Up to 25% of city carpool lot users may not be legitimate carpool users.

### 3.1.3.3 Peripheral Parking

- City-initiated peripheral parking lots often have low usage (in some cases peripheral parking similarly priced to city centre parking).

### 3.1.3.4 Parking Tax

- Tax does not address employer-provided parking; accentuates inequities between free and user-paid parking.
- Tax increase result (San Francisco): parking rates changed at some garages but not at others; number of cars parked fell at half, but increased at the rest.

## 3.1.4 Australia

Planning limitations on parking spaces (maximums) in new CBD developments have been set in both Sydney and Brisbane. However, developers in Sydney claim they cannot be competitive with non-CBD developments without 'adequate' parking, and in some cases parking levels above the maximums have been permitted.

A parking levy was introduced by the New South Wales Government in 1992 on all Sydney CBD and North Sydney business district car spaces in commercial buildings (PNR spaces). The levy is \$400 per space per year, with the funds being hypothecated for public transport infrastructure. No formal evaluation of the levy has been undertaken, however, several observations have been made:

- The existing levy (equiv \$1.50/weekday) is only a small % of typical commercial parking rates, and
- When initially introduced there were claims by car parking owners of adverse consequences.

The Australian Federal Government has also introduced a fringe benefits tax on parking. Again, no formal evaluation of the effects of this tax has been carried out. However, it is apparent that some employers provide employees with 'pool vehicles' to avoid the tax.

## **3.2 Implementation Issues**

### **3.2.1 Publicly Controlled Parking**

#### **3.2.1.1 On-Street Parking**

Municipal authorities generally have complete control over on-street parking, and have little difficulty in implementing different on-street measures. However, illegal parking and general low compliance can be a serious problem. The most common approach to this issue has been to increase enforcement resources, and introduce stricter measures (eg wheel-clamping, tow-away).

#### **3.2.1.2 Public Off-Street Parking**

Again, where municipal authorities control off-street parking lots, long stay parking charges can be increased relative to short stay, and/or the amount of long stay parking reduced without great difficulty. However, in practice, difficulties in implementing these policies arise as a result of parking operations being administered separately from the transport planning function. Many cities have historically viewed parking as a revenue generator and the parking operations division is tasked with maximising parking revenues, which may require lower long stay parking rates.

A recent approach to this issue has been to bring together all groups within a local authority involved in parking, either in a separate organisation (several US cities) or in a working group (eg Birmingham). As well, several UK local authorities have developed comprehensive parking strategies (eg the Canterbury PARC plan).

### **3.2.2 Private Parking**

#### **3.2.2.1 Publicly Available**

The attempts of municipal authorities to exercise direct control over the charges of commercial parking garages have had mixed results. An increase in taxes on commercial parking buildings in San Francisco resulted in charges changing at half the garages, and not at the other half. The main difficulties, which have arisen, have been claims in some cases for compensation for lost revenue; and the ability of operators to absorb parking levies without necessarily increasing parking charges, particularly in the short term.

In some cases local authorities have also attempted to control parking garages operations, particularly to discourage long stay parking by requiring long-stay parking to be charged higher than short-stay. These attempts do not appear to have been very successful. Operators tend to meet the letter of the regulation on pricing rates, but sidestep discouraging long-stay parking.

#### **3.2.2.2 Private Non Residential - New Developments**

Planning processes can be used effectively to control the amount of parking permitted in new developments. The main difficulty, which arises for the authority, is at what level to set the minimum and/or maximum requirements. Historically minimums were used to keep traffic moving; maximums are now used to attempt to limit the growth in traffic. One approach is the German 'Parking Concept' where demand is estimated from an in-depth analysis of the

area involved, and an attempt is made to balance demand and supply among the different user groups. There are several issues relating to maximums:

- If the maximums are set too low, developers may be tempted to look at non-city centre sites (this is often cited by developers, but little evidence exists of this actually occurring).
- In areas where few alternatives to the car are available maximums may be unworkable. Several cities have addressed this matter by relating maximums to the availability and quality of public transport services.

### **3.2.2.3 Private Non Residential - Existing Developments**

The proportion of PNR parking in the city centre is an important factor in the success of parking restraint measures in restraining traffic into the CBD. This is highlighted by the contrasting results obtained in Canterbury (UK) with 28% PNR, where a significant displacement of commuter parking from the CBD was achieved; and Cambridge, with 65% PNR, which instituted similar measures with little impact on peak period traffic flows into the CBD.

Few attempts have been made to control the supply and operation of existing PNR parking. One of the most in-depth examinations of approaches available to control PNR was by the UK Government in the 1970s in regard to the London situation (Valleley, 1997). A number of possible measures for controlling PNR parking looked at; however, political pressure resulted in none of these being implemented.

Measures that have been implemented in an attempt to control existing PNR parking include:

- The imposition of parking levies on PNR parking - this has been successfully implemented in Sydney. This is a fairly blunt levy being charged on all spaces equally, no matter the type of use or occupancy. Applying a more refined levy (for example, targeted at commuters) would require significant administrative resources.
- The introduction of a parking fringe benefit tax in Australia. Employers are required to keep records of the usage of company carparks by employees, and are taxed according to the amount of parking benefit provided.

The main issues involved are rights of access and inspection for assessment and enforcement, and the administrative framework required. Compensation would also be an issue if parking spaces were reduced.

### **3.2.2.4 Private Residential**

Most cities do not seek to limit central area residential parking given a general strategy to promote inner city living. However, there are some cases where areas are being developed as public transport/walking/cycling areas, and maximum residential parking standards have been set.

### **3.2.3 General Issue**

An important implementation issue that applies to all types of parking - although mostly at off-peak times - is the impact of restraint measures on the intra-regional competitiveness of the retail and commercial sectors within the area where the measures are applied. This has

long been recognised as an issue within a city in regard to the availability of free parking in suburban shopping centres in contrast to limited stocks of charged parking in the city centre. Examples of this would be Riccarton in Christchurch, Johnsonville in Wellington, and St Lukes in Auckland.

In the regional context, the adoption of different parking policies by different city councils within the region will have some impact on the retail and commercial businesses within each city.

A summary of the implementation issues, and approaches to address these issues, is set out in Table 2.

### **3.3 Effectiveness Factors**

In addition to the difficulties involved in implementing some parking measures, there are several factors that affect the effectiveness of parking policy measures as instruments to restrain traffic into the city centre. The main effectiveness factors are summarised below.

#### **3.3.1 Control of Parking Stock**

In most cities municipal authorities are only able to control a proportion of the parking stock in an area. As controls are tightened the private spaces tend to be used more intensively, thereby increasing the trip generation/attraction rates per space, and undermining any demand management objectives.

The main approaches available to increase municipal control of private parking are:

- limit increase in private spaces through maximum standards, and
- impose taxes on all spaces, public and private.

#### **3.3.2 Employer Parking Subsidies**

The extent of employer subsidisation of the parking costs of their employees will affect the impact of parking pricing strategies on commuter traffic. If employers meet any extra costs imposed, parking price increases will have no effect on commuter travel behaviour.

The main approach available to reduce the impact of employer subsidies is a car parking fringe benefit tax. This can cover both the provision of parking facilities, and the subsidisation of car parking expenses. However, although this will increase the cost to the employer, there may be no flow-on cost to the employee and no change in modal choice.

TABLE 2 Parking Implementation Issues

Type	Potential Measures	Implementation Issues	Possible Approach
<b>Public</b>			
On-Street	<ul style="list-style-type: none"> <li>• Meters</li> <li>• Increase charges</li> <li>• Residents-only zones</li> <li>• Maximum parking durations</li> <li>• No waiting areas</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Increase enforcement</li> </ul>
Off-Street	<ul style="list-style-type: none"> <li>• Increase cost of long-stay parking relative to short-stay</li> <li>• Reduce long-stay parking</li> <li>• Preferential parking HOV's</li> <li>• Peripheral parking + P&amp;R</li> </ul>	<ul style="list-style-type: none"> <li>• Competing Territorial Local Authority (TLA) objectives</li> </ul>	<ul style="list-style-type: none"> <li>• Sole Parking Authority/Division</li> <li>• Parking Plan</li> </ul>
<b>Private – Publicly Available</b>			
Commercial	<ul style="list-style-type: none"> <li>• Tax (per space) on commercial operators</li> </ul>	<ul style="list-style-type: none"> <li>• No direct control</li> <li>• Compensation</li> <li>• Operator absorb levy</li> <li>• Operator pricing strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Tax can be implemented relatively easily</li> </ul>
<b>Private – Private Use</b>			
PNR – existing	<ul style="list-style-type: none"> <li>• Tax per parking space</li> <li>• Remove existing spaces</li> <li>• Employer Fringe Benefit Tax</li> </ul>	<ul style="list-style-type: none"> <li>• Access/inspection rights</li> <li>• Administratively cumbersome (refined levy)</li> <li>• Compensation (PNR reduction)</li> </ul>	<ul style="list-style-type: none"> <li>• Legislation required: tax on all CBD car spaces easiest to implement</li> </ul>
PNR – new	<ul style="list-style-type: none"> <li>• Commuted payments: below minimum</li> <li>• Maximum standards</li> <li>• Freeze on new parking</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty of setting 'right' standards</li> <li>• Developer opposition to maximums</li> <li>• Maximums may push development to suburbs</li> </ul>	<ul style="list-style-type: none"> <li>• 'Parking Concepts': estimate demand and balance supply among user groups</li> </ul>

### 3.3.3 Public Transport Provision

The level of public transport service in general, and P&R in particular, will impact on the readiness of commuters to leave their cars at home.

### 3.3.4 Through-route Traffic

Parking controls do not have any impact on traffic passing through rather than terminating in an area. This can severely limit the impact of parking controls when a significant proportion of traffic in an area is through-route traffic (eg 30-40% in central London). In such situations, through traffic may expand to fill the capacity freed by the reduced parking search traffic, unless this capacity is designated to other uses, such as increased pedestrian or cycling facilities.

## 3.4 CONCLUSIONS

The following conclusions can be made in regard to this review of the international practice and experience with parking restraint measures:

1. Municipal authorities which have sought to introduce parking restraint measures in the city centre have generally followed a similar approach:-
  - introduced residential parking zones,
  - removed long stay on-street parking in city centre,
  - increased enforcement of on-street parking,
  - increased charges for long stay parking relative to short stay in,
  - municipal controlled off-street parking garages,
  - provided peripheral long stay parking supported by P&R facilities, and
  - introduced maximum parking levels for new developments.
2. The main limitation with parking measures as traffic restraint instruments relates to the difficulties involved in controlling privately owned parking, primarily privately controlled (commercial) parking garages and existing PNR parking.
3. Parking taxes can be levied with relatively little difficulty on commercial parking operations. Attempts to exert further control over their operation, (eg require long-stay to be more expensive than short-stay parking) however, have had only had limited success.
4. Possible mechanisms to control the supply and price of existing PNR parking are available. It has been demonstrated that parking levies can be successfully applied. Political opposition has hindered implementation of further measures.
5. Several other factors affect the effectiveness of parking measures in restraining overall traffic levels: the extent of employer parking subsidies, the level of public transport provision, and the volume of through-traffic.



## 4. CBD PARKING SUPPLY AND DEMAND IN NEW ZEALAND

### 4.1 Parking Supply

#### 4.1.1 Parking Profile

Table 3 provides a parking profile for the central business district (CBD) for Auckland, Wellington and Christchurch.

**TABLE 3 Parking Profile in the Main Centres**

	Auckland <sup>1</sup>	Wellington <sup>2</sup>	Christchurch <sup>3</sup>
<b>Publicly Owned</b>			
<i>On-Street</i>			
Metered/Coupon	920	4032	2350
Sign Restricted	890	483	1644
Resident's Parking	35	488	28
Disabled	40	0	16
Un-controlled	2335	527	5914
<b>Total</b>	<b>4220</b>	<b>5530</b>	<b>9952</b>
<i>Off-Street</i>			
Short-stay <sup>4</sup>	3100	36	
Long-stay	1400	2087	2193
<b>Total</b>	<b>4500</b>	<b>2123</b>	<b>2193</b>
<b>Total Publicly Owned</b>	<b>8720</b>	<b>7653</b>	<b>12145</b>
<b>Private</b>			
<i>Publicly Available</i>			
Casual (Charged)	9900	9022	1267
<i>Private Use</i>			
Customer	1700	1525	4349
Reserved/Staff	19000	12745	14938
Other	1300	480	68
<b>Total</b>	<b>22000</b>	<b>14750</b>	<b>19355</b>
<b>Total Private</b>	<b>31900</b>	<b>23772</b>	<b>20622</b>
On-Street (public)	4220	5530	9952
Off-Street (public)	4500	2123	2193
Off-Street-public avail (private)	9900	9022	1267
Off-Street-private	22000	14750	19355
<b>Total Carparks</b>	<b>40620</b>	<b>31425</b>	<b>32767</b>
% On-Street (public)	10.4	17.6	30.4
% Off-Street (public)	11.1	6.8	6.7
% Off-Street-public avail (private)	24.4	28.7	3.9
% Off-Street-private	54.2	46.9	59.1
	100.0	100.0	100.0

- Notes: (1) 1998 Central Area Parking Inventory, ACC  
(2) Central Business District Parking Survey 1996, WORKS Consultancy Services for WCC  
(3) 1994 Central City Parking Inventory, CCC  
(4) Most spaces can be either short-stay or long-stay - breakdown here related to usage.

The CBD areas used for Table 3 were:

- Auckland central parking area, which is bounded by the motorway on the west, the waterfront on the north, and Stanley Street on the east.
- Wellington central city area bounded by Tinakori Road, Thorndon Quay and the waterfront, Kent Terrace, and Webb Street.
- Christchurch central area bounded by Rolleston Avenue, Bealey Avenue, Fitzgerald Avenue, Moorhouse Avenue plus Christchurch Hospital parking.

#### **4.1.2 Comparisons Between Centres**

The CBD areas used for the three cities are broadly comparable, although the Christchurch area is the largest in physical size and includes more residential areas than the other two cities. Below are the key points to note in regard to the respective parking profiles.

##### **4.1.2.1 Proportion under council control**

In all three centres the majority of the CBD parking stock is in private ownership. Auckland has the smallest proportion of parking spaces under its direct ownership and control with 21.7%, compared to 24.4% in Wellington and 36.5% in Christchurch.

##### **4.1.2.2 Publicly available**

Fifty three percent of the CBD parking stock is publicly available in Wellington, 46% in Auckland, and 41% in Christchurch.

##### **4.1.2.3 On-street parking**

On-street spaces play a significant role in each centre. However, their proportion of the total parking stock varies from 10.5% in Auckland to 17.6% in Wellington, and 29.8% in Christchurch. The proportion of on-street spaces that are controlled varies substantially: 90.5% in Wellington, 44.7% in Auckland, and 38.8% in Christchurch. There is also substantial difference between the proportion of on-street spaces that are charged: 72.9% in Wellington, 21.8% in Auckland, and 21.3% in Christchurch.

##### **4.1.2.4 Off-Street parking**

Public off-street spaces are only a small proportion of the parking stock in each centre: around 7% in Wellington and Christchurch and 11% in Auckland.

##### **4.1.2.5 Long-stay parking**

Long-stay parking is defined here as spaces where the user is legally entitled to park more than 4 hours. In practice all spaces are long-stay apart from those with a specified time limit below 4 hours, although even in this case users often extend their stay beyond the time limit. Potential long-stay spaces), as a proportion of total parking stock, are estimated at 81% in Wellington, 75% in Christchurch, and 78% in Auckland.

Council policy affects the long-stay proportion, although to different degrees in the three centres. The Wellington percentage could be lowered to around 74% if the number of WCC off-street long-stay spaces were reduced, and the Christchurch percentage could be lowered to 52% if the uncontrolled on-street spaces were sign-restricted and the number of CCC off-street long-stay spaces were reduced.

## 4.2 Pricing

The CBD pricing structure for each centre is shown in Table 4.

**TABLE 4 Parking Pricing (weekdays) Main Centres.**

	Auckland	Wellington	Christchurch
<b>Public</b>			
<i>On-street</i>			
Inner area	\$1.50/ hour	\$2.50 / hour	\$1.20/ hour
Outer area	\$1 / hour	\$1.50 / hour	\$1.20/ hour
Coupon Parking; Fringe		\$3 / day	\$1 / hour
<i>Off-street</i>			
Standard	\$2 / hour	\$1.50 / hour	\$1.20 / hour
Early Bird	\$5 - 10		\$5 - 7/ day
Daily	\$15 - 18.50 / day	\$10 / day	
Long-term (reserved)	\$140-275/month		varies
<b>Private Parking</b>			
Standard	\$2 - 4 /hour		\$2 / hour
Early Bird	\$7 - 16 /day		\$4 - 7/ day
Daily			
Long-term(reserved)	\$169-427/month	\$100 / week	
Public On/Off St ratio <sup>1</sup>	1 : 1.33		1 : 1
Public/Private ratio <sup>2</sup>	1 : 1-2		1 : 1.66

Notes: (1) Inner area : Standard  
(2) Off-street : Standard

Several comments can be made in regard to comparative pricing levels and structures:

- Overall, Christchurch has the lowest parking charges, with Wellington having the highest on-street prices and Auckland the highest off-street. Wellington's on-street charges are substantially higher than the other two cities, particularly in the inner area where they are twice that of Christchurch and 66% above Auckland.
- The public on-street : off-street pricing ratios vary significantly between cities. In Auckland on-street charges are 33% below off-street charges; in Christchurch they are the same; and, in Wellington on-street charges are 66% above off-street charges.
- In all three cities public parking is less expensive than private parking.

## 4.3 Parking Demand

A summary of data available in regard to CBD parking usage in the three centres is provided below.

### 4.3.1 Auckland

#### 4.3.1.1 On-street

Recent on-street parking usage sample surveys show average occupancy rates of 83% for time restricted parking in the central area and 82% for metered parking. These are considered by ACC to be very high occupancy rates where there is difficulty in obtaining parking.

#### 4.3.1.2 Public off-street

Average occupancy rates for council-operated carparks are well below their capacity. On average short-stay spaces have 48% occupancy and long-stay 71%. Demand for casual spaces is variable, and close to major entertainment areas the carparks are often full.

#### 4.3.1.3 Private off-street

No data is available for private off-street parking.

### 4.3.2 Wellington

#### 4.3.2.1 On-street

Data available regarding on-street parking demand includes:

- A 1996 survey of CBD parking behaviour found that around 1,000 metered spaces were being used by commuters or all-day users. The proportion of spaces used by commuters varied throughout the CBD, from 60% in the Government sector to around 17% in the Cuba Street area.
- A 1995 assessment showed the coupon parking scheme (\$2 day charge in CBD fringe areas previously free, first 3 hours still free) reduced commuter parking in those areas by 25%.

### 4.3.3 Christchurch

#### 4.3.3.1 On-street

The most recent survey of on-street parking usage in the Christchurch CBD was undertaken in December 1994. This survey was carried out between 0900 and 1600 on one day. The main findings were:

- The mean occupancy in the survey period was determined to be 76%.
- Usage on certain blocks was substantially higher, up to 96% in the core area around Cathedral Square.
- Usage fell between 1991 and 1994. This was postulated to be a result of a fall in demand related to the decline in retail space north of Cathedral Square and employment losses; and an increase in off-street.

Analysis of parking meter revenues showed some seasonal variation, with a high in December and a low in January, for example. However, revenues are reasonably consistent throughout the year.

#### 4.3.3.2 Public off-street

A 1995 analysis of usage of CCC parking buildings found:

- The CCC leases 25% of its spaces for private reserved use, leaving 75% as casual parks. In 1995 the CCC was offering an 'earlybird discount'. An analysis based on a survey at 9.30am determined that around 60% of the spaces were used by long-stay parkers.
- Detailed analysis of usage by time period for all CCC parking buildings was not undertaken. However, the Oxford Terrace carpark was analysed and for 2.3 hours a day it operates at over 85% of the casual space capacity.
- Usage of casual off-street space is more variable on a seasonal basis than on-street.

**4.3.3.3 Private off-street**

No data is available for private off-street parking. However, the CCC noted in 1995 that inspection of the private Cashel Street parking building showed that it is ‘currently under-utilised’.

**4.4 Compliance**

The non-compliance with parking regulations (on-street parking) in the CBD of each city ranges from 59% to more than 80%.

**4.4.1 Auckland**

- Compliance in the central area restricted parking averages 63%
- Compliance in metered parking spaces averages 59%.

**4.4.2 Wellington**

- In 1996 33% of metered spaces (1 or 2 hour time limit) were being used by all-day users. This has since fallen to 13%. Two price rises have occurred since 1996.
- (1995) Coupon scheme: 50% of commuters not were displaying a coupon, although compliance varied greatly between areas.
- The (1995) Parking Enforcement Unit had an Annual Plan performance measure of 80% compliance. This measure was consistently exceeded throughout the year in specific areas.

**4.4.3 Christchurch**

- 1994 Survey - compliance in metered areas 63%
- 1998 Performance Targets:
  - paid compliance in metered and coupon areas 60%
  - average compliance rate in time restricted areas 80%

**4.5 Economics of Parking**

The costs and revenues associated with public parking can be summarised as follows:

<b>Costs</b>	<b>Revenues</b>
Capital	Meter
Maintenance	Coupon
Operations	Off-street
Enforcement	Fines

Details of the costs and revenues associated with the operation of public parking in each of the three cities were not available within the time frame of this project. Further analysis in this area would be very useful.

## 5. CURRENT PARKING POLICIES AND PRACTICE

### 5.1 Policies

The current parking policies for the three centres are set out in Appendix A. An overview of these policies as they relate to CBD parking is provided in Table 5.

**TABLE 5 Overview of CBD-Related Parking Policies**

	Auckland	Wellington	Christchurch
<b>Regional Council</b>			
Overall Goal/Strategy	Reduce the proportion of trips made by single-occupant cars: specific reduction target for CBD am peak traffic.  Give more emphasis to passenger transport & other alternative modes.	Restrain growth of commuter road traffic.  Enhance and expand urban public passenger transport facilities and services.	Increase proportion of trips by sustainable modes.
Specific Policies	Ensure parking supply not greater than road network ability to service demand in high parking demand areas (including CBD).	Limit long-stay carparks in major urban city centres.	
<b>City Council</b>			
Overall Goal/Strategy	Balance parking supply with road network capacity.	Restrain growth in car commuter trips to CBD.  Encourage shift for CBD trips to non-car modes.	Control parking to maximise economic benefit to city: primary consideration viability of central city.
Specific Policies	Maximum parking limits for new development in CBD: 0 parking spaces on main retail roads.  Developments with > 100 carparks subject to assessment of parking location.  Commuter parking buildings allowed as discretionary activities in less-pedestrian orientated area only.	Maximum parking limits for new development in CBD .  Developments with > 70 carparks subject to assessment of traffic impacts on local street network.  Parking buildings not core Council business.  Minimise use of on-street parking by commuters.  Strengthen coupon parking scheme.	For 0 parking standard in very central C5 zone.  Minimum car parking standards by activity in CBD.  Developments with > 25 cpks or > 250 trips/day subject to assessment of traffic impacts on local street network.  Council continue to manage pkg central city.  Remove long-term parkers to increase off-street capacity - short-term parking.  Developers allowed to provide financial contribution in lieu of parking where not practicable to do so.

Key points of comparison between the three centres are:

- All three regional councils support the increase in travel by passenger transport and other non car-driver modes; and both the ARC and WRC aim to decrease commuter road traffic.
- However, only the WRC has a specific parking restraint policy to achieve this: setting a limit on long-stay carparks in major urban centres. This policy is part of a package of commuter restraint measures.
- Both the Auckland and Wellington city councils have set a maximum parking limit for new CBD developments.
- The CCC views CBD parking primarily in terms of its impact on the viability of city centre, and is seeking to reduce the supply of CBD long-stay parking in favour of short-term to this end. Retaining control of the public carparks is seen as important in this regard.
- The WCC has reduced the availability of free long-stay parking in the CBD through its coupon parking scheme.

## **5.2 Operations Practice**

### **5.2.1 On-street parking**

Local authorities generally have complete control over on-street parking within their area, and have little practical difficulty in implementing different on-street measures (councils may experience opposition to introducing parking restraint, and these 'political forces' may inhibit or prevent implementation). Parking enforcement is conducted by the city council in all three centres, and parking fines retained by them. The main issue involved with on-street parking is non-compliance with parking regulations.

### **5.2.2 Public off-street parking**

The situation in each of the three city councils being assessed in regard to public off-street parking is outlined below:

#### **5.2.2.1 Auckland**

As part of the development of a Parking Strategy, issues relating to pricing, operation and ownership of council carparks are presently being considered.

#### **5.2.2.2 Wellington**

The Core Service Review recommended the council exit involvement in parking buildings.

#### **5.2.2.3 Christchurch**

The aim is to retain ownership of its existing CBD parking buildings, and to gain control over several private CBD parking buildings where feasible.

The CBD parking policy is led by the Central City Committee, which has as its main objective maintaining the viability of the central city.

At present the policy is to reduce the number of CBD long-stay carparks in favour of short-stay parking.

### 5.2.3 Private publicly-available parking:

In New Zealand local authorities do not have any direct control over parking fees charged by commercial parking operators. However, it would be feasible to impose a parking charge under the Resource Management Act (RMA). This is discussed further below in regard to PNR parking.

### 5.2.4 Private Non Residential - Existing

Local authorities do not currently have any direct control over the existing PNR parking.

### 5.2.5 Private Non Residential - New Developments

Planning processes can be used effectively to control the amount of parking permitted in new developments. Under the Resource Management Act local authorities are able to set conditions for new developments in terms of managing environmental effects. This can include specifying both minimum and maximum parking requirements as long as these were adequately justified. Both the Auckland and Wellington city councils have specified maximum requirements.

### 5.2.6 Private Residential

Most cities do not seek to limit central area residential parking given a general strategy to promote inner city living. The CCC has lower minimum parking requirements in the central city.

## 5.3 Assessment of Effectiveness Factors

Table 6 shows an assessment of the parking effectiveness factors (identified in the international review) for each of the three New Zealand centres, along with ratings for three United Kingdom centres.

**TABLE 6 Assessment of Parking Effectiveness Factors**

	% of Parking Stock Publicly Owned	% of Parking Stock Publicly Available	% of worker parking expenses paid by employer	% of trips to CBD by public transport in am peak	% of trips to CBD that are through traffic
Auckland	21.0	46		19	22
Wellington	24.4	53		27	30
Christchurch	36.5	40		9	
London	60		80		30-40
Canterbury	72				
Cambridge	35				

The main points of note are:

- All of the three New Zealand centres have a relatively low proportion of CBD parking spaces under public control (equal or below the Cambridge level where the imposition of parking restraint measures had very little impact).
- Public transport plays a much larger role for morning peak traffic to the CBD in Auckland and Wellington than in Christchurch. This suggests that introduction of parking restraint measures in Christchurch would require a counter-balancing increase in public transport service.



## 5.4 New Zealand Evidence on Parking Schemes

### 5.4.1 Wellington Commuter Coupon Parking Scheme

#### 5.4.1.1 Overview

The coupon parking scheme was introduced in December 1994 (legal challenge delayed the start one year). It involved imposing a daily charge for spaces previously free 8 a.m. to 6 p.m., Monday to Friday. The initial daily charge was \$2, with monthly and annual discount. The first three hours parking was free. The coupon parking area covered the fringes of the CBD, and included several resident parking zones. A total of 5,500 parking spaces were covered. Exemptions were issued to residents at no charge. Two parking wardens were generally involved full time on enforcement of the scheme.

#### 5.4.1.2 Objectives

The objectives of the scheme included:

- Encouraging commuters to use public transport,
- Reducing volume of peak hour commuter traffic,
- Free-up parking for short term shopping and business trips, and
- Provide a mechanism for restricting growth in commuter traffic.

#### 5.4.1.3 Results

An assessment of the coupon scheme carried out by the WCC in 1995 found<sup>1</sup>:

- Number of commuter vehicles in zone (residents' vehicles identifiable by pass) fell by 25%, from 3,200 to 2,400.
- No substantial increase in commuter parking in areas adjacent to coupon zone.
- 2% increase in bus ridership following introduction of coupon scheme.
- No clear indication of how traffic levels have or have not changed as a result of scheme.
- Apparent increase of take up of leased spaces in CBD.
- Anecdotal evidence of more people walking or cycling during a.m. and p.m. peak periods.
- Residents now find it easier to park on-street.
- Over whole area average of 50% of commuters not displaying a coupon; however, the non-compliance rate varies substantially between areas.
- Revenue is substantially below forecast: \$47,000 per month against a budgeted \$83,000.

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<sup>1</sup> WCC Report3 to Cityworks Committee, 'Commuter Coupon Parking Scheme', 3 May 1995

## 6. LEGISLATIVE AND REGULATORY ISSUES

### 6.1 Overview

The New Zealand legislative and regulatory framework for the control and charging of parking is summarised in Table 7. Parking is administered by the Territorial Local Authorities (TLAs).

**TABLE 7 New Zealand Parking Legislative and Regulatory Framework**

Type of Parking	Legislative / Regulatory Framework
<i>Public</i>	
On-Street	TLAs have power under Transport Act 1962 s72(1)(k) to control/restrict parking on any roads under their control. No statutory provision directly gives TLAs authority to install meters; but taken to be within meaning of s72.
Off-Street	TLAs have power under ss591 & 591A of Local Govt Act to provide parking places & buildings, & to make bylaws as to their uses: including fees as condition of use.
<i>Private: Publicly Available</i>	
Commercial - existing	The only control TLAs have over existing commercial car parks is the ability to charge differential rates.
Commercial - new	Under Resource Management Act TLAs can set conditions of use for new commercial car parks where justified to mitigate adverse traffic effects.
<i>Private: Private Use</i>	
PNR - existing	TLAs have no control over existing private car parking.
PNR - new	Under Resource Management Act TLAs can set conditions on parking in new developments where these can be justified, including minimum and maximum parking requirements. This includes the ability to 'zone out' an area for new parking by specifying it as a zero parking space area.

Summarising Table 7, local authorities have little difficulty, under existing legislation, in implementing parking measures related to publicly owned parking and new private parking. The ability to implement measures aimed at existing private parking is more problematic, and this is discussed further below.

### 6.2 Existing Private Parking Measures

As shown above, local authorities have little power over privately owned parking. At present their main point of intervention is in regard to parking associated with new developments. Existing private parking escapes any local authority control. The legislative and regulatory issues involved with each of the parking measures aimed at existing private parking are discussed below.

### 6.2.1 Private Publicly-Available Parking Measures

Imposition of a parking charge on existing commercial car parks is possible under existing legislation.

A legal opinion obtained by the WRC<sup>2</sup> stated that: *“The only legislative provisions which could be utilised to impose a (parking) surcharge are the Resource Management Act 1991 and the differential rating provisions contained in Part V of the Rating Powers Act 1988. However, both of these provisions have difficulties ..”*

In regard to the RMA, the ability to impose a parking levy on private car parks is presently untested. A council wanting to do this under the RMA would be required to consider all available methods for dealing with the perceived issue (eg unacceptable levels of traffic congestion at peak times), which includes rules, advocacy/education, delivery of services (eg P&R facilities), and a levy. The council would need to evaluate the costs and benefits of the options available for addressing the issue.

In regard to differential rates, the opinion noted that differential rates can be made *“by reference to one or more of a number of criteria which include the use or uses (to which) the property is put”*. The differential rate mechanism could be used to impose a parking levy on private car parks. This mechanism is applied using a beneficiaries approach in that it can be challenged if considered unreasonable. Councils must be able to justify the level of rate levied (eg in terms of local street expenditure).

The approach most likely to succeed in implementing a commercial car park building levy is via a differential rate. This could be aimed either at buildings/lots used primarily for car parking, or all buildings where users pay for parking.

### 6.2.2 Private- Private Use Parking Measures

As for commercial car parks, a parking levy could be imposed on existing private PNR parking via the differential rate mechanism. The ability of councils to impose a parking levy is untested in terms of the RMA, and it is likely that new enabling legislation would be required to facilitate this. New legislation could also address the issue of the applicability of funds raised through a parking levy to support measures such as subsidising public transport services.

Under the Local Government Act councils are required to show a link between the service which the rate is intended to fund and the level of benefit obtained by ratepayers. If it was intended to apply the parking charge to funding public transport there would be no clear link between ratepayers categorised according to number of car parks on their property and public transport use. In addition, at present public transport services are funded by regional councils, and no provision exists for funds to pass from city councils to regional councils in this way (although city councils can collect regional rates on behalf of the regional council).

The Government Working Group on Demand Restraint and Regional Funding of Community Passenger Transport Services suggested that new legislation would be necessary to achieve a parking levy, if it was to be used for the funding of public transport.

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<sup>2</sup> Oxley Moran, Letter to WRC of 3 March 1997.

Any move to remove existing private parking spaces would not be permissible under present legislation. A point made by the WRC legal opinion was that: “... *each of the territorial authorities has or will have made provision for parking in earlier plans or district planning schemes...Any new provisions would have to take into account what provision had been made earlier and to what extent individual property owners might be entitled to resist the new provisions on the basis of a reasonable expectation in reliance on earlier provisions*”.

Implementation of a parking fringe benefit tax, as in Australia, would require new legislation.

## 7. POTENTIAL POLICY PROPOSALS

### 7.1 Parking Measures: Opportunities

An assessment of the current situation in each of the three cities in regard to the main potential parking restraint measures is given in Table 8.

**TABLE 7.1 Parking Restraint Measures: Main City Assessment**

Measures	Auckland	Wellington	Christchurch
<b>Public</b>			
<i>On-Street</i>			
Parking Charges	22% charged	73% charged	21% charged
Increase charges	Scope for increases	Recent increases	Scope for increases
Residents only zones	0.8% of spaces	9% of spaces	0.3% of spaces
Max parking durations	21% sign restricted	9% sign restricted	17% sign restricted
No waiting areas	55% uncontrolled	9% uncontrolled	61% uncontrolled
<i>Off-Street</i>			
Up cost long-stay parking relative to short-stay	Discount given to all-day parkers	Discount given to all-day parkers	Discount given to all-day parkers
Reduce long-stay parking		All spaces available for long-stay if required	All spaces available for long-stay if required
Preferential parking – high occupancy vehicles (HOVs)	None for HOVs	None for HOVs	None for HOVs
Peripheral parking and P&R	Several Bus P&R facilities	Train P&R facilities provided	No P&R facilities
<b>Private: Publicly Available</b>			
<i>Commercial</i>			
Parking Tax/Levy	Building owners pay rates : no parking levy	Building owners pay rates : no parking levy	Building owners pay rates : no parking levy
<b>Private Use</b>			
<i>PNR – Existing</i>			
Parking Charge	Building owners pay rates : no parking levy	Building owners pay rates : no parking levy	Building owners pay rates : no parking levy
Remove existing spaces	No provision for this	No provision for this	No provision for this
Employee Fringe Benefit Tax	Employer subsidised car expenses taxed, parking not taxed	Employer subsidised car expenses taxed, parking not taxed	Employer subsidised car expenses taxed, parking not taxed
<i>PNR – New</i>			
Commutated payments: below minimum	None	No minimums - CBD	Permitted by Council
Maximum standards	Maximums for CBD	Maximums for CBD	No maximums
Zone out area	Main retail streets	None	Very central zone
Freeze on new parking	No parking ceiling	No parking ceiling	No parking ceiling

Based on the assessment in Table 8, the opportunities for parking restraint measures in each city are shown by a ✓ in Table 9. This identifies measures which have not been implemented to date (not all of these measures will be feasible to implement; their feasibility is examined below).

**Table 9 Parking Restraint Measures: Opportunities**

	Auckland	Wellington	Christchurch
<b>Public</b>			
<i>On-Street</i>			
Parking Charges	✓		✓
Increase charges	✓		✓
Residents only zones			✓
Max parking durations	✓		✓
No waiting areas	✓		✓
<i>Off-Street</i>			
Up cost long-stay parking relative to short-stay	✓	✓	✓
Reduce long-stay parking	✓	✓	✓
Preferential parking HOVs	✓	✓	✓
Peripheral parking and P&R			✓
<b>Private : Publicly Available</b>			
<i>Commercial</i>			
Parking Charge	✓	✓	✓
<b>Private : Private Use</b>			
<i>PNR - Existing</i>			
Parking Charge	✓	✓	✓
Remove existing spaces	✓	✓	✓
Employer Fringe Benefit Tax	✓	✓	✓
<i>PNR - New</i>			
Commutated payments: below minimum	✓		
Maximum standards			✓
Zone out area		✓	
Freeze on new parking	✓	✓	✓
<b>Overall Measure</b>			
Parking Ceiling	✓	✓	✓

## 7.2 Impediments and Approaches

The impediments to implementing each of the potential measures listed above, and possible approaches to overcoming these impediments, are identified below. This is based on the results of the international review, and analysis of the New Zealand context. Where appropriate, measures are grouped together.

### 7.2.1 Public On-street Parking

#### 7.2.1.1 Introducing or increasing charges

This has been successfully carried out in Wellington City with the introduction of the Coupon Scheme in the CBD fringe, and the increase in on-street parking charges. The main impediment to achieving the desired results from the pricing changes is non-compliance.

Increasing enforcement resources is clearly one approach available to address this problem. Appropriate penalties also help reduce non-compliance. Wheel-clamping has been found to be an effective deterrent in the United Kingdom.

#### **7.2.1.2 Controlling use**

Residents-only zones have been introduced in all three cities with Wellington making the greatest use of this measure. Scope exists in Christchurch for increasing the number of residents-only zones within the central city area.

With the high proportion of uncontrolled spaces in both Auckland and Christchurch scope exists for increasing the number of controlled spaces. However, compliance is an issue when time restrictions are considered. The experience in Wellington over the last few years has been that setting higher charges for central city parking dramatically reduces the level of non-compliance with time restrictions (this is more likely to mean a change in parking location than a change in travel mode).

### **7.2.2 Public Off-Street Parking**

#### **7.2.2.1 Long-stay parking: increase cost, reduce, preference for HOVs**

Given that public off-street parking is presently directly under the control of the city councils there is no structural impediment to making public long-stay parking more expensive than short-stay. This simply means a pricing structure with hourly charges increasing with time, rather than decreasing as is often the case. Removal of earlybird discounts would also assist in this. Attempting to prevent long-stay parking totally, by setting a maximum parking time, would have enforcement difficulties. Internationally pricing has been used for this purpose by imposition of a long-stay penalty (eg \$50 fine for parking over 4 hours).

In the same way, preferential parking for carpools can be provided with little difficulty. Reduced fees can be charged for carpool vehicles, and where parking is in under-supply preference can be given to carpools. The main impediment to successful operation will be the need for extra administrative resources to ensure the scheme is not abused, and the extra time on customers who would have to purchase their ticket from a manned office. This measure would not be very successful in unmanned facilities: regular checks of vehicles at normal arrival times would be required.

The main impediment historically to this approach to council owned parking has been the separating off of council parking as a separate function. The Parking Manager's brief has generally been to maximise the return to the council, given the prevailing view of council parking as a revenue generator. The commuted payments scheme, where developers contribute funds for the provision of public carparking also mitigates against charging higher rates for long-stay parking.

However, given that councils are now examining all their activities to determine how they fit within their statutory role, it should be timely for the councils to place parking within their transport management function. Parking buildings could then be used as a mechanism to intentionally influence the CBD 'publicly available parking market'. The extent of this influence will depend on the degree to which council owned parking buildings are 'price takers' (follow the commercial parking building prices) or 'price makers' (set the benchmark for publicly available CBD parking), which will be related to the proportion which public

spaces are of publicly available off-street spaces. This proportion varies substantially between the three cities, with publicly owned spaces around 60% of CBD publicly available off-street spaces in Christchurch, 30% in Auckland, and 20% in Wellington.

A comparison of public and private off-street prices shows that they are around the same level in Christchurch, but that public prices are lower than private prices in both Auckland and Wellington. This may indicate that public parking buildings have more impact on CBD off-street prices in Christchurch than in the other two cities. More evidence would be required before a firm conclusion could be drawn on this matter.

#### **7.2.2.2 Peripheral parking and park & ride**

Park and ride (P&R) is operating very successfully in Wellington (with the rail service), and with some success in Auckland (mainly bus services from the North Shore). Initial investigations into the scope for P&R services in Christchurch have been undertaken. The main impediment will be availability of suitable sites (adjacent to main bus routes).

### **7.2.3 Private Commercial Parking Publicly Available**

#### **7.2.3.1 Impose parking levy**

As discussed earlier, a parking levy could be imposed on commercial parking buildings by way of a differential rate. Building owners can then pass this levy on to customers directly through parking fees.

The simplest levy would be a fixed annual charge per parking space to be paid by all owners of parking buildings within the CBD (council owned parking buildings would be included). This would be relatively easy to administer. An annual survey of commercial parking spaces would be carried out; and, the annual rate bill for properties on which publicly available charged parking is provided would be determined to include the parking levy. A rates rebate could be available to owners who could prove that the number of parking spaces publicly available decreased during the year.

A more sophisticated levy would be targeted at commuter all-day parking. This could be done by, for example, making the levy payable for every space occupied by the same vehicle between 7-9 a.m. and 2 p.m. The survey approach could be used to establish average usage (3-4 surveys carried out during the year). The advantage of the all-day targeted levy is that it encourages owners to provide price penalties for long-stay parking.

### **7.2.4 Private PNR (Existing)**

#### **7.2.4.1 Impose parking levy**

As discussed earlier, a parking levy could be imposed on existing PNR parking via a differential rate. It may be possible under the RMA to impose a parking levy, however, this has not been tested.

The methods of applying a levy discussed earlier in regard to commercial parking buildings are also applicable for existing PNR parking. The main differences are:

- The greater number of buildings involved, and thus, the increased administrative resources required;



- The difficulty in ensuring that the parking charge is passed on to tenants given the nature of lease agreements; and
- The difficulty in assessing the number of spaces being used for all-day parking makes a more sophisticated levy possible, but most likely impractical and administratively burdensome. One approach would be to require occupiers to keep records of their usage of their parking spaces.

#### **7.2.4.2 Remove existing spaces**

Councils are not presently able to require building owners to remove existing parking spaces. Given that previous district planning schemes made under the former Town and Country Planning Act 1977 set minimum parking levels, individual property owners 'might be entitled to resist any new provisions on the basis of a reasonable expectation in reliance on earlier provisions'<sup>3</sup>. This measure would thus require new legislation, and is not presently possible. In addition, given that it would most likely be very unpopular with the retailing and commercial sector, any moves to introduce such legislation would probably encounter strong opposition.

#### **7.2.4.3 Employer fringe benefit tax**

There appears to be no reason why the present fringe benefit tax regime could not be extended to also cover parking benefits, as is the case in Australia. However, this would require new legislation and falls within the ambit of central government rather than local government.

#### **7.2.5 Private PNR (New)**

##### **7.2.5.1 Commuted payments**

There are no impediments to instituting a commuted payments scheme, and the CCC has made provision for this in its City Plan.

##### **7.2.5.2 Maximum standards**

There are no practical impediments to instituting maximum parking standards for new developments in the CBD. Both Auckland and Wellington have done this (as indicated earlier, there may be 'political' impediments to doing this - 'political factors' have been cited as an important impediment to parking maximums being introduced in Christchurch).

##### **7.2.5.3 Freeze on new parking**

Under the RMA it would be possible for councils to impose a freeze on new CBD parking as part of their City Plans. This could be implemented by setting a zero parking standard for new developments in the CBD. Auckland presently has a zero standard for a certain section of the central parking district. As indicated earlier, such a measure would need to be justified in terms of Section 31 of the RMA.

#### **7.2.6 Overall Measure**

##### **7.2.6.1 Parking Ceiling**

This measure of setting a ceiling for the parking stock within the CBD could also be implemented as part of the City Plan. A ceiling of total spaces public and private spaces for

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<sup>3</sup> Oxley Moran 1997. Legal opinion for Wellington Regional Council.

the CBD would be set (determined as the maximum number of spaces which can be accommodated without excessive traffic management problems and adverse congestion and environmental effects), with a breakdown between on-street and off-street spaces. Proposed private developments which would cause the number of spaces to exceed the ceiling could either be declined, or approved with an equivalent reduction in public spaces.

### **7.3 Equity Issues**

In implementing parking measures, particularly in regard to privately owned parking, several 'equity' issues may arise.

#### **7.3.1 Previous Council Policies and Measures**

This issue has been mentioned earlier in regard to any attempts to reduce parking entitlements for existing privately owned properties. Previous council planning schemes have generally required developers to have a minimum number of parking spaces, and have often allowed them to reduce this by paying a CBD parking development fee. Attempts to remove existing parking spaces on private property, or set conditions on their use, would have to address this issue.

#### **7.3.2 Coverage of Private Parking**

If a parking measure (eg a parking levy) was applied to only commercial carparks, and not to private PNR parking, there may be claims that this is inequitable, given that the adverse effects being addressed (congestion etc) are caused by all traffic, not just vehicles parking in commercial carparks. This would be difficult to refute given that PNR parking makes up the largest proportion of CBD carpark.

## 8. ASSESSMENT

### 8.1 Overall Impacts

Parking restraint measures in inner city areas are considered as contributing to a number of transport and related objectives for the city, particularly including:

- Reduction in peak period traffic volumes, in order to reduce congestion and improve traffic flow.
- Encouraging commuters to switch to public transport (both to reduce traffic volumes and improve public transport viability).
- Reduction in the CBD land required for parking.
- To increase the revenue generating effects of the parking system; the additional revenue generated to be used to improve public transport, to finance transport expenditure generally, and/or for other (non-transport) purposes.

Table 10 provides an assessment of the likely impacts of individual parking measures against such objectives. The measures have been grouped into three categories according to their expected degree of implementation difficulty (easier, medium, harder).

Each parking measure has been rated in terms of its expected impact on each of the ‘impact areas’ listed below. This has been done by assigning a score out of 5 to each parking measure for each ‘impact area’, with 5 being major impact and 1 being minimal impact.

- Reduce peak traffic levels into, through, and out of the CBD.
- Reduce commuter parking levels in the CBD.
- Increase public transport patronage to and from the CBD.
- Reduce total council costs associated with the implementation of parking policies, and operation of council owned parking.
- Increase total revenue from parking, including fines.

Several comments can be made from this analysis.

#### 8.1.1 Implementation Difficulty

- The easiest parking restraint measures to implement are those over which the councils have direct control, on-street and publicly owned off-street parking. Imposing maximum standards on new development parking have already been implemented in two cities under the RMA.
- Of medium difficulty is the implementation of preferential parking for HOVs in public carparking buildings, and imposing a parking levy on commercial parking buildings. Both of these can be readily implemented, but will required substantial enforcement resources in the case of the HOV parking, and a specially designed rate for the parking levy.
- Imposing controls on private parking (PNR) would be very difficult under existing legislation. It is questionable whether the RMA could be used to impose a parking levy, set a CBD parking ceiling, or remove existing spaces. These measures would most likely require special enabling legislation. However, given the political will to do this, the measures are workable.

TABLE 10: Impacts of Parking Measures

Parking Restraint Measure	Reduce Peak CBD Traffic	Reduce CBD Commuter Parking	Increase Public Transport Use	Reduce Parking Admin Costs	Increase Parking Revenue
<b>Implementation - Easier</b>					
<i>On-Street Parking</i>					
- Charge fringe parking	1	2	1	3	5
- Maximum Time Durations	1	2	1	4	2
- Increase inner-area charges	1	2	1	4	5
- Increase Residents Only zones	1	2	1	4	1
- No Waiting areas	1	2	1	4	1
<i>Public Off-Street</i>					
- Pricing favouring short-stay	2	3	2	4	2
- Reduce long-stay spaces	2	3	2	4	2
<i>Private Parking - Private Use</i>					
- Maximum Standards	2	3	2	4	1
- Commuted Payments	2	3	2	4	1
<b>Implementation - Medium</b>					
<i>Public Off-Street</i>					
Preferential parking-HOVs	1	2	1	3	1
<i>Private Parking-Publicly Avail</i>					
Parking Levy(Commercial Pkg)	3	4	4	2	5
<b>Implementation - Harder</b>					
<i>Public Off-Street</i>					
Peripheral Pkg & P&R	2	3	2	1	0
<i>Private Parking - Private Use</i>					
Parking Levy	4	5	4	1	5
Parking FBT	4	5	4	1	5
Remove Existing Spaces	4	5	4	4	0
<i>General</i>					
CBD Parking Ceiling	4	5	4	1	1

### 8.1.2 On-Street Parking Measures - Impacts

- On-street parking measures will have a small impact on reducing CBD commuter parking by increasing the cost of parking for those commuters parking on the CBD fringes, and those using inner city meters. The impact will be less on CBD traffic given that typically close to a third is travelling through the CBD (this is true for all parking measures).
- The increase in public transport use is also expected to be minimal, as evidenced with the Wellington coupon parking scheme.
- Overall, these measures should increase net revenue to the council.

### 8.1.3 Publicly Owned Off-Street Parking Measures - Impacts

- Measures to increase the cost and availability of publicly owned off-street parking will have a greater effect on CBD commuter parking than on-street measures. The degree of impact will depend on the proportion publicly owned off-street parking is of the publicly available off-street parking stock.
- P&R could achieve significant mode switching to public transport where the parking facility is located on a congested corridor, prior to the congested road section. High construction and land costs may be incurred.

- Overseas experience has found that preferential parking for HOVs will not have a substantial impact on CBD commuter parking.

These measures may reduce net revenue from off-street parking.

#### **8.1.4 Privately Owned Publicly Available**

Imposing a levy on commercial parking buildings will have similar effects to those from increasing the cost of public off-street parking.

This measure should achieve significant net revenue for councils.

#### **8.1.5 Private Parking Private Use**

- Although most difficult to implement, measures to control PNR parking would potentially have the most impact on CBD traffic levels and commuter parking of any of the measures available given that PNR parking comprises the majority of the parking stock in each city.
- A parking levy and/or a fringe benefit tax, would generate substantial net revenues for the councils, as can be seen from the Australian experience.

## **8.2 Local Impacts**

The impact (as defined in 8.1) of any parking restraint measures will depend on the actual measures implemented, and will vary in each city due to the different parking/transport situations. The expected impact of several possible combinations of measures is discussed below.

### **8.2.1 Impacts of 'Easy' Measures**

- The easiest parking measures to implement are those involving on-street parking and publicly owned off-street parking. Little opportunity remains in regard to on-street parking in Wellington. Scope still exists in this area in Auckland and Christchurch; however, the impact on commuter parking is likely to be only a small reduction. This could result in a small increase in public transport usage.
- Scope exists in all three cities to increase the cost of publicly owned long-stay off-street parking. This should have the greatest effect in Auckland which has nearly twice the proportion of these spaces than the other two cities. However, the impact on commuter parking will still be small.

### **8.2.2 Impacts of 'Medium' Measures**

Introducing a parking levy on 'publicly available carparking buildings/lots', probably through a differential rate, would have a good 'payback' in terms of impact on commuter parking relative to cost/difficulty of implementation. Users of public carparking buildings/lots are likely to be the most price sensitive group amongst CBD commuter carparkers given that many will be meeting the cost of parking themselves (rather than their employers). The result is likely to be a displacement of parkers from inner city parks to outer CBD/fringe carparks, and a degree of mode switching (to public transport, carpooling, and slow mode).

The impact of this measure will be much greater in Auckland and Wellington where publicly available spaces are 35% of the total stock, than in Christchurch where they amount to only 11%. Also, we would expect a higher degree of mode switching in Wellington than in

Auckland given that 90% of CBD on-street spaces are controlled in Wellington against 45% in Auckland. The impact of the parking levy would be increased in Auckland and Christchurch if it were introduced in conjunction with on-street parking restraint.

### **8.2.3 Impacts of ‘Harder’ Measures**

Implementation of the measures to control PNR parking could achieve substantial long-term reductions in peak hour commuter traffic and parking levels, particularly if all of the measures were introduced. If a parking ceiling was set, a sophisticated parking levy introduced (applicable to all long-stay parking, and priced to penalise peak period parking), and a parking fringe benefit tax introduced, substantial reductions in commuter parking could be achieved in the longer term (5-10 years).

Again, this measure would have the greatest impact in Wellington under present conditions, with Auckland next and close in degree of impact.

Substantial public transport usage gains could be expected: however, these would be dependent on the level of service being increased, particularly in Auckland and Christchurch.

### **8.3 Combined Impacts**

As this initial assessment of the impacts of parking restraint measures shows, individual measures on their own are likely to have only a relatively small impact on traffic and commuter parking levels. However, a ‘package’ of complementary parking measures could have a substantial impact, particularly when combined with improvements in public transport provision. Further research would be required to quantify the likely impact of different packages of parking restraint measures.

## 9. CONCLUSIONS

This project was not concerned with the wider issue of whether parking restraint policies are desirable in the main centres in New Zealand relative to other forms of traffic restraint (eg road pricing) or to non-restraint policies. Rather its objective was to 'provide guidance on the development, specification and implementation of parking restraint policies for the major urban centres in New Zealand'. The main conclusions which can be drawn from this project are set out below.

1. A number of possible parking restraint measures are available which could be implemented effectively in the three major urban centres, Auckland, Wellington, and Christchurch.
2. The parking measures available can be differentiated by the likely degree of difficulty in implementation, and the expected effectiveness in restraining CBD traffic, reducing commuter parking and increasing public transport usage.
3. Parking measures involved with controlling/charging for on-street parking are the easiest to implement. Most of the available measures have already been implemented in Wellington. These measures will have a small effect in restraining CBD traffic. Overall, they will result in a net revenue gain for the council. The effectiveness of these measures will depend to a large extent on the level and type of enforcement resources provided.
4. Imposing a levy on publicly available CBD parking, in public and private carparking buildings/lots, is likely to be the most cost-effective measure. It can be implemented by a differential rate, and will achieve significant decreases in the number of commuters parking. The greatest impact, under present conditions, would occur in Wellington where 90% of CBD on-street parking is controlled (compared to Auckland and Christchurch where only 45% is controlled). Substantial net revenue should be achieved for the councils involved.
5. Implementing charges and greater controls on private parking for private use (Private Non Residential-PNR) would have the greatest impact on CBD traffic levels given that PNR parking comprises around 60% of the CBD parking stock. However, these measures would be the most difficult to implement, and may require enabling legislation, particularly if they were to be used to fund public transport.

## **10. RECOMMENDATIONS**

A possible process for implementing further parking restraint measures is outlined below.

### **10.1 On-Street Parking**

Increase CBD on-street parking controls and charges such as impose time restrictions in areas presently uncontrolled, increase CBD on-street parking charges, and introduce residents only zones where appropriate. This is applicable to Auckland and Christchurch, as nearly all on-street spaces are already controlled in Wellington.

### **10.2 Public Off-Street Parking**

Increase cost of public long-stay parking relative to short-stay parking, with the aim of removing all long-stay parking from council-owned facilities.

### **10.3 Existing Private Parking**

Investigate introducing a parking levy on all publicly available off-street parking; and discuss with the Government the feasibility of a parking levy on all CBD parking spaces, and introducing a parking fringe benefit tax.

### **10.4 New Developments**

Introduce a parking ceiling for CBD areas. Once the ceiling reached no further CBD parking is allowed, apart from short-stay customer parking.



## **11. FURTHER RESEARCH**

### **11.1 Traffic and Public Transport Impacts**

Further research is required to enable quantification of the impacts of individual, and combined, parking restraint measures on CBD traffic levels, and on public transport usage. This could make use of current regional transport models, but these may need to be supplemented by other modelling tools and analytical approaches.

### **11.2 Financial Impacts**

This project did not address the impact of parking restraint measures on parking costs and revenues, and hence on the effectiveness of such measures in raising money to improve public transport and for other purposes.

### **11.3 Legal Issue**

An initial assessment of the existing legal framework for parking, and likely impediments to implementing parking measures was undertaken. Further assessment of the legal implications would need to be undertaken by an expert in this field.

### **11.4 Relative Effectiveness**

This project was focused on the practical impediments to implementing parking restraint measures. An assessment of the available traffic restraint mechanisms in terms of their likely relative effectiveness in the New Zealand context has not been undertaken (by any parties). Several studies have reviewed the international experience with transport demand management measures<sup>4</sup>, but these have not attempted to assess the likely impacts on traffic levels, commuter parking and public transport.

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<sup>4</sup> *Travers Morgan (NZ) Ltd, 'Review of Transport Demand Management Measures' for Auckland Regional Council, 1996.*

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## **APPENDIX A**

### **SUMMARY OF INTERNATIONAL EXPERIENCE WITH PARKING RESTRAINT**

TABLE A.1 UNITED KINGDOM: PRACTICE/EXPERIENCE WITH PARKING RESTRAINT MEASURES

City	Parking Restraint Measures	Constraints/ Impediments	Results
Sheffield	<ul style="list-style-type: none"> <li>• Policy that number of long stay carparks will be restricted to current levels</li> <li>• New developments: long stay pkg not operational usually not permitted</li> <li>• City plan allows for increase in public short stay parking</li> <li>• Pedestrianisation policy in city centre</li> <li>• P&amp;R considered in conjunction with Supertram</li> <li>• Encourage short stay pkg: eg temporary planning permission usually granted for use of vacant lots as public carparks if they are short-stay</li> <li>• Sheffield CBD to become 'special parking area': aim to improve enforcement</li> </ul>	<ul style="list-style-type: none"> <li>• Only 1% illegal parked vehicles get a ticket</li> <li>• 7,500 PNR spaces out of 19,000 central city spaces (39%)</li> <li>• Enforcement not effective</li> </ul>	
York	<ul style="list-style-type: none"> <li>• P&amp;R facilities on city outskirts: high freq, 6 days/week service</li> <li>• Residents parking scheme inner city</li> <li>• Commuted payments scheme aimed at reducing PNR stock: £2,500 each space not constructed-funds used for P&amp;R</li> <li>• Long-stay pkg charges increased relative to short-stay</li> <li>• Some pedestrian only streets</li> <li>• Some bus priority routes provided.</li> </ul>	<ul style="list-style-type: none"> <li>• PNR</li> <li>• City's influence on public transport services limited by legislation &amp; finances</li> </ul>	<ul style="list-style-type: none"> <li>• P&amp;R intercepts 15-20 % of vehicles on south-western approach</li> </ul>
Bristol	<ul style="list-style-type: none"> <li>• Creating up to 12 P&amp;R sites to ring city serving key routes. Providing high frequency bus service from P&amp;R sites.</li> </ul>	<ul style="list-style-type: none"> <li>• PT needed to be improved to be an alternative to car</li> </ul>	

TABLE A.1 UNITED KINGDOM CONTINUED

City	Parking Restraint Measures	Constraints/ Impediments	Results
Cambridge	<ul style="list-style-type: none"> <li>Requires a 10% or 20% reduction in residential parking for different levels of public transport provision.</li> <li>In city centre no more than 5% of business space should be for parking-remaining 95% of space commuted payment charge of £2,500/space (in lieu of providing parking spaces), to be used to build P&amp;R facilities</li> <li>Long stay off-street public pkg virtually eliminated within 1 mile radius of town centre (1989)</li> <li>On-street pkg either dedicated to residents, short term (2 hrs max), or subject to 1 hr prohibition of waiting in middle of day (1989)</li> <li>P&amp;R service provided</li> </ul>	<ul style="list-style-type: none"> <li>17,000 PNR spaces within controlled area, 65% of total pkg stock: occupancy within central area at 75%</li> <li>Lack of development pressure in central area</li> </ul>	<ul style="list-style-type: none"> <li>The limited pkg controls did not produce any detectable impact on traffic flows either at city radial level or in town centre. Apparently little impact on peak commuter journeys</li> <li>Only a few commuted payment agreements entered into</li> <li>P&amp; R ridership low in peak commuting times, more popular with shoppers.</li> </ul>
Oxford	<ul style="list-style-type: none"> <li>'Balanced Transport Policy' since 1973</li> <li>Commuted carpark payments @ £3,000/space used for P&amp;R sites</li> <li>P&amp;R facilities on city outskirts opened in Dec 1973</li> <li>Many on-street spaces reserved for residents</li> <li>Few' free publicly available spaces.</li> </ul>	<ul style="list-style-type: none"> <li>High proportion of PNR parking (10,000 of 16,000 spaces-63%)</li> <li>From 1966-1976 30 fold increases in private pkg in central area which compensated for 60% decrease in free public pkg</li> <li>Most users found car more convenient: also, free parking still available elsewhere</li> </ul>	<ul style="list-style-type: none"> <li>Over £1 million raised since 1983 (100 commuted payment agreements entered into)</li> <li>P&amp;R usage increased steadily from 1975, with 2,750 cars parked in 1988</li> <li>Large reduction in long-stay pkg in public spaces</li> <li>Use of private free spaces increased from several % to 30% of car journeys</li> <li>95% of car trips escaped pkg charges.</li> </ul>

TABLE A.1 UNITED KINGDOM CONTINUED

City	Parking Restraint Measures	Constraints/ Impediments	Results
Manchester	<ul style="list-style-type: none"> <li>Adopted restrictive parking standard for office development in 1967.</li> </ul>	<ul style="list-style-type: none"> <li>Loss of employment counteracted the effect of increasing car use.</li> </ul>	<ul style="list-style-type: none"> <li>Pkg standard abandoned in 1982.</li> </ul>
Canterbury	<p>1988 PARC plan -aim to balance demand &amp; supply (projected shortfall in city centre) while protecting residents needs &amp; controlling future traffic levels:</p> <ul style="list-style-type: none"> <li>P&amp;R sites opened on principal routes to city centre</li> <li>Office &amp; retail development parking limited to operational-non-operational pkg commuted</li> <li>City centre residents only pkg zone, surrounded by 2 hr voucher zone, then 4 hr buffer zone with waiting prohibited for two 1 hr periods to prevent commuter pkg in buffer zone: residents pkg allowed in all zones.</li> <li>Pkg charges in city centre carparks discourage long stay pkg: park over 5 hrs in short stay space incurs excess charge of £.50</li> <li>P&amp;R carpark charge £1/day with free bus trip to city centre; long stay carparks outside city centre £1.80/day.</li> <li>Council considering making available some spaces controlled by permit for local business operational use.</li> </ul>	<ul style="list-style-type: none"> <li>Needs of city centre businesses: loss of pkg for business vehicles</li> <li>2,500 PNR spaces in city-28% of pkg stock.</li> </ul>	<ul style="list-style-type: none"> <li>Pkg space deficit of 1,300 spaces in 1988; a surplus of 737 spaces in 1995 (sufficient to meet projected 2001 demand)</li> <li>City centre on-street pkg decreased from 785 cars in 1987 to 143 in 1993, and increased from 4,100 in buffer/outer areas in 1987 to 5,100 in 1993.</li> <li>Only half of permitted spaces in voucher zone occupied</li> <li>Average length of stay decreased</li> <li>Around 900 vehicles/day use P&amp;R weekdays: 10% of vehicles heading for city centre in a.m. pk intercepted</li> </ul>



TABLE A.1 UNITED KINGDOM CONTINUED

City	Parking Restraint Measures	Constraints/ Impediments	Results
London	<ul style="list-style-type: none"> <li>• First pkg meters introduced 1958</li> <li>• 1966 Inner London Parking Area designated: all on-street pkg to be controlled</li> <li>• 1967 - first residents' pkg scheme</li> <li>• From 1969 GLC had powers to control tariffs &amp; opening times of privately-owned publicly-available off-street car parks; also issued licences for public off-street car park operation</li> <li>• 1969 minimum pkg reqts for new devlpts reduced, and maximum pkg levels set</li> <li>• In mid 1970s both GLC &amp; Govt examined feasibility of controlling PNR pkg: but no powers given</li> <li>• 1982-provision for wheelclamping offenders</li> <li>• Clamping introduced in 1983 to tackle illegal pkg.</li> <li>• 1991-Red Routes piloted: aim to reduce illegal pkg along key routes with a no stopping regime backed by red lines, whilst providing for essential business activity</li> <li>• 1993 -boroughs took over responsibility for enforcement from police for on-street pkg</li> <li>• LPAC developed matrix of pkg standards for business, financial &amp; professional services which relates pkg standards to level of PT accessibility - not applied to date</li> <li>• 1997 UK Govt proposed max PNR pkg at new business devpts in London</li> <li>• Hammersmith &amp; Fulham Borough: plot ratios specified-ratio betw floor space of devlpmt &amp; site area for diff levels of PT accessibility</li> </ul>	<ul style="list-style-type: none"> <li>• 70,000 vehicles illegally parked per day: only 10% offenders caught</li> <li>• PNR 40% of all available spaces</li> <li>• 75% of trips into central city have a free PNR space at destination</li> <li>• Procedures for controlling private car parks cumbersome</li> <li>• Through traffic not controlled</li> <li>• 80% of people driving to work in central London have all pkg or mileage expenses covered, &amp; 50% of cars travelling in peak have a space provided</li> <li>• Company cars 53% of total a.m. pk cars.</li> </ul>	<ul style="list-style-type: none"> <li>• Wheelclamping improved compliance</li> <li>• In spite of increased pkg controls traffic flows entering central London rose substantially.</li> </ul>

TABLE A.2 EUROPE: PRACTICE/EXPERIENCE WITH PARKING RESTRAINT MEASURES

City	Parking Restraint Measures	Constraints/ Impediments	Results
<i>Netherlands</i>			
Amsterdam	<ul style="list-style-type: none"> <li>• Pkg spaces allocated according to employment levels: norm for offices in city is zero, and elsewhere it is 25 places per 100 jobs</li> <li>• Travel demand management initiative: employers encourage their staff to use most appropriate travel mode according to environmental criteria</li> </ul>		
Utrecht	<ul style="list-style-type: none"> <li>• Pkg enforcement increased: no of patrols doubled.</li> <li>• Residents only pkg created; bollards &amp; flower boxes used to protect against illegal pkg</li> <li>• Fixed penalty tickets replaced by increased pkg fees dependent on location and overstay duration.</li> </ul>	<ul style="list-style-type: none"> <li>• Substantial reductions in illegal pkg</li> <li>• Small modal shift to cycling &amp; public transport</li> <li>• Willingness to pay increased</li> </ul>	
<i>Switzerland</i>			
Search	<ul style="list-style-type: none"> <li>• Forbid provision of pkg spaces in new buildings in certain parts of city centre.</li> <li>• Withdrew 10,000 spaces over sev yrs up to 1995</li> <li>• Very high pkg prices; strict limits on pkg time</li> <li>• Dissuasion for all purposes</li> <li>• High level of public transport service provided.</li> </ul>		
Berne	<ul style="list-style-type: none"> <li>• Promotion of P&amp;R</li> <li>• Strict urban pkg norms: 1 space/housing, 1 space/10 employees.</li> <li>• Stabilisation of public supply (3,500 pkg spaces)</li> <li>• Berne's road investment policy to reduce congestion rejected in a referendum in 1970. This public refusal led city council to modify policy. Pkg restraint policies introduced very gradually</li> <li>• High level of public transport service provided.</li> </ul>	<ul style="list-style-type: none"> <li>• Public transport carries 85% of journeys to city centre in am peak</li> <li>• 450 PT journeys per annum per inhabitant</li> </ul>	

TABLE A.2 EUROPE CONTINUED

City	Parking Restraint Measures	Constraints/ Impediments	Results
Germany	<ul style="list-style-type: none"> <li>• 1980 -legal introduction of residential pkg permits</li> <li>• 'Parking Concepts' (area-wide pkg management) introduced in several cities</li> <li>• Parking space obligation: new bldg devlpmt reqd to provide certain pkg spaces-can do this or pay-off amount to council, often used for P&amp;R.</li> </ul>	<ul style="list-style-type: none"> <li>• Illegal pkg (amounting to 40-50% of total pkg) widespread</li> </ul>	
Frankfurt	<p>Parking Concept:</p> <ul style="list-style-type: none"> <li>• Area wide-covers inner city area</li> <li>• Goal to encourage necessary traffic &amp; remove the unnecessary</li> <li>• 'Parking balances' for residents, customers &amp; visitors, &amp; employees determined by assessing what pkg uses in each city district; and, what pkg demand results from a staggered priority of the different user group demands.</li> <li>• Conceptual traffic management &amp; street layout planning then carried out at city district level</li> <li>• Pkg instruments used are: pkg prices in garages, pkg meters, and residents permits</li> </ul> <p>Other:</p> <ul style="list-style-type: none"> <li>• P&amp;R provision being increased</li> <li>• Pkg Guidance system introduced</li> <li>• Indirect effect on private pkg by not allowing for any supply for employees on street.</li> </ul>	<ul style="list-style-type: none"> <li>• 383,000 fines &amp; 27,000 tow-aways in 1989</li> <li>• Pkg concept only influences directly the public pkg volume, about half the total volume.</li> </ul>	<ul style="list-style-type: none"> <li>• Pkg Guidance system: 80% awareness, 50% of off-street &amp; 25% of on-street parkers claimed to have used system; around 20% of drivers use service on any one day. Pkg search times appear to have reduced.</li> </ul>
Munich	<ul style="list-style-type: none"> <li>• Resident's pkg scheme in part of inner city.</li> </ul>	<ul style="list-style-type: none"> <li>• 927,000 fines &amp; 42,000 tow-aways in 1989</li> </ul>	<ul style="list-style-type: none"> <li>• Resident's scheme results: drive-alone share fell from 44% to 32%, while car pass trips up by 2-3%, PT share up from 40 to 47%.</li> </ul>

TABLE A.3 USA: PRACTICE/EXPERIENCE WITH PARKING RESTRAINT MEASURES

City	Parking Restraint Measures	Constraints/ Impediments	Results
Portland, Oregon	<ul style="list-style-type: none"> <li>• 1975 set a city ceiling of off-street &amp; on-street pkg spaces with aim of limiting car use (excludes hotel &amp; residential pkg). 1990 Plan allowed for 3% increase in spaces.</li> <li>• Pkg Code sets maximum spaces allowed depending on proximity to public transport: no minimums set except for residential use</li> <li>• Pkg approved by conditional use permit only</li> <li>• Reserved pkg spaces for carpoolers in city &amp; state garages, and in on-street metered spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Several buildings provided considerably less than the maximum pkg spaces: issue of whether maximum too high</li> </ul>	<ul style="list-style-type: none"> <li>• 43% of commuters into city centre used public transport in 1987; projected 35% for 2000</li> <li>• Carpool rate of 17%</li> <li>• From 1975 to 1989 the number of pkg spaces remained approx the same (40,000).</li> </ul>
Washington State	<ul style="list-style-type: none"> <li>• Passed statute authorising cities &amp; counties to tax either commercial pkg operators or the act/privilege of pkg in a facility for which a fee is charged &amp; is operated by a commercial pkg business. Proceeds from tax can only be used for transportation purposes. Tax rates can be varied by duration of pkg, location &amp; type or use of vehicle.</li> </ul>	<ul style="list-style-type: none"> <li>• Tax does not address employer-provided free pkg: accentuates inequities between free and user-paid pkg.</li> </ul>	
Seattle, Washington	<ul style="list-style-type: none"> <li>• Maximum of 1 space per 1,000 sq ft GFA: excess amount only allowed by administrative review</li> <li>• Minimum reqts also: vary by proximity to public transport: 20% provided to meet minimum must be reserved for carpools. Carpool spaces &amp; free PT passes reduce minimum; in-lieu provision allows up to 100% of long term reqt to be waived for contribution to Downtown Parking Fund.</li> <li>• Pkg Pass demonstration with 5 city center employers: employees offered 4 free or discount pkg passes/mth if purchase bus passes-9% of participants previously SOV switched to bus use.</li> </ul>	<ul style="list-style-type: none"> <li>• Developer opposition to carpool set-aside policies.</li> </ul>	<ul style="list-style-type: none"> <li>• 45% of city centre employees use PT</li> <li>• Few carpools occupied set-aside spaces</li> <li>• Few developers opting to reduce minimum pkg reqts for additional carpool stalls, PT pass sales or contribution to in-lieu fund</li> <li>• Up to 25% of city carpool lot users may not be legitimate carpool users.</li> </ul>

TABLE A.3 USA CONTINUED

City	Parking Restraint Measures	Constraints/ Impediments	Results
San Francisco, California	<ul style="list-style-type: none"> <li>• Aim to keep an 'informal lid' on pkg supply: no code-required pkg in city centre; and only up to 7% of bldg's gross floor area can be devoted to pkg</li> <li>• New city centre bldgs must have an approved pkg plan before receiving an occupancy permit: in some cases only short term pkg approved; long stay pkg must be charged at rate higher than short stay.</li> <li>• 25% increase in taxes on private commercial &amp; city owned pkg.</li> </ul>	<ul style="list-style-type: none"> <li>• Developers object to regulation of pkg pricing, but not to Traffic Mitigation Plans.</li> </ul>	<ul style="list-style-type: none"> <li>• Developers &amp; pkg operators comply with letter of code on pkg pricing rates, but sidestep discouraging long-term pkg in favour of short-term pkg.</li> <li>• Tax increase result: pkg rates changed at some garages but not at others; no of cars parked fell at half, but increased at the rest.</li> </ul>
Hartford, Connecticut	<ul style="list-style-type: none"> <li>• Pkg reqts can be reduced by up to 30% for discounted carpool pkg, rideshare promotions, subsidised PT passes, &amp; shuttle services from off-site pkg.</li> </ul>		<ul style="list-style-type: none"> <li>• The incentive for reduced pkg reqts has not been used</li> <li>• City-initiated peripheral pkg lot low usage (similar price to city centre pkg).</li> </ul>
Washington, District of Columbia	<ul style="list-style-type: none"> <li>• Comprehensive pkg enforcement program</li> <li>• 12% parking tax</li> </ul>		<ul style="list-style-type: none"> <li>• \$13 million from pkg enforcement in 1979</li> <li>• \$8 million from pkg tax in 1979</li> </ul>
Montgomery County	<ul style="list-style-type: none"> <li>• Proposed that any person who made available land for public or employee pkg pay a tax on the use of the land for pkg purposes: all proceeds to go to transportation trust fund.</li> </ul>	<ul style="list-style-type: none"> <li>• Business opposition: cost, loss of competitive edge with neighbouring counties, unfair (only businesses covered)</li> <li>• Strategy vetoed by county executive.</li> </ul>	
Boston	<ul style="list-style-type: none"> <li>• Since 1975 off-street pkg spaces in CBD frozen at 1972-73 level. As existing spaces eliminated they are placed into a 'space bank' &amp; may be reallocated to new pkg facilities within freeze area.</li> </ul>		

TABLE A.4 AUSTRALIA: PRACTICE/EXPERIENCE WITH PARKING RESTRAINT MEASURES

City	Parking Restraint Measures	Constraints/ Impediments	Results
Australia	<ul style="list-style-type: none"> <li>Federal Govt instituted Fringe Benefit Tax on: 1) employers who provide car parking facilities for an employee (related to commercial pkg availability within vicinity); and, 2) employers who subsidise cost of employee parking.</li> </ul>	<ul style="list-style-type: none"> <li>Some employers provide employees with 'pool vehicles' to avoid fringe benefits tax.</li> </ul>	
Sydney	<ul style="list-style-type: none"> <li>From 1971 the amount of on-site pkg in new devpmts in CBD strictly limited: contributions reqd to new pkg devlpmts in peripheral locations.</li> <li>However, in recent years, because of developer &amp; State Govt pressure, permits given to a number of large devpmts in CBD with much more pkg than allowed by Pkg Code</li> <li>From 1992 Parking Levy on each car parking space in commercial bldgs in CBD &amp; North Sydney: \$400 pa, previously \$200 pa. Approx 37,500 spaces covered by levy. Levy paid by bldg owner. Funds raised (\$45m 1997) hypothecated for PT infrastructure.</li> <li>1995 amended CBD pkg reqt to allow a maximum of 1 car per 250 sq m of GFA or a max of 1 space per 25 sq m 'site area', whichever gives the lower no of spaces.</li> </ul>	<ul style="list-style-type: none"> <li>Expected peripheral pkg not developed: pressure for more CBD spaces.</li> <li>Some developers claim cannot be competitive if adequate pkg not allowed, &amp; devlpmts won't proceed without it.</li> <li>Existing Pkg Levy (equiv \$1.50/weekday) only small % of typical commercial pkg rates.</li> </ul>	<ul style="list-style-type: none"> <li>No evaluation of results of Pkg Levy: when initially raised claims of adverse consequences by car pkg owners.</li> </ul>
Brisbane	<ul style="list-style-type: none"> <li>1995 amended CBD pkg reqt to allow a maximum of 1 car per 250 sq m of GFA or a max of 1 space per 25 sq m 'site area', whichever gives the lower no of spaces.</li> </ul>		

## APPENDIX B: PARKING POLICIES

### 1. AUCKLAND

#### A: Auckland Regional Council

##### *Regional Land Transport Strategy*

Objective 2: Reduce the proportion of trips made by single-occupant cars: specific reduction target for CBD am peak traffic.

Strategy 2: Give more emphasis to passenger transport & other alternative modes.

Policy 2.6: Introduce & promote park & ride facilities where appropriate.

Policy 3.1: Ensure parking supply not greater than road network ability to service demand in high pkg demand areas (incl Akl CBD).

#### B: Auckland City Council

##### *Objectives*

Balance parking supply with road network capacity.

##### *City Plan*

- Priority of access to parking within the central area is as follows: Priority 1 - public transport, 2 - servicing and residential, 3 - short-term public visitor, 4 - permitted ancillary parking (business), 5 - commuter parking.
- Maximum parking levels set in central area (Central Parking District): roads in central area classified into four types, and parking maximums set for each road type. Type 1 roads (main retail roads) - 0 spaces; Type 2 roads (close to Queen St, major PT corridors, direct linked to motorway) - 1 space/240 m<sup>2</sup> gfa; Type 3 roads (edge of CBD) - 1 space/160 m<sup>2</sup> gfa; Type 4 roads (cul-de-sacs) - 1 space/120 m<sup>2</sup> gfa.
- All developments providing for more than 100 vehicles (carparking buildings) are controlled activities. Criteria for consent include assessment of parking location and vehicle circulation, the latter in regard to effects on the roading network. Conditions of consent can include intensity and scale of activity (in order to manage traffic generation within the capacity limits of the adjoining road system).
- Short-term public visitor parking is a discretionary activity on Type 2 and 3 roads. Leased or commuter parking areas or buildings are provided for as discretionary activities on Type 3 roads within the “less pedestrian-orientated area” only.
- Stacked parking (access to a parking space achieved through another parking space) only allowed in special circumstances.

### 2. WELLINGTON

#### A: Wellington Regional Council

##### *Regional Land Transport Strategy*

Strategy A: Enhance and expand urban public passenger transport facilities and services.

Strategy E: Restrain the growth of commuter road traffic.

## Key Policies:

- Limit the number of long stay car-parking spaces in major urban city centres and encourage short stay parking.
- Develop policies that lead to limiting growth in car travel (parking measures considered most appropriate out of available options).

B: Wellington City Council*City Plan*

- Maximum parking levels for new development in CBD: permitted activity maximum of 1 space per 100m<sup>2</sup> gfa; proposals for more than 1 space become a discretionary activity. Criteria for accepting discretionary activity include that additional spaces are short-stay, and accessibility of other modes.
- No minimum parking levels for CBD.
- Developments involving provision of more than 70 carparks are discretionary activities, and are subject to assessment of traffic impacts on local street network.

*Transport Strategy (Dec 1994)*

## Commuter Traffic Restraint:

## Strategic Objectives (3.2.2.2)

- restrain growth in the number of commuter trips made to the inner city by car.
- encourage a shift in commuter trips to the inner city from cars to other modes of transport.

## Key Achievement Areas

- limit the number of commuter parking spaces in the inner city to 18,600 till the year 2015 through the District Plan.
- strengthen the commuter coupon parking system.

## Parking:

## Strategic Objectives (3.2.3.2)

- provide a generous supply of short-stay parking in the inner city, particularly in the vicinity of the Golden Mile.
- encourage inner city living by allowing the construction of inner-city residential units without on-site parking.
- ensure that carriageways are not obstructed by parked vehicles.

**3. CHRISTCHURCH**A: Canterbury Regional Council*Regional Land Transport Strategy*

- Goal to increase proportion of trips by sustainable modes.
- No specific policy relating to parking.

B: Christchurch City Council*City Plan*

## Transport Objective and Policies



Objective: Sufficient and accessible off-street parking and loading facilities to meet normal anticipated demands for each activity.

#### Parking Policies

- Set minimum parking requirements for each activity and location based on parking demand for each land use, while not necessarily accommodating peak requirements.
- Make provision for a cash contribution in lieu of parking.
- Set minimum design standards for car parking spaces and areas.
- Ensure all business uses have provision for suitable areas for loading vehicles on site.
- Ensure convenient parking is available for vehicles used by people with disabilities.

#### Central City Access

Objective: A highly accessible central city for people and all forms of transport.

#### Parking Policies

- Ensure adequate and balanced provision of off-street and on-street vehicle parking for short-term visitors and business needs in the central city.
- Provide a financial contribution in lieu of car parking on sites in the central city where it is not practicable to provide car parking.

#### Parking Rules - New Developments

- Minimum car parking standards set according to activity (same standards for all activities in central city zone: eg 1 space/400m GFA in core area).
- Activity on central city zone site which generates > 250 vehicle trips/day and/or requires > 25 parking spaces is a controlled activity -Council's discretion limited to vehicular access.
- High traffic generators not in central city zone -maximum of 250 vehicle trips/day; no more than 25 parking spaces.

The CCC advises that it is able to set conditions on resource consents for new developments relating to parking involving:

- Hours of operation,
- Amount of staff parking provided,
- Management of short-stay/long-stay parking and the ratio of short to long-stay parking provide,
- Any other appropriate conditions that will not unduly disadvantage the operation of the parking or cause it to become non-viable.

#### Central City Parking Policy

Overall Objective: 'That parking is controlled to maximise the economic benefits to the city within acceptable environmental capacity with the primary consideration being the viability of the Central City, not just the return on parking buildings'.

#### Key Policies:

- Major parking decisions be made through the Central City Subcommittee.
- The management and provision of parking be integrated with other traffic management considerations, including the management and operation of public transport, cycle transport and pedestrian access to central city facilities.

- Council continue to manage parking in central city to achieve sufficient supply and appropriate price to manage time and enhance viability of central city.
- Progressively remove long-term parkers to increase off-street capacity for short-term users.
- Council pursue provision of public parking spaces on Sheraton site and with any major private development in NW quadrant.