

DUNEDIN CITY COUNCIL 2009 CENTRAL BUSINESS DISTRICT PARKING STRATEGY AND ITS EFFECTS ON THE RETAIL SECTOR



MSc International Planning and Development

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ABSTRACT

This dissertation examines the impacts of the Parking Restraint Strategy implemented by Dunedin City Council New Zealand in July 2009. The study was restricted to considering the impact of the changes on retailers in the CBD. This was broken into two objectives.

1. To determine whether the real effects of the parking changes were the same as the perceived effects; and if not, how these perceptions differ from the reality.
2. Has the council's strategy been effective when measured against its stated long term objectives of economic growth and environmental sustainability?

Parking research to date has been somewhat limited with much left to perception rather than gathered evidence. In general, research has shown that retailers tend to place greater emphasis on the importance of low cost parking to their business profitability than empirical evidence would suggest. In contrast, Shoup makes a strong theoretical case for paid parking in his 2005 book *The High Cost of Free Parking*. Two parking priorities repeatedly raised during the Dunedin study were *convenient* and *free*. These are often mentioned in the same breath as if they are complementary despite price providing an effective mechanism to improve convenience by relieving congestion.

The study utilized a CBD street survey; a retailer survey; and nine in depth interviews. Additional information was gathered through email and informal conversations. What became apparent through the study is that a parking restraint strategy cannot stand alone and be effective. An integrated transport plan with strategies to encourage travel mode changes, and a strong consultation process with affected parties greatly increase the likelihood of success when implementing parking restraints.

CHAPTER One: INTRODUCTION

1.1 Setting the Scene

On 6 July 2009 the Dunedin City Council in southern New Zealand implemented a series of changes to parking in the Central Business District (CBD). These changes included increased charges, altered length of stay determined by zones, new parking machines replacing older meters, and removal of free short term parking at selected locations. Responses to the changes were swift and furious (Otago Daily Times archives 2009). Retailers were particularly vocal about the negative effects of the changes with some stating their takings had dropped by as much as 40 percent (Otago Daily Times, Parking Anger Boils Over, 10 July 2009). A rise in bus fares on July 1, 2009 implemented by the Otago Regional Council further angered residents.

This dissertation is an attempt to determine the validity of the assumptions of:

- the retailers that parking is critical in encouraging or discouraging people to shop in the CBD
- the Dunedin City Council that the parking strategy supports its objectives of economic growth and environmental sustainability as laid out in its long term plan.

1.2 The Research Problem

The 2009 parking changes in Dunedin were seen by a number of retailers as extremely harmful to their businesses which could conflict with the stated goal of the council parking policy to encourage economic development.

1.3 Dissertation Key Question

What were the actual effects of the July 2009 parking policy changes on the retail sector in the Dunedin CBD?

1.4 Objectives

Objective 1: To consider the outcomes of the 2009 Parking Strategy in relation to the stated objectives and the assumptions behind these.

Method

- Interviews with council officers involved in the creation and implementation of the strategy to establish whether they believe the strategy measures were effective, and the rationale for subsequent adjustments to the policy
- Interviews with members of the parking strategy group (formed since the change in policy and made up of councillors, Chamber of Commerce members and public representatives)
- Review of council parking data to identify any changes in parking trends since the new policy.

This objective has been pursued both through interviews and surveys and other sources such as the Otago Daily Times archive and various sources outlining theories of parking. Parking data has been requested from the council but according to the responses it appears that little data is available. Some information has been drawn from the council's annual Residents' Opinion Surveys.

Objective 2: To consider the consultation processes used by Dunedin City Council before, during and after the implementation of the parking changes and determine how this may have impacted the perceived outcome.

Method

- Qualitative survey or focus groups with retailers arranged through the Otago Chamber of Commerce. This would provide insight into the effects of the process used, what worked well and what could have been done better. It was expected that this would also draw out the views of retailers about the council and its role.

The focus groups were rejected for logistical reasons and replaced with two in depth interviews with affected retailers and 79 retailer surveys completed by CBD retailers.

Objective 3: To identify who is shopping in the CBD, how they get there, how much they spend and how frequently they shop to better understand the role that parking plays in retail health in the CBD. Identifying the primary reason that people are in the CBD was also part of this objective. Do they work in the CBD and shop during their lunch break? Do they come to the CBD specifically to shop?

Method

- Shoppers' survey about chosen modes of transport and shopping patterns (frequency, average spend). It was originally intended that this survey would be distributed via shop counters. After discussion with council staff and a generous offer by Dunedin City Council to pay for two graduate planning students the surveys were conducted on the street.

This objective was addressed through the gathering of 302 shoppers' surveys within the CBD. It was anticipated that the surveys would be collected over two days – a Thursday and a Saturday. During the research it became apparent that a Sunday, the one day of the week that parking is free in the CBD, may provide a different set of opinions. As a result several surveys were also collected on a Sunday. Consideration was given to completing some surveys in South Dunedin to assess whether some people now shop in South Dunedin due to the parking changes in the CBD. This was rejected because getting an adequate sample to test this hypothesis would be time consuming and may not yield conclusive results.

1.5 Research Limitations

It is recognised that the methods used had some weaknesses and limitations.

a. Nothing in the methods above could really assess whether there have been major changes in shopping trends since the change in policy because there was no assessment of people who may have shopped in the CBD prior to the changes and no longer do so. This would be a difficult study to undertake, possibly requiring household surveys and more time than this study had available.

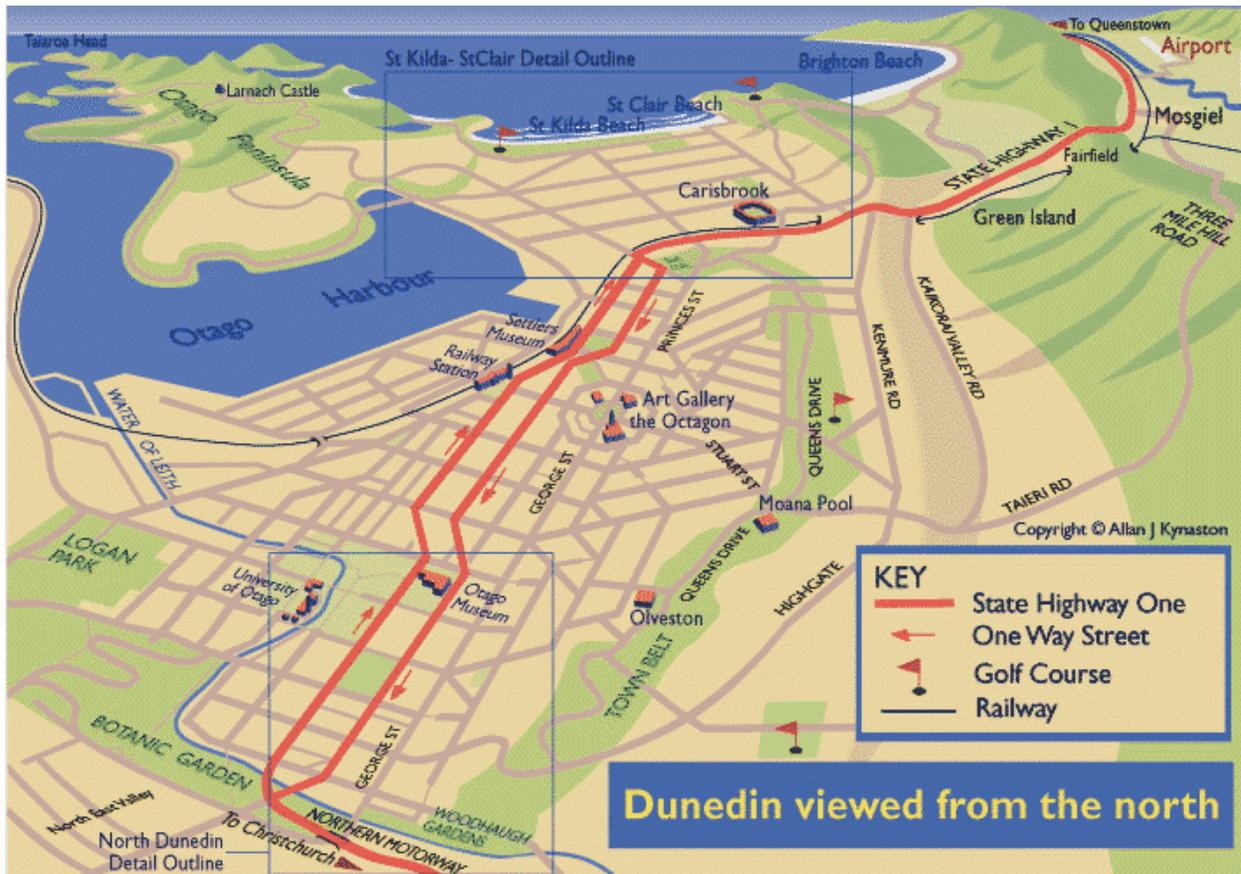
b. The shoppers' survey covered different days and different times of day but is inevitably a somewhat self-selecting group. No record was kept of those who declined to take part and the surveyors acknowledged a certain bias based on expected responses. One commented that she tended to leave people with children alone because they were busy and probably in a hurry. Approaching groups of adults was a strategy employed because several surveys could be completed at once.

c. The council reversed some of the changes due to the negative responses it received. This has left a parking strategy that is neither the old strategy nor the planned one of 2009 but something in between. As a result it is impossible to determine whether the adjustments altered the effects of the 2009 strategy.

1.6 The Setting: Introducing Dunedin (Otepoti)

While the first known Maori residents of the area arrived around 1100 AD the city in its current form was founded by European settlers in 1848 with a layout drawn up by Charles Kettle, surveyor with the New Zealand Company (McKinnon, 2010). Kettle created the Octagon as the centre of the town with Moray Place forming a second ring of streets, Princes and George Streets running north – south, and a town belt reserve separating town from country. All the central streets were wide enough to accommodate a lane of traffic in each direction and the more recent addition of parking on both sides of the street.

Figure 1.1 Dunedin CBD and Surrounds. Dunedin Tourism.

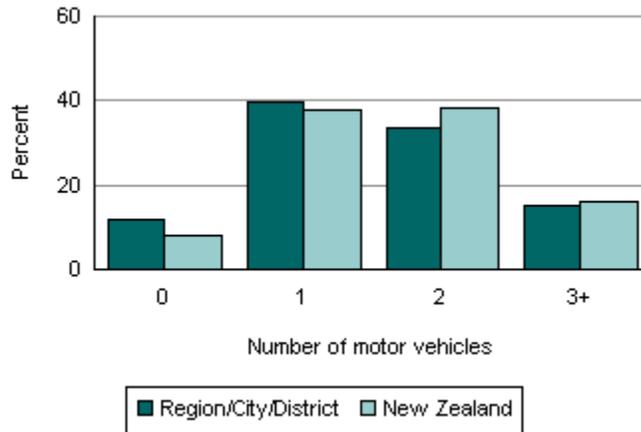


The 2006 census recorded Dunedin’s population as 118,683 an increase of 3.8% since the 2001 census of 114,342 and a very similar figure in the 1991 census. According to Dunedin Tourism the current population is 123,000 (dunedinnz.com). It is the home of Otago University, New Zealand’s oldest university with a student population of 25,000 (dunedinnz.com). In addition to the main university the city contains a medical school, dental school, teacher’s college, polytechnic and a teaching hospital. The university and the hospital were mentioned repeatedly during the research undertaken for this dissertation as areas requiring effective parking strategies.

Statistics NZ lists Dunedin as slightly above the national average for education and yet the city falls well below the national average for income with a median of \$19,400 against a national average of \$24,400 (Statistics NZ 2006). Dunedin’s median age is 35 almost identical to that of the national average at 35.9 (Statistics NZ 2006). Whether as a direct result of the student population, the lower than average median income or other factors, the 2006 census also records

Dunedin as having lower than the national average of multiple car households and a higher than average number of no car households.

Figure 1.2 Number of motor vehicles per household. Dunedin = the region/city.
2006 census data from Statistics NZ



1.7 Parking in Dunedin

The DCC Parking Study 2007 lists an increase of parking over a six year period as 563 spaces bringing the total available to 23, 319 in 2007. This is a 2.5% increase however the same study notes an 8% increase in vehicles (p1-2.). The study states that there has been an increase in “off street parking occupancy at 9am [which] has increased from 37% to 55% occupied between 2001 and 2007” (p2). The timing suggests that this is likely to be commuters, particularly when the study also reveals that many time-restricted parks were being occupied well past the stated time limit with some used as all day parking. The study had a wider brief than the CBD so the figures noted above do not reflect the CBD specifically.

1.8 Shopping in Dunedin

Dunedin has a strong CBD centred on George Street and has not suffered the hollowing out, or doughnut effect, exhibited by some cities with large suburban shopping centres and malls (Burapatana and Ross, 2007). Dunedin in contrast has incorporated its three linked malls: Wall Street, the Golden Centre and the Meridian into a single block of George Street. There are

however a few large retailers south of the CBD that may have drawn some shoppers out of Dunedin's CBD. As one survey respondent noted "*I am doing more of my shopping out of Central Dunedin. The increased parking charges cost a huge amount and really cut into my spending - much better to get free parking at Briscoes, Noel Leeming, Warehouse etc.*". Despite this George Street remains the main shopping hub.

1.9 Transportation Background

To understand the context within which the Dunedin City Council has created its CBD parking restraint policy it is important to consider the national and regional transport frameworks which influence the transportation climate of the country and preferred transport modes. New Zealand houses transport nationally under a government funded Ministry of Transport which manages air, rail, road and sea transportation. Within this Ministry the New Zealand Transport Agency (NZTA) is the crown agency responsible for planning, funding, enforcement and access issues around transport in New Zealand. NZTA describes itself "as the link between government policy and the operation of the transport sector" (NZTA, 2011).

The NZTA owns all state highways throughout the country including State Highway 1 which runs through central Dunedin via two one way streets (see figure 1.1). At a recent spatial plan public consultation meeting in Dunedin it was noted that the one way systems created both a physical and a psychological barrier along the east west axis of Dunedin creating a sense of distance and difficulty of access that is only partially a physical feature and yet may influence the behaviour of Dunedin shoppers' parking choices.

1.10 Central Government

Land Transport New Zealand (LTNZ) published Part 13 of its Traffic Control Devices Manual, titled Parking Control in December 2007. LTNZ was merged with Transit New Zealand in 2008 to become the NZTA, however its Parking Control document appears to be an active regulating document with requirements that regional and local bodies must adhere to when laying out parking and this is evident in the Dunedin City transport and parking policy documents. This

document clearly stipulates that parking cannot be viewed in isolation but must take wider transport, social, economic and environmental goals into account. It also notes that parking may influence competition between centres if one offers free unrestricted parking and the neighbouring centre has paid restricted parking. The conclusion is that this can lead to “more and longer trips by car” (LTNZ 2007 p 4-1), an undesirable outcome and a reason for ensuring parking is part of broader transport and land use strategies.

The Otago Regional Council notes in its 2009 Otago Regional Land Transport Programme 2009 – 2012 that central government has cut funding for cycle and pedestrian projects. The current Transport Minister Stephen Joyce is quoted in a November 2010 Cabinet paper saying “I effectively capped funding for public transport services in the 2009 Government Policy Statement (GPS) on Land Transport Funding.”

1.11 The Otago Regional Council

In a 2009 document, the ORC states that “Land transport in Otago is predominantly road-based and focused on the use of private cars” (Pressures and Issues Facing Land Transport in Otago 2011 p3). Dunedin is the largest settlement within the ORC’s borders.

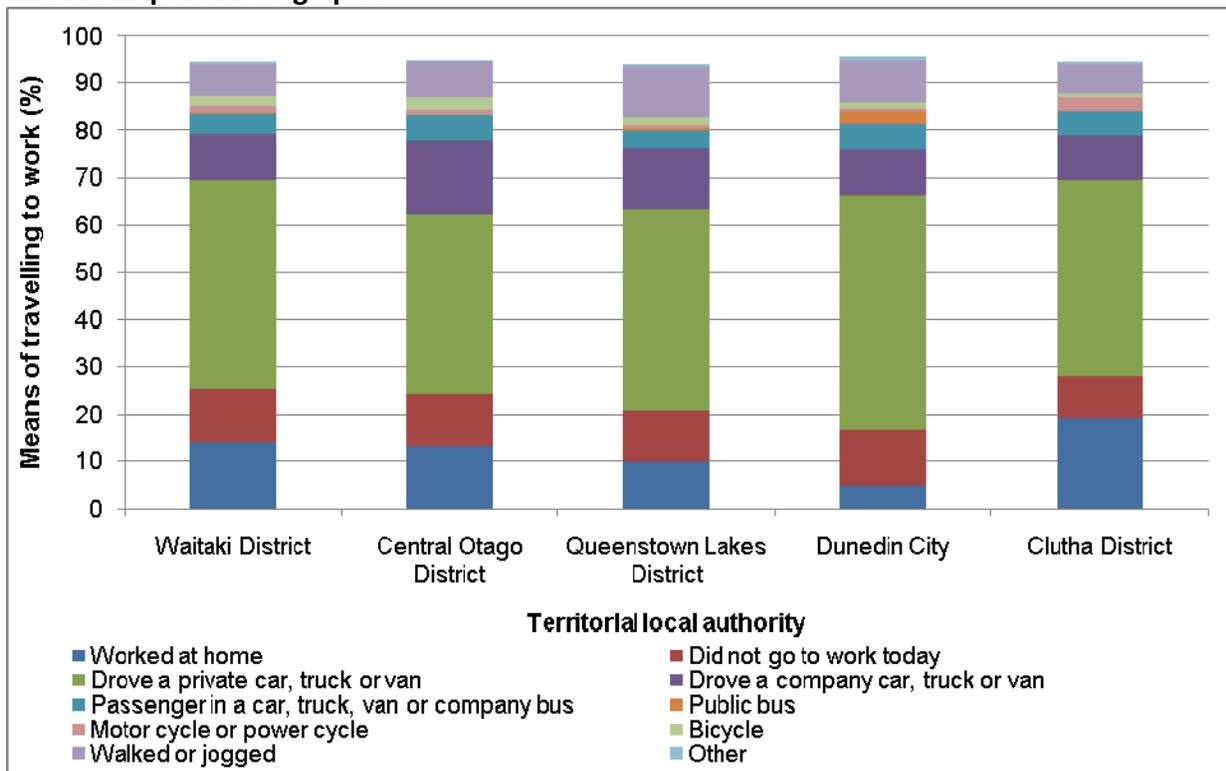
Figure 1.3 Otago Regional Council Boundaries. localcouncils.govt.nz



The ORC document Implementation of the Otago Regional Land Transport Strategy 2005 published in 2010 lists sustainability and accessibility as key outcomes of the strategy while acknowledging the difficulties the ORC faces in delivering these outcomes. It also notes how little is known about “how the transport system we provide – the services, facilities and infrastructure – fits with how people want to live their lives” (ORC 2010, p 6) and at this point mentions the need for “roading and parking to provide better for private and commercial motor vehicles” (ORC 2010 p 6). The document does not include a strategy for how to do this nor a definition of what “providing better” might mean and the document is candid about how little is really known and how many gaps there are in the data. See Appendix 1 for a more detailed discussion (Section 1.4 Progress in implementing the RLTS: Overview).

One of the gaps is about travel mode share. Available census data only records travel to work on the day of the census (Figure 1.4).

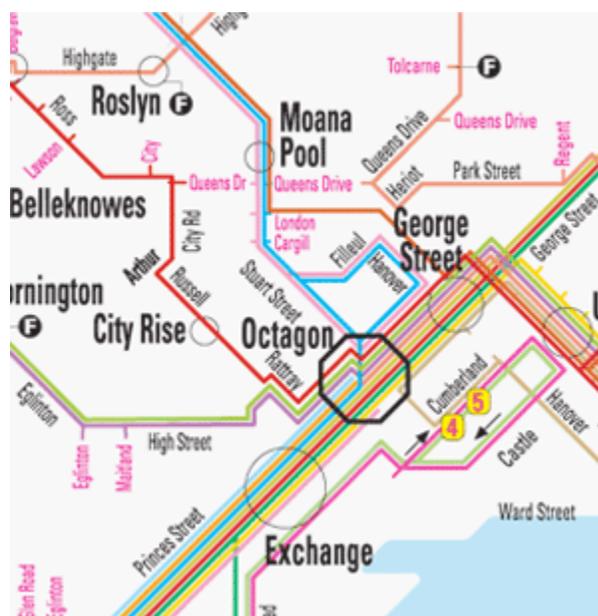
Figure 1.4 2006 census data reprinted in ORC 2009 document Pressures and Issues Facing Land Transport in Otago p 4.



The ORC's responsibility for public transport in Dunedin is an added complication to Dunedin's parking strategy as it creates difficulties in forming joined up policy. The ORC is partially funded by central government and as a result its goals and strategies are adjusted depending on the current central government priorities. In its 2009 discussion document Pressures and Issues Facing Land Transport in Otago the ORC notes that the current government "envisages a largely market-led approach" (2009 p 21) and as mentioned earlier the current Minister of Transport briefed parliament in 2009 that he has capped public transport spending.

The ORC currently manages Dunedin buses through a mix of regional council owned services and privately run bus companies. These services are co-funded by the regional council, the NZTA and revenue through bus fares. Figure 1.5 below gives an overview of Dunedin City bus routes.

Figure 1.5 Dunedin bus routes



Several respondents to the CBD street survey undertaken for this dissertation expressed concern about the running of these services with some commenting that they do not use the buses due to cost and or service constraints but instead drive into the city for both shopping and to work.

“I don't use buses in Dunedin now, would rather walk or get taxis. But I'd like to use buses if they were easier to use”. (CBD Street Survey respondent)

As can be seen by the Ministry of Transport data outlined in figures 1.5 and 1.6 private vehicle use was continuing to rise up to 2007 at the time the data was collected. If the Dunedin trend is similar to what has been recorded nationally, the Dunedin City Council will be facing a moderate rise in the number of trips by car into the city centre and a corresponding increase in required parking.

Figure 1.6 Ministry of Transport Vehicle Kilometres

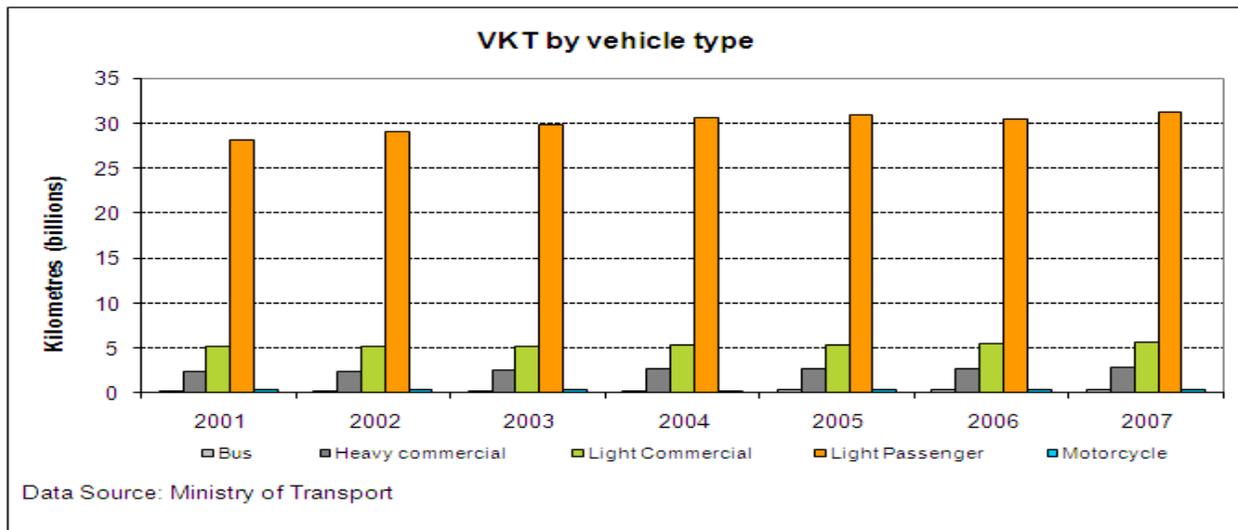
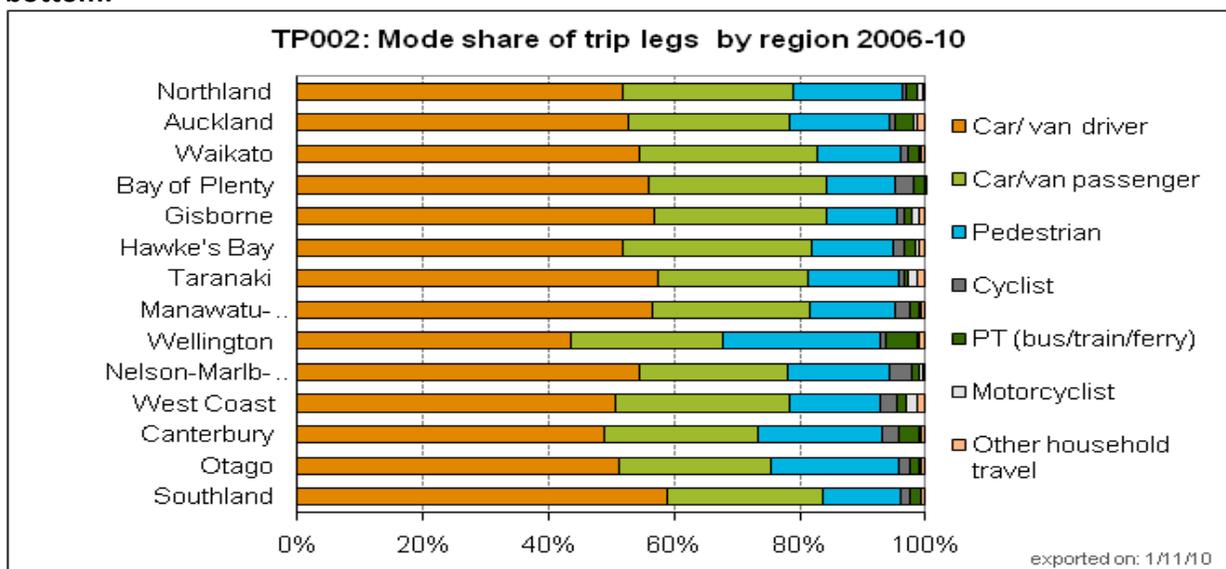


Figure 1.7 Ministry of Transport Mode share of trips by region. Note Otago second from bottom.



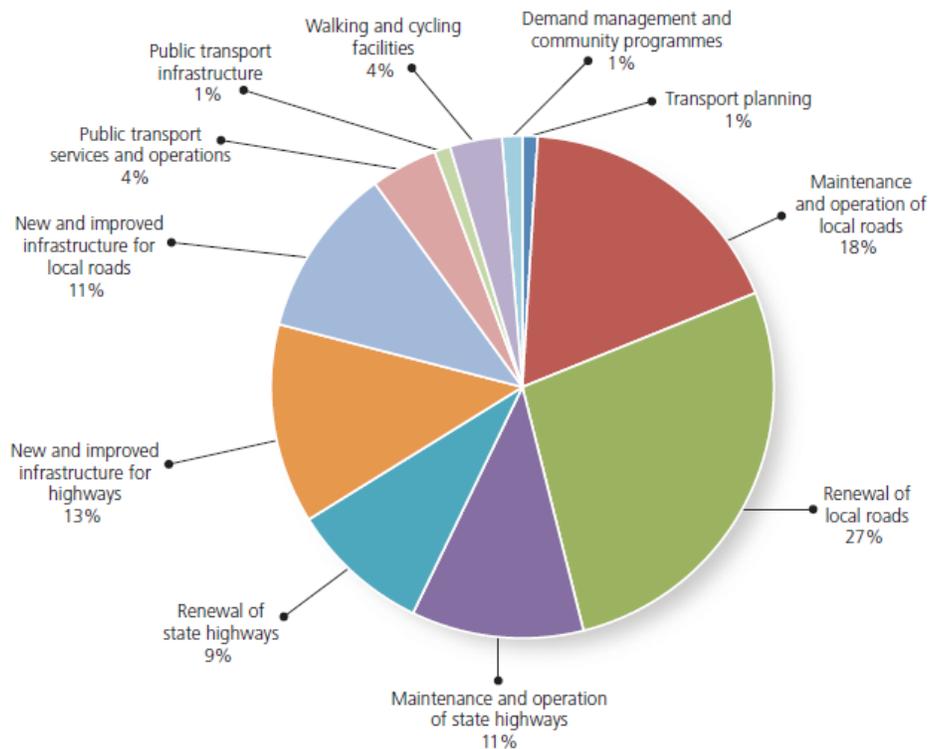
The priorities of the Otago Regional Council are outlined in figure 1.8 below which shows that all but 11% of land transport expenditure for 2009 – 2012 is related to road stock with 5% of the remaining funds allocated to public transport to be spread across all of Otago. Box 1.1 below reflects the change in direction of central government as reported on the ORC website:

Table 1.1 Otago Regional Council: Change in Central Government Land Transport Policy

In May, part-way through the committee’s public consultation, the Government amended its policy statement on land transport funding. In this amendment, the Government asserted a clear change in philosophy. Its priority is now to increase New Zealand’s economic productivity and growth. The amended GPS places greater emphasis on roading at the expense of public transport, walking and cycling. Moving too quickly on modal shift is seen as likely to impact adversely on environmental and economic efficiency. The shift also reflects the Government’s desire to use the dedicated national land transport fund, derived principally from duty, charges and fees paid by motorists, to provide more direct benefit to road users.

Figure 1.8 Projected Otago Expenditure, Otago Regional Council

Figure 1: Projected Otago land transport expenditure 2009 - 12, by activity class



1.12 The Dunedin Situation

Part of what makes parking an interesting topic of research is the discrepancies between current theory and common practice. Exacerbating this is a lack of data about parking strategy outcomes for planners to draw on. The Dunedin City Council transport and parking policy documents show an understanding of parking theory and an adherence to national policy documents. The 2008 Parking Policy implemented in mid 2009 appears to be an attempt to bring Dunedin parking more closely into alignment with the current parking theory. It can also be viewed as the council dipping its toe a little deeper into the user pays pool to test the water.

Dunedin created its current Transport Strategy Your City Your Future in 2006 and it was from this that the 2008 Parking Policy was created. The 2006 Transport Strategy takes the same five key considerations outlined in central government's Traffic Control Devices Manual: economic development, safety and personal security, access and mobility, supporting public health, and ensuring environmental sustainability (Land Transport NZ, 2007). These same priorities are then repeated in the council's 2008 parking strategy document. As noted earlier this dissertation is focused on economic development and environmental sustainability.

In the 2005 Residents' Opinion Survey 46% of respondents said they were dissatisfied with the availability of parking in Central Dunedin. One of the transport goals listed in Your City Your Future was to reduce this to 35%. The 2011 Residents' Opinion Survey shows the dissatisfaction rate is now 36%. This is a 10% drop in dissatisfaction level which indicates success in achieving the goal but no detail was requested to identify why the shift has occurred.

The council has a different strategy for parking in the Central Activity Area which includes the CBD than it does in other areas. In its 2010 document Dunedin Code of Subdivision and Development the council uses a minimum parking requirement strategy for developments. Minimum parking requirements that stipulate that developers are required to provide a set minimum number of parking spaces commonly leads to increased demand (Shoup 2005) although a flexibility in the requirements taking into account access to bus routes is noted. In the Central Activity Area the aim is to reduce demand through increasing the cost of on street

parking and the council does not apply minimum parking requirements nor require businesses to contribute to council provided parking.

In summary, the Dunedin City Council is responsible for the parking strategy within the city; the Otago Regional Council is responsible for the delivery of bus services; both have roles to play in regard to road management generally and both must work within the transport framework laid out by central government.

Managing the requirement for joined up policy where parking is part of a larger transport strategy with wide economic social and environmental goals is complicated by the requirements of various layers of government and the priorities of the city itself and its current management structure. These issues will be discussed in the findings section of this dissertation.

CHAPTER Two: Literature Review

2.1 Parking Strategies

With the advent of widespread car ownership, parking for free on public streets became the norm. This quickly led to congestion and councils found themselves having to consider strategies to manage parking. Some of these are focused on increasing supply to meet demand. A common early strategy and one still in use today is to require businesses to provide customer parking. This strategy sets out a minimum number of parking spaces, commonly by type and physical size of business rather than by turnover (Hitge and deVroodt 2006). This has tended to discourage economic activity in older areas that lack space for parking often leading to an economically depressed area. Some councils have recognized this and have allowed businesses to operate without providing parking but instead to pay an annual fee and the council then supplies the parking (Shoup 2005). This does not address issues of sustainability nor reduce car traffic into an area. It can also discourage businesses from opening in areas that require them to make annual payments. Taking this approach further as a traffic restraint measure, Enoch and Ison (2005) talk of councils levying the very same businesses they had earlier required to provide parking in an attempt to regain some control over the total parking available (Enoch and Ison, 2005, p4).

Where businesses are willing and able to meet minimum requirements they can lead to excessive parking and the demolition of buildings to make room for car parking (Shoup, 2005). This in turn makes a downtown more spread out, less walkable and generally less hospitable for people (Lewyn 2010)

Strategies are now beginning to focus less on increasing supply and more on decreasing demand. These parking restraint strategies fall into three main categories.

- Regulating parking by time, hours available and user types.
- Physically restricting the amount of parking available.
- Charging for parking

Current research appears to largely concur that charging for parking is the most effective strategy and yet many councils are loathe to implement paid parking because of the political cost of doing so. Restraint strategies can support broader transport, health and environmental goals. It can also provide revenue for the city or for the neighbourhoods themselves. (City of San Diego website 2011). Some countries are taking a broader approach to limit the number of cars generally which naturally reduces parking requirements. Japan limits demand by restricting car ownership unless parking is available and Singapore has increased taxes on car ownership and has placed a 3% maximum increase per annum on cars in the country (May, 2005). Neither of these options are likely to be palatable in New Zealand with its low population, limited public transport and distances between centres.

2.2 How much parking is enough?

There is no easy answer to this question. Todd Litman makes the bold claim that cars are on average parked for 23 hours per day (Litman, 2008). Couple this with the high cost to society as a whole of the congestion and pollution caused by people cruising for parking to the opportunity cost of lost public space (Shoup 2005) then it is clear that local authorities have a challenge. To make it more difficult there has been inadequate research into parking so those same local authorities have very little real data on which to build an effective parking strategy (Shoup 2005). There is also the planning challenge of ensuring a parking strategy meets the needs of multiple user groups and the wider transport goals of the city. The trouble is that no one likes to give up something they are used to having for free and there is a perception that free parking is a right. Retailers commonly have the opinion that taking away free parking affects their trade and there is some evidence that parking restraints, particularly when implemented in isolation, does impact trade although it is not clear how long this impact lasts “there are likely to be short-term disruptions within the parking restraint areas while activities adjust” (Still and Simmonds 2000 p314).

Charging for parking does not have to be a blunt instrument. The Centre for the Study of Regulated Industries at Bath University argues for the use of access pricing to control levels of demand (Vass 2004). For parking this would require variable pricing to keep demand at the

desired level, for example 80% in use. This would lead to a local authority pricing different areas differently to even out use based on desirability and adjusting for different times of day and days of the week. It can then be argued that restricting the time of parking becomes unnecessary because people will self limit based on the price (Glazer and Niskanen, 1991).

2.3 A case study

McHill and Garrick undertook a longitudinal study of two New England towns to assess the impact of parking policy on the built environment and travel behavior, reviewing available data from 1960 to 2007. What makes this study particularly pertinent to Dunedin is the size of the towns which are very close to the size of Dunedin. In addition, Cambridge is home to Harvard University and the Massachusetts Institute of Technology (MIT) so shares a strong university culture with Dunedin. These two towns made very different transport choices over the study period. Hartford agreed to the construction of two Interstate highways in the 1960s which now run through its centre, cutting off the downtown area from the neighbourhoods to the north and to the river in the east. It also created vast parking areas in an attempt to encourage urban renewal. Parking has remained contentious with concerns about congestion and unsightly areas due in part to the parking lots described by the mayor as “black topped wastelands” (McHill and Garrick, 2010 p 125).

In contrast Cambridge resisted attempts to build an interstate highway through its neighbourhoods. It did not pay a great deal of attention to parking as an important transport issue until 1980 when officials started “prohibiting on street parking in certain areas” and also decided to build off street parking totaling 1400 spaces. This was strengthened by the council implementing parking maximums in 1981 to cap the amount of parking provided by businesses. By the 1990s Cambridge began actively encouraging other modes of transport and formed a Bicycle Committee in 1991 and a Pedestrian Advisory Committee in 1995 to improve non automobile facilities. Hartford has installed short sections of bicycle lanes as part of a traffic calming plan but falls short of a citywide cycle network, Cambridge has retrofitted its streets for bicycles and now has over 56 kilometres of two way bicycle lanes. The rates of walking and cycling in Cambridge are more than twice as high as in Hartford, and there has been a major

drop in car use. The conclusion of the researchers is that Cambridge's choice to limit public parking downtown has resulted in a vibrant city centre and enhances the city's historic urban qualities. It was also found that jobs in Hartford had decreased while they have increased in Cambridge (McHill and Garrick, 2010). The McHill and Garrick study concluded that restriction of parking has enhanced the vitality of Cambridge Massachusetts CBD.

An important point to note from this study is that Cambridge did not make parking changes in isolation. It actively worked towards changing transport modes providing cycle lanes and improved pedestrian access. It also started to focus on parking as part of its development strategy in 1980 and so has been working at improvements for 30 years, which has allowed for a gradual shift in behavior and in the expectations of residents (McHill and Garrick, 2010).

2.4 The Dunedin situation

While Dunedin does not have to deal with anything like an east coast US interstate highway running through its centre, it does have State Highway 1 running parallel to its central carriageway via two one way systems of two lanes each. According to council planning staff, and also the design firm recently contracted to create a spatial plan of the city, these one way systems have been recognized as a problem both for parking and for Dunedin's transport strategy generally. Dunedin City Council noted a number of parking problems in its 2008 Parking Strategy document. These were presented as a SWOT analysis (Figure 2.1) and were set against five overall transport objectives taken from the New Zealand Transport Strategy:

1. Assisting economic development
2. Improving personal safety
3. Improving access and mobility
4. Protecting and promoting public health
5. Ensuring environmental sustainability

These are complex objectives that deserve independent consideration in addition to identifying ways in which they can work together rather than against one another. (Dunedin City Council Parking Strategy 2008 – 2018 April 2008 Draft Version 4)

Figure 2.1 Dunedin City Council Parking Strategy 2008 – 2018 April 2008 Draft Version 4

<p>Table 1: SWOT analysis of main issues identified through Parking Review</p> <p>Strengths</p> <ul style="list-style-type: none"> • The New Zealand Transport Strategy highlights the need for Travel Demand Management in making transport more energy efficient and less environmentally harmful. • The majority of residents that responded to the Residents Opinion Survey were satisfied with off-street car parks and parking buildings. • Overall there is a surplus of parking supply in the city. • Occupancy of paid 2hr and 4hr parking indicates good efficiency with supply slightly exceeding demand. This is also true of P30s and P60s. • The ability of residents to park overnight when there are no commuter/visitor cars is only an issue in very small areas; this indicates there is sufficient parking for residents in the area north of Hanover St. • DCC control 49% of off-street public car parking. • Rates for casual parking compare well with other cities used for benchmarking, and suggest these are set at the right level. • Supply of leased parking spaces for businesses in the central area supports economic development by allowing these businesses to operate without having on-site car parking. 	<p>Weaknesses</p> <ul style="list-style-type: none"> • The District Plan parking standards are ready for review. • High growth in student numbers living close to the campus with limited on-site parking options has led to increased parking demand • 39% of residents were dissatisfied with on-street parking in the central city area (Residents Opinion Survey). • There is significant overstay in Loading Zones, P5s, P10s and P30s. Enforcement is difficult. • P5s, P10s and P30s that are scattered throughout the paid parking area are difficult to enforce, increase circulating traffic and congestion. • Locating P5s, P10s and P30s in the main CBD goes against much parking guidance. • Free kerbside parking for commuters has implications for travel mode choice, residents and business parking. • P5s, P10s and Loading Zones in the CBD represent inefficient use of parking space as many are vacant throughout the day. • Provision of 1hr paid meter spaces far exceeds demand. • YMCA and Great King Street car park buildings have relatively low occupancy. • Frederick Street car park is in high demand, has no time limit and is often over-subscribed. • The Parking Protocol requires review. • The current distribution of on-street parking and fees needs rationalising to reflect the desirability of parking. • The rate of \$4-\$5 a day for commuter parking compares well with comparable cities. However, compared to bus fares, a higher rate e.g. \$8 a day would be needed to generate significant mode shift. <p>tes for some City Council leased car parks are much lower than the market rate.</p> <ul style="list-style-type: none"> • Leased parking for commuters does not encourage mode shift. • The 75+ permit and the mobility permit have different rules regarding parking, for no good reason. • Lack of provision for camper van parking, and information for visitors regarding where they can park. • Lack of signs to parking buildings.
<p>Opportunities</p> <ul style="list-style-type: none"> • The National Energy Efficiency and Conservation Strategy recognises that increasing the price people pay to park is one of the most effective demand management tools available. • Dunedin City Council has made a commitment to the Communities for Climate Protection programme. • The Regional Land Transport Strategy for Otago recognises the need for travel demand management in Dunedin, and suggests using parking and pricing signals as ways to achieve modal shift. • There is a commitment in the Dunedin City Council Transportation Strategy to introduce \$5/day commuter parking charges in the central area, in streets where commuters currently park for free on-street if commuters do not show a willingness to move to other transport modes. • There is a commitment in the Visitor Strategy to encourage beautification of the city centre and provide conditions to support an increase in street dining. • Dunedin is very centralised and has a compact centre; with high numbers using public transport, walking and cycling it has the potential to be a very sustainable city in terms of transportation. • The leased parking prices could be increased to reflect the market value of premium parking sites (at least \$30/wk), which are very central, in particular, York Place, Fileul St and Station South. 	<p>Threats</p> <ul style="list-style-type: none"> • At the moment there is high dependency on private cars for the journey to work. • There are high levels of car ownership in Dunedin. • Increasing parking charges for short stay parking may negatively affected the number of shoppers and visitors to Dunedin, thus affecting the economy. • There is a large supply (73% of parking spaces in central city area) of free unrestricted on-street parking outside of the main retail areas, which lends itself to commuter parking, which has impacts on choice of mode of travel to work, residents parking problems, and negative effects on local businesses/services which rely on kerbside parking for visitors/customers. • Parts of Dunedin are hilly, and the city has unpredictable weather, both of which can make alternatives to the car unattractive.

For the purposes of this study, with its emphasis on the effects of parking on the retail sector, economic development and access and mobility are the two objectives that will be discussed in detail.

2.5 Economic impact of parking restraints

Still and Simmonds (UK) completed a review of parking restraint policies and urban vitality policies in 2000. They concluded that parking restraint policies have not been implemented long enough to reach a clear conclusion. They did note that “attitudinal evidence suggests ...a high level of sensitivity to parking provision whereas aggregate statistical studies tend to find only a weak relationship” (Still and Simmonds, 2000 p 291).

The City of Oxford introduced radical traffic restraint and pedestrianisation in 1999. Parkhurst compares transport modal share in 1999 and in 2000 which showed a 17% reduction of car trips to the city centre with no change to overall visitor numbers (Parkhurst 2003). Despite no change in visitor numbers Parkhurst recorded that the local economy experienced some difficulty over this period and mentions that some other studies such as one carried out in York city centre concluded that pedestrianisation had had some negative effects on trade, although these effects were slight. There was also been some evidence of increased congestion in cities that have introduced traffic restraint strategies “just beyond the boundary of the restricted area” (Parkhurst 2003 p 19). This is in line with increased parking in Dunedin just beyond the paid parking areas. Parkhurst’s study concludes that there is evidence of economic benefit of pedestrianisation and in central Oxford the total retail floor space increased as did the demand for this space (Parkhurst 2003 p 20).

A Transport for London study, Town Centre Parking Final Report (2005) covering 11 town centres of varying sizes, found that 32% of survey respondents said they would continue to come to the town centre they were surveyed in if parking costs increased while 22% said they would shop elsewhere (Transport for London 2005 p ii). Unfortunately the data of actual changes in shopping behaviour post parking increases is not available, although 2006 research by European

Cooperation in Science and Technology (COST), Parking Policies and the Effects on Economy and Mobility, suggests changes are overstated in relation to actual outcomes (Cost 342, 2006).

A report by Sustrans – the sustainable transport charity (Shoppers and How They Travel, 2006) raises another factor to consider when assessing the impact of parking changes on shopping patterns and effects on retail. Several studies have found a tendency by retailers to overestimate the number of their customers arriving by car and underestimate the numbers arriving on foot, by bicycle and by public transport. This then leads to the opinion by retailers that increasing the cost of parking will have a strong negative impact on their sales. Sustrans replicated an earlier Graz study on travel modes and shopping habits in Bristol and their findings showed that not only were retailers inaccurate in their assumptions about mode, they overestimated the distance shoppers travelled and underestimated the number of shops people visited (Sustrans 2006).

2.6 Reasons for parking

Two common groups requiring parking are shoppers and commuters. Shoppers are generally looking for short term parking close to where they want to shop and commuters are looking for all day parking close to where they work. Problems occur when workplaces and shopping areas are synonymous and employers do not have employee parking. Paid parking, particularly with time restrictions is a solution to freeing up parking for shoppers but this requires commuters to either park further away from where they work or to make a mode shift to another form of transport. (Still, Simmonds 2000) A 1995 Netherlands study looked at commuter parking and found a predictable variance in views between those that drove to work and those that came by other means when asked their opinions about the implementation of paid parking (Verhoeft, Nykamp, Rictveld 1995). While the Dunedin study is focussed on retail, the attitudes recorded in the Netherlands study show some parallels and are also relevant because the Dunedin City Council does not impose parking minimums on any businesses in the CBD including non retail. This means the general available parking must cater for multiple groups including commuters or viable alternatives to driving into the city centre must be available.

2.7 Improving Safety

A commonly reported problem with under-priced on-street parking recognised by the Dunedin City Council is cruising for parking. Cruising comes in two main forms: cruising to find a space to park; and cruising that involves a driver circling an area after dropping off a passenger to attend to a task with the intention of picking them up again. Cruising has been linked to crashes caused by congestion and inattention, and also to increased pollution (Shoup 2005).

Arnott and Inci discuss the connection between parking and congestion related to cruising and the resultant increase in congestion and pollution. They conclude that the best solution is to raise the price of on-street parking until cruising is eliminated but not so high that parking becomes underutilised. A second less desirable strategy would be to increase the available amount of parking until cruising is unnecessary (Arnott and Inci 2006). This option of course assumes there is space to increase the parking and other researchers such as Shoup and Litman have concluded that the more parking that is available the more people will drive. The aim, Shoup suggests, is to reduce car travel but not human travel (Shoup 2005 p 313).

Glazer and Niskanen suggest that higher parking charges leading to higher turnover of cars may increase congestion and argues that a better solution may be road pricing rather than parking pricing (Glazer Niskanen 1991). This is however an older paper and more recent research as discussed above does not share this view.

Simmonds in The Interaction of Transport and Land Use Planning considers Transport Economic Efficiency (TEE) when comparing transport generally and land use and his observation that the categories considered most important are time saving and safety is valid when considering parking. Time is often wasted through cruising and safety is compromised (Simmonds 2008).

2.8 Improving access and mobility

A comprehensive European study (COST - Technical Committee on Transport 2006) considered mobility in relation to parking strategies and found that parking restraint measures resulted in increased mobility. One example given was Basel where heavy traffic and congestion led a large employer to take three actions. It reduced its parking, it started charging employees for parking and it offered alternatives through making infrastructure changes to promote bicycle use and gave each employee who voluntarily stopped driving to work a free bicycle. COST created COST 342 to consider Parking Policy Measures and their Effects on Mobility and the Economy. This resource provides a wealth of information on best practices and studies in several European countries.

At the local level the perceived disadvantages of reduced parking very often outweigh the estimated effects of enhanced accessibility. The main explanation for this situation is a lack of knowledge on the effects of parking policy measures. Because of this, measures are often taken too little and too late. **COST 342, 2006**

Conclusion

A number of issues have been investigated in previous research on parking but there are significant gaps in knowledge. The Dunedin study is an attempt to address some of these gaps in a specific setting.

CHAPTER Three: RESEARCH DESIGN, METHODOLOGY AND ETHICS

3.1 The Dunedin Study

“It really is a jigsaw”

Dunedin City Council Manager

The Dunedin Parking Study grew out of a desire to understand why there was such a backlash to the 2009 implementation of Dunedin’s parking restraint strategy. What really were the effects of the changes? Was the council wrong to move more fully to paid parking? Did the change in parking machines create resistance and/or cause difficulties for people parking? Were the time restrictions the right lengths of time? Should there be time restrictions? Did the retail sector really suffer as much as some very vocal retailers said they did? What has happened over the longer term? What outcomes was the council aiming for?

The issues above were too broad for the limited study that could be undertaken in the timeframe available and the focus was narrowed to considering the effect of the council’s parking strategy changes on the retail sector.

From this two views were chosen to research.

- The assertion by retailers that parking is critical in encouraging or discouraging people to shop in the CBD and that the 2009 changes negatively impacted retail performance in the CBD. This has required an attempt to tease out evidence from general perceptions.
- The view of the council that the current parking strategy is in line with the city’s economic and environmental goals as laid out in its transport strategy and community plan. A primary statement in the 2009/2010 – 2018/1019 Community Plan Summary is very clear about the overarching aim. “A city with a transport system that supports economic development and where people move about easily and safely” (Dunedin City Council, p8).

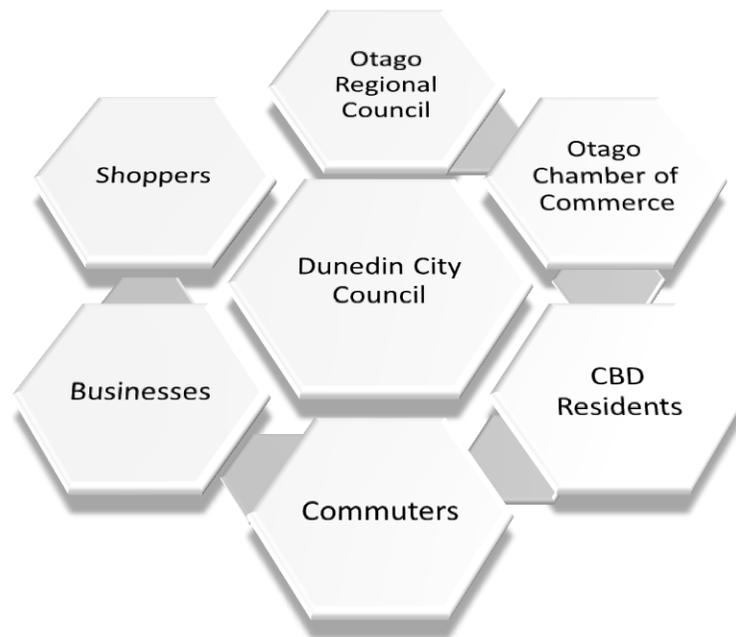
3.2 Theoretical Framework

In determining the framework for this research, it was important to think about its purpose, the questions to be answered and the desired outcomes and uses of the research.

While May's description of Empirical research as the collection of data "to test, generate or interact with proposition of social science" goes some way towards the purpose of the research, his further explanation that "facts speak for themselves" without requiring an explanation via theory (2001 p 11) does not seem adequate. His description of realism however fits well with the subject under scrutiny. May states that "Realism argues that the knowledge people have of their social world affects their behaviour, and unlike the propositions of positivism and empiricism, the social world does not simply 'exist' independently of this knowledge" (2001 p12). He also notes that realism views society of being "made up of layers – individual, interactive and institutional levels" and that access to these layers is "the task of a realist research programme" (2001 p13). He quotes Pawson and Tilley's 1997 work that a realism theoretical framework is particularly useful for programme evaluation. If the parking strategy of the Dunedin City Council is viewed as a programme of service delivery then again this is a good fit.

The study has confirmed the chosen theoretical framework. Both the surveys and the interviews have highlighted the complexity of parking and the layers of effects, both expected and unexpected of making changes to a parking strategy. Some of the key players identified through this study are below in Fig 3.1. To add to the complexity each group of CBD users whether shoppers, residents, workers, or business owners comes with a mix of transport and parking requirements and preferences.

Figure 3.1 Some key stakeholders in Dunedin CBD Parking



3.3 Research Strategy

As noted above, the aim of this study is to assess two points of view and their validity – one from the retailers and the other from the council. This section addresses these one at a time and outlines the methods used to explore the complexity of parking as presented by these two viewpoints.

A. The assertion by retailers that parking is critical in encouraging or discouraging people to shop in the CBD and that the 2009 changes negatively impacted retail performance in the CBD.

To check the strongly held belief of some retailers that the 2009 changes in parking strategy towards a more user pays approach and removing the free parking in central Dunedin has been

detrimental to the retail vitality of the CBD, the first objective was to compare retail vitality data from Dunedin from 2008, 2009, and 2010 with other New Zealand cities. It quickly became apparent that very limited data are available. The Otago Chamber of Commerce searched a number of websites and the only data that appeared to be related to this study listed number of retailers and number of employees in retail businesses but no financial information.

The second method used to consider the effects on the retail sector was to undertake surveys of both people on the streets of the CBD and retailers. Prior to the development of the surveys and the interview questions, informal conversations were held with some council managers and with the Chief Executive of the Chamber of Commerce. These conversations were important in determining the research approach. It was in these discussions that the complexity of parking became clear. There are different behaviours for different trips into the CBD, there are more people living in the CBD than there used to be, there are also a lot of people working in the CBD. A distinction was also noted that parking is for the public not for the retailers although retailers are beneficiaries of parking. These conversations informed the design of both the surveys and the choice of interview questions. The original plan was to keep the CBD street survey as short as possible but the final survey contained 15 questions with an emphasis on questions relating to those who came by car into the CBD. Without these initial conversations the surveys and interview questions would have been much less informed and probably yielded less usable data.

The on street survey was conducted over three different days of the week. It was originally planned to survey over two days – a Thursday and a Saturday however during the research it became apparent that Sunday, the one day of the week that parking is free in the CBD, may provide a different set of opinions. As a result several surveys were also collected on a Sunday. No special events were in place on the days of the survey.

The survey was conducted over different times of the day and different locations within the CBD. An attempt was made to complete some surveys within the malls to reach people who enter the malls from the off street parking at the back of the buildings and return to their cars without stepping onto the street. This proved difficult. As one of the surveyors said, the space within the

malls is large and open allowing people to avoid her more than they were able to on the street. In all, 302 surveys were collected.

The survey did not include a filter on the respondents unlike a study undertaken for Transport for London where respondents needed to meet certain criteria to be included in the study. This gave varied responses for reasons for being in the CBD and did not limit the responses to shoppers only. This may have resulted in some skewing about the effects on retail trade as commuters would be in the CBD regardless of parking changes. By surveying only in the CBD it was also impossible to know whether there were fewer people shopping because of the changes. If the study had included surveys undertaken in suburban shopping centres in addition to the CBD a question could have been asked whether they shopped in the CBD before the changes.

Shoup raises a provocative question in *The High Cost of Free Parking: Are people who are price sensitive to paying for parking, people who spend a lot of money going shopping?* (2005, p 399). This is a question worthy of research but it is not fully answered in this study. The data collected in this study would allow mapping the average spend of people who made negative statements about the parking but they were still people surveyed in the CBD so the parking costs were not above their payment threshold.

The CBD street survey asked people for their modes of transport, how often they came into the CBD, and their average spend when there. Previous studies such as Graz and Bristol (Sustrans) found that retailers tended to overestimate the number of customers arriving by car and underestimate the numbers using other transport modes. According to Sustrans Bristol retailers undertook a study on this question and concluded that shoppers travelling by car spent the most money but a later Sustrans study reversed the findings. This was due to the retailers study asking only about mode and spend but not frequency. When the Sustrans study added a question about how often the respondent came into the area to shop it showed those coming by bus, cycle and on foot spent more than those travelling by car (*Shoppers and How They Travel 2006*). The Dunedin study included these same questions to find out the percentage of people travelling by car that were then affected by the changes in parking.

The second survey was of retailers in the CBD to gauge their views on the effects of the parking strategy. This survey asked about the type of business because both council managers and retailers had mentioned that some businesses had been more adversely affected than others. The types most mentioned were chemists, takeaways and coffee shops; all businesses that relied on people stopping in briefly to pick up goods whether food, coffee or prescriptions. The change in the time limit on parking outside of these shops was believed to deter people from using these businesses in the CBD.

The retail survey asked whether the business believed the changes had affected their businesses so this could be compared to the shoppers' survey for consistency. Retailers were also asked to estimate by percentage the main modes of transport used by their customers. This proved slightly challenging to analyse as many retailers did not provide percentages that totalled 100%.

This survey was distributed by the Otago Chamber of Commerce to the members the Chamber identified as possibly being retailers in the CBD. The Chamber acknowledged that it was not exact because their members' database did not allow clear identification of this group. The usual response rate for the Chamber surveys is between 10 – 15% and in total 8 surveys were received. To increase the number of retailers surveyed another 100 surveys were distributed to central city businesses, mostly to retailers but some professional services were included. A 70% response rate was achieved bringing the total number of completed surveys to 78. These were then entered into Survey Monkey for ease of collating the results.

Half hour interviews were held with two retailers, each of whom had noted major downturn in their trade after the 2009 changes. The questions asked in these interviews were very similar to those asked of council managers, councillors and members of the Parking Working Party. The questions were kept broad and deliberately avoided any push for getting into detail about what happened in 2009 but rather focused on the purpose of regulated parking, whether there are problems with Dunedin's CBD parking currently, what is working well, what their role in Dunedin's parking is, and what they would do if they were in charge.

B. The view of the council that the current parking strategy is in line with the city's economic and environmental goals as laid out in its transport strategy and community plan.

Interviews were held with three council managers involved in the 2009 parking strategy with a fourth answering the same questions via email. The four managers spanned the planning of the strategy, the implementation and one who worked on the strategy as a consultant and later came to work for the council. Two councillors who are on the Parking Working Party plus the community representative of the Parking Working Party were also interviewed and a traffic engineer from outside the council was interviewed to provide an overview of Dunedin's parking from a technical perspective and without having direct involvement in the 2009 strategy. A complete list of those interviewed is in Appendix 5.

A review of Council documents was undertaken to better understand the goals of the council's parking strategy and how they reflect and/or vary from international research and theories of parking. A review of council parking data was also planned but it has been hard to find. The council undertakes a parking survey every five years and the 2007 survey was made available but unfortunately the next is not due to be completed until 2012 so the data precede the changes. The council uses pay and display parking machines which technically should be able to provide data on use and revenues but no analysis has been forthcoming. It is possible that although the council has the means to collect raw data there is no one assigned to undertaking analysis except on the \$5 per day parking which was offered but never received. Some information has been drawn from the council's annual Residents' Opinion Surveys.

The Otago Daily Times archives have been accessed for background on much of the debate around the 2009 parking strategy changes. Another research question outside the scope of this study could be to assess the effects of intense media attention on this issue and how much it was responsible for forming and/or hardening the opinions held by some retailers and users of the CBD.

Relevant to both the chosen research questions is the issue of consultation and how the chosen consultation process used by the council played in the negative views formed by retailers and residents. This will be addressed in broad terms in relation to current consultation theories and recommendations.

3.4 Ethics

No significant ethical issues were raised in undertaking this study due to the nature of the research. Both surveys carried statements that they were anonymous and voluntary. The people interviewed signed a statement that they understood the interview was voluntary and how their answers might be used. They were also informed that because of the small number of interviews it was possible that answers might be correctly identified as coming from them.

There is however, another ethical issue which has to do with the sensitivity of the topic. The 2009 parking changes and the backlash reported in the Otago Daily Times made it a difficult period for council staff, councillors and retailers. The parking issue came hard on the heels of a divisive debate over the building of a new stadium and added fuel to public anger about decisions taken by council. It has been important in undertaking this study that the feelings and concerns of various parties involved have been recognized and, as researcher, to remain objective. Empirical evidence has been used to test the various assertions.

CHAPTER Four: RESEARCH RESULTS AND ANALYSIS

4.1 Overview

Analysis of the surveys and interview transcripts provided some interesting insights into the complexity of implementing a parking restraint strategy. In Dunedin's case the strategy was implemented in isolation which had both economic and political implications.

This chapter examines the Dunedin study findings and Chapter Five presents conclusions and recommendations based on these and the other research reviewed.

4.2 Travel Modes

Some of Dunedin's retailers assert that parking is critical in encouraging or discouraging people to shop in the CBD and that the 2009 changes negatively impacted retail performance in the CBD. The first analysis linking responses from the retailers' survey and the CBD street survey was to compare travel modes of those in the CBD with the expected travel mode split estimated by retailers. As noted previously studies undertaken in other parts of the world have found that retailers tend to overestimate the number of people travelling by car and underestimate other modes. Dunedin has returned a similar result although the over estimation of car travel was only 3% and further analysis of the data calls even this small gap into question. Respondents of the CBD street survey who answered that they came into the CBD by car fell into two groups: those who drove their own car and those who came as a passenger. This has implications for parking requirements. The retailers however were not asked to make this distinction but rather to give an estimate of the percentage of customers who came by private car.

The number of people travelling on foot to the CBD was severely underestimated by retailers. According to those surveyed over three different days of the week a total of 30% listed their main mode as walking. Retailers on the other hand, estimated this group at only 16%. Bus users were also underestimated by retailers. Part of this could be that the question asked of retailers

was related to their own customers. In contrast there was no selection criteria applied on who answered the survey on the street so there was a mix of respondents, not just shoppers.

On analysis of the data some discrepancy may have been created by some retailers not providing estimates adding to 100%. Some gave no answer, one answered nil against cycle and taxi with no other categories chosen and one enthusiastically provided estimates for several modes adding up to 160%. Many however gave mode estimates that either added to 100% or were close. The underestimates are reflected in the Unknown category in Figure 4.1 below.

Figure 4.1 Main travel mode comparison

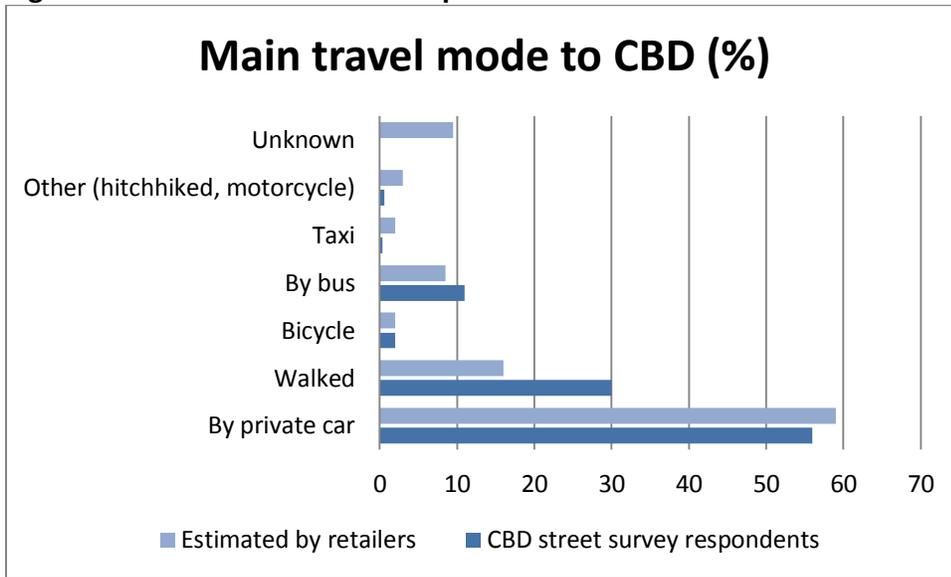


Figure 4.2 and 4.3 give the modal split from the street survey and the retailers with the street surveys already showing those that drove in their own car and those that got a lift already combined into one “by private car” category.

Figure 4.2. Main travel mode CBD Street Survey combining drivers and passengers into a single category.

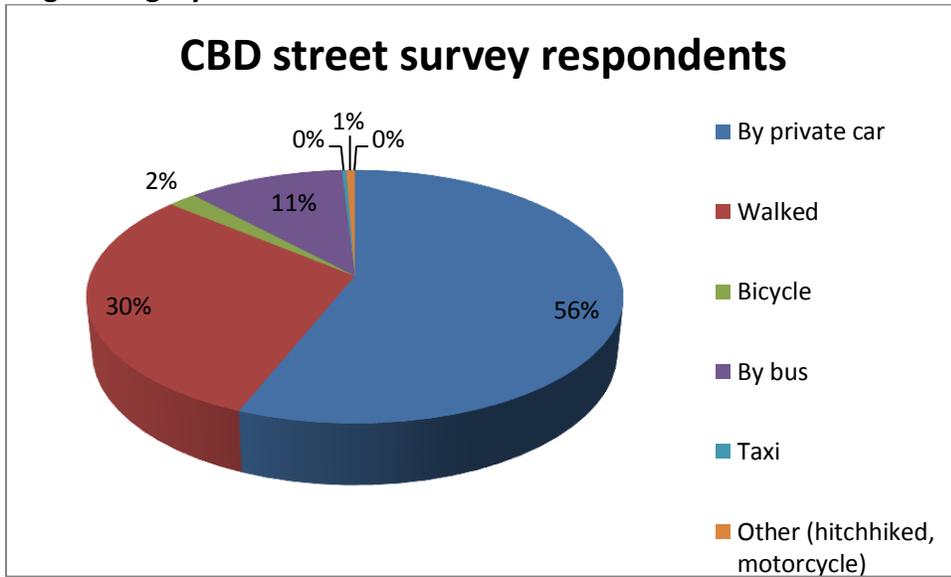


Figure 4.3. Main travel mode Retailer Survey

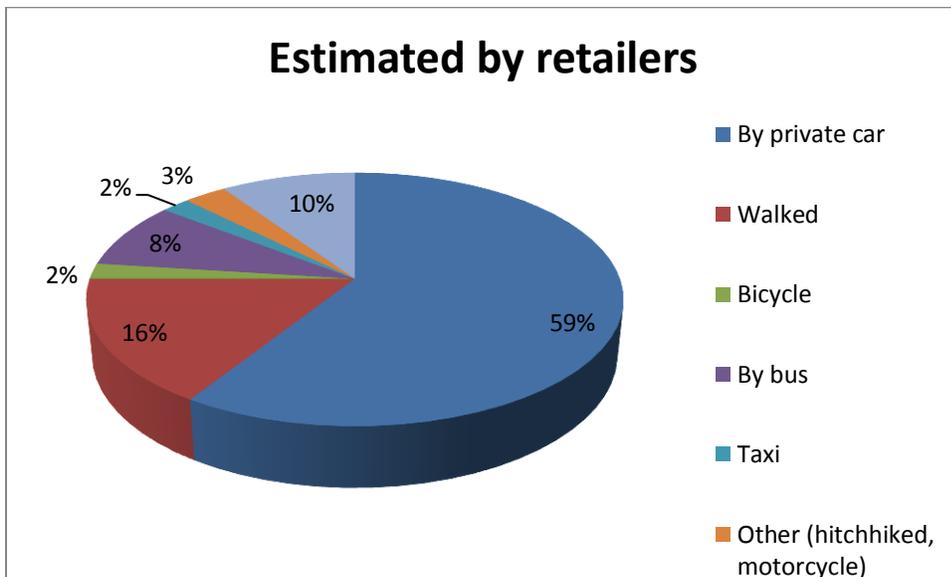
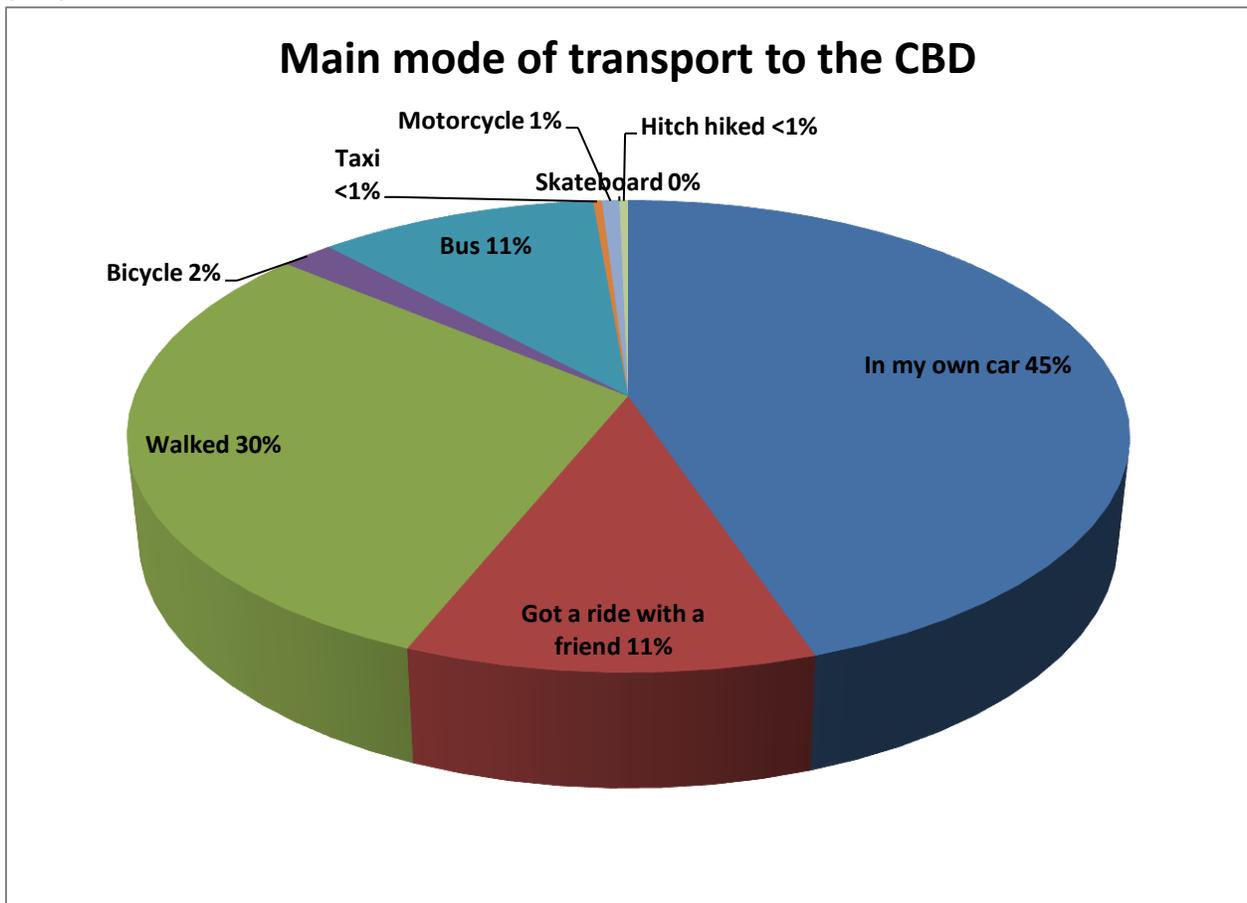


Figure 4.4 shows the main mode of travel including separate categories for those that drove into the CBD in their own cars and those who travelled as passengers. This then drops the percentage of private cars down to 45%. Retailers were not asked how many people they would estimate came as passengers so while it makes for an easier comparison to group drivers and passengers into a single category it is important to make the distinction that the total number of cars travelling into the CBD is not the same as the number of people travelling by car. If this survey were to be repeated, a clearer question could be to make a distinction between drivers and passengers. Some respondents made a note that they were travelling with a spouse so while it was their own car they were a passenger.

Figure 4.4 Responses from CBD Street Survey showing breakout of mode by “own car” or “got a lift”



Where the data became more interesting was in considering the modal split in relation to the days of the week. The two retailers interviewed both mentioned that many people now come into the CBD only on Sundays because that is the one day when parking is free.

There are still a lot of people who say to me why don't you open on Sunday because I only come to town on Sundays when the parking is free.

Many people said that once the changes happened they would only come in on Sunday because the parking is free and there are many businesses like mine that don't open on Sunday. If I do I don't have a life anymore.

The perception that a number of people only come to the CBD on Sunday is borne out by a small number of CBD street survey respondents.

Parking has changed the way I shop. More likely to come in on Friday night or Sunday when it is free.

From these views it was expected that the surveys collected on Sunday would show a larger percentage travelling into the CBD by car. The results however show no change in the number of people driving into the CBD (Figure 4.5) with 52% driving regardless of the day of the week. The picture changes if those travelling by car are not separated into drivers and passengers (Figure 4.6) which shows 80% of people arriving by car on a Sunday, a much higher rate than on other days of the week. It should be noted that the Sunday sample was small and the comparison data for other days were also substantially less than the total number of surveys collected because 33% of surveys did not have the day noted on them. This has resulted in the split by day of the week reflecting slightly higher numbers of people travelling by car than when travel modes are calculated across all completed survey forms (52% compared to 45%).

Figure 4.5 CBD Survey Respondents main travel mode differentiating own car and passenger

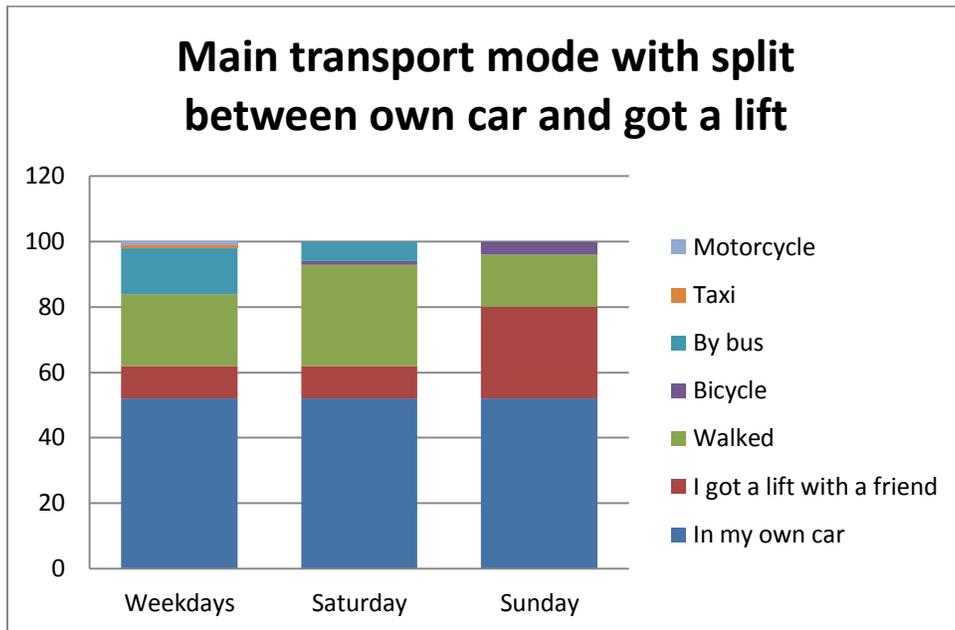
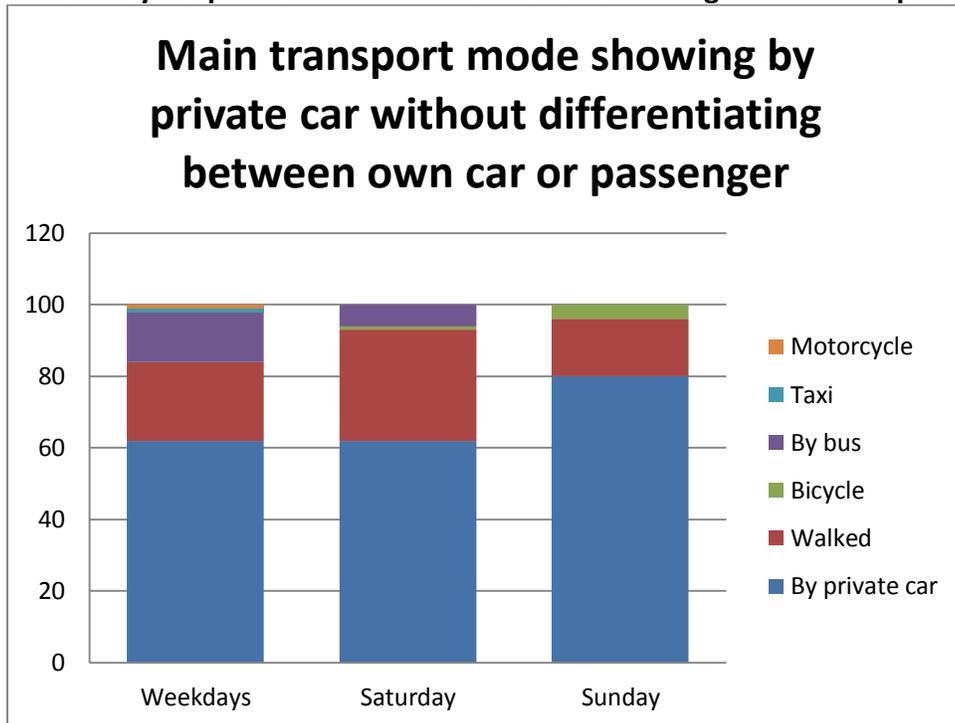


Figure 4.6 CBD Survey Respondents main travel mode combining own car and passenger



The reason why there is a higher rate of people travelling by car on a Sunday with a higher occupancy rate per car is undetermined. Two likely influences are that the Sunday surveys would not have included many commuters who may be more likely to travel in single occupancy cars and because Sunday is perhaps likely to be a day that friends and family may undertake an activity together such as shopping, visiting the Art Gallery or going to a movie.

4.3 Purpose and Mode

In an attempt to determine the effect of parking restraint strategy changes on retail, respondents were asked what their main purpose was for being in the CBD (Figure 4.7). Breaking this down to show mode of transport solely for the 41% of respondents who listed their main purpose as shopping shows an increase in those coming by car (52%) than when all survey respondents are included (45%) (Figure 4.8). Taking this a step further to show all those travelling by car in one category to match the retailer responses brings the percentage up to 64%. This then is the group that is expected to have been most affected by the parking changes. This survey does not however include surveys completed in other shopping districts so cannot offer any evidence of shoppers no longer shopping in the CBD nor whether some shoppers have changed their travel mode.

The survey does provide a breakdown of the main reasons for respondents to be in the CBD and the largest single category is shopping (41%). This is of course only the primary reason and does not preclude the likelihood that other categories include shopping activity and regular spending in the CBD.

Figure 4.7 CBD Street Survey Main reason for being in the CBD today

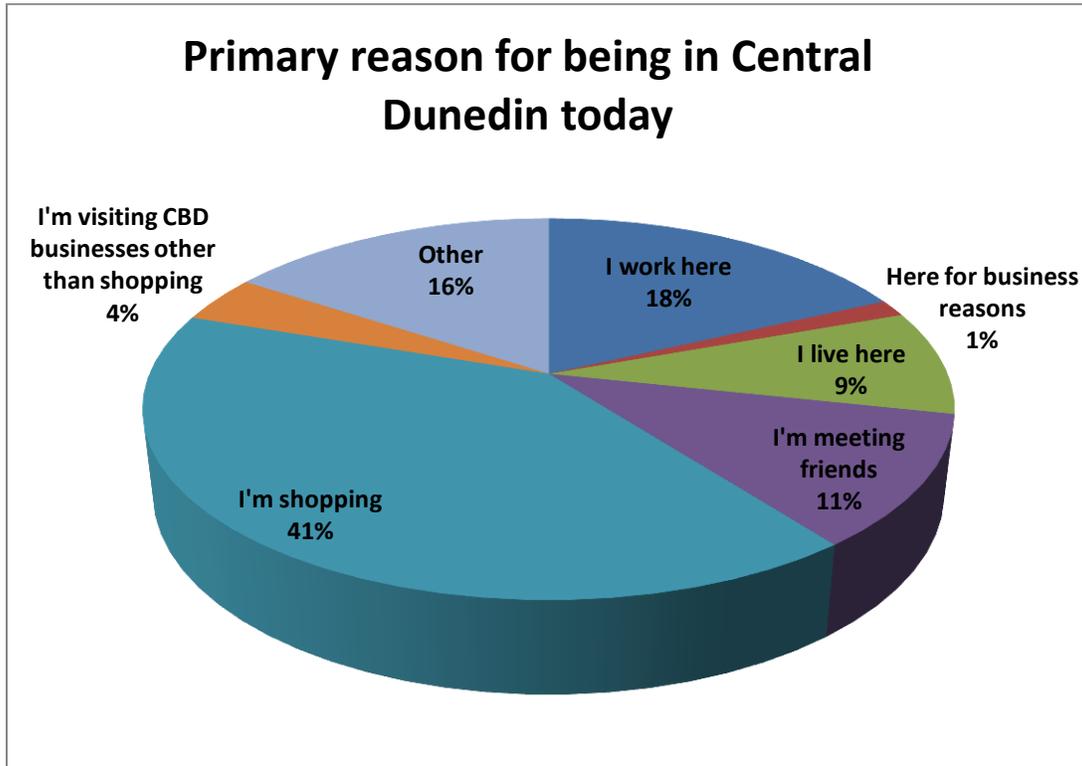
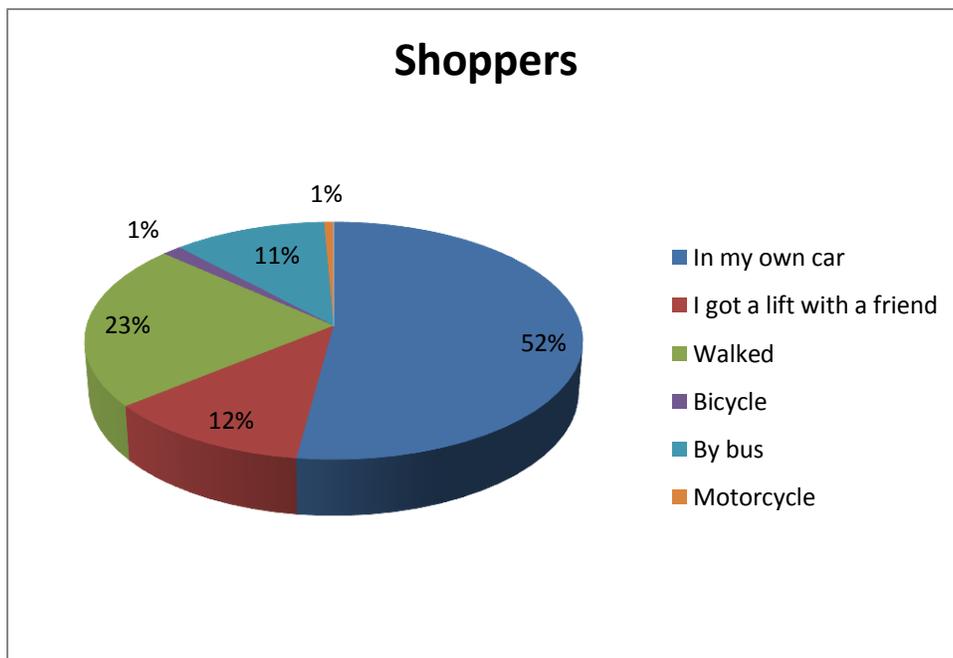
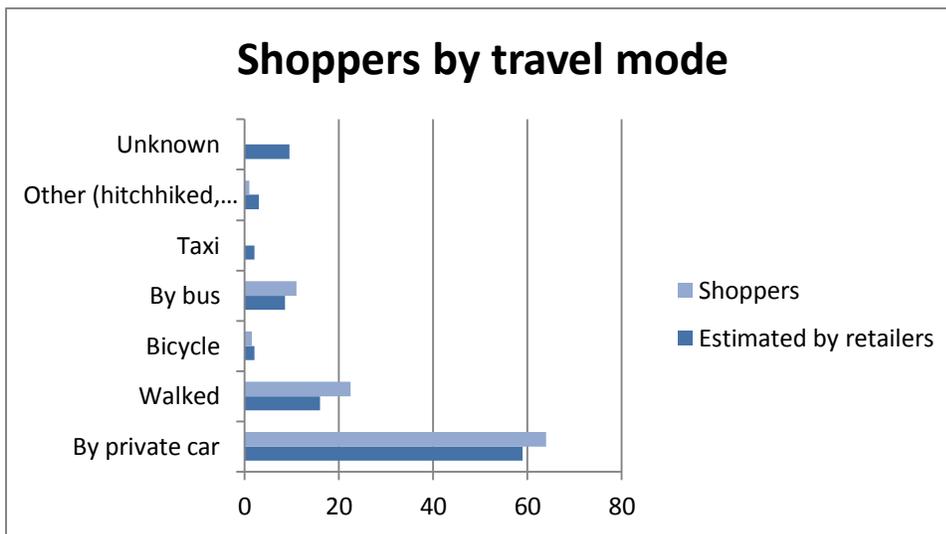


Figure 4.8 Main transport mode used by shoppers



If only the shopper data are compared to the retailers' estimates more shoppers come by car than retailers estimate (Figure 4.9). This is a somewhat arbitrary distinction because respondents who gave other main reasons for being in the CBD were still shopping. It is important to consider the need for short term parking for those coming to the CBD to shop because the data suggests more shoppers drive into the city than other respondents.

Figure 4.9 Shoppers by travel mode with retailers' estimation



4.4 Convenience or Price?

The retailers surveyed and a number of CBD street survey respondents commented that cost of parking is a deterrent for people to shop in the CBD.

Parking way too expensive, I spend less time in town because of this

Two statements that appeared repeatedly in the interviews was the desire by people in Dunedin to park right outside where they are going. This includes, according to one DCC manager, commuters. The other is that Dunedin people expect parking to be free. Many of the responses in the CBD survey show a tendency to lump these two together – convenient and free is the desired parking state.

It is quite expensive, particularly around the Octagon - hard to get parks during the day.

Cheaper and more all day parking zones would allow me to drive into Central Dunedin instead of parking on Carroll St and walking.

Cheaper parking, otherwise you spend more but then no one will move car

While convenience and cost do go hand in hand it is paid parking that helps create convenience. “Free or very low cost on-street parking benefits only a few commuters. Employees and shopkeepers who arrive first in the morning occupy the most convenient spaces, forcing customers arriving later to waste time and money looking for an available space farther away.” (Weinburger, Kaehny, Rufo, 2010 p2). The question then is which is the more important to users of Dunedin’s CBD? The ability to park close to where they want to go or the price? Figure 4.10 below shows a preference for convenience over cost. The two categories relating to price ‘It is free’ and ‘It is cheaper than other paid parking options’ make up 25% of the reasons for choosing that park. The two convenience related categories “It is close” and “It is easy” make up 37%.

Figure 4.10 CBD survey responses about their parking choices

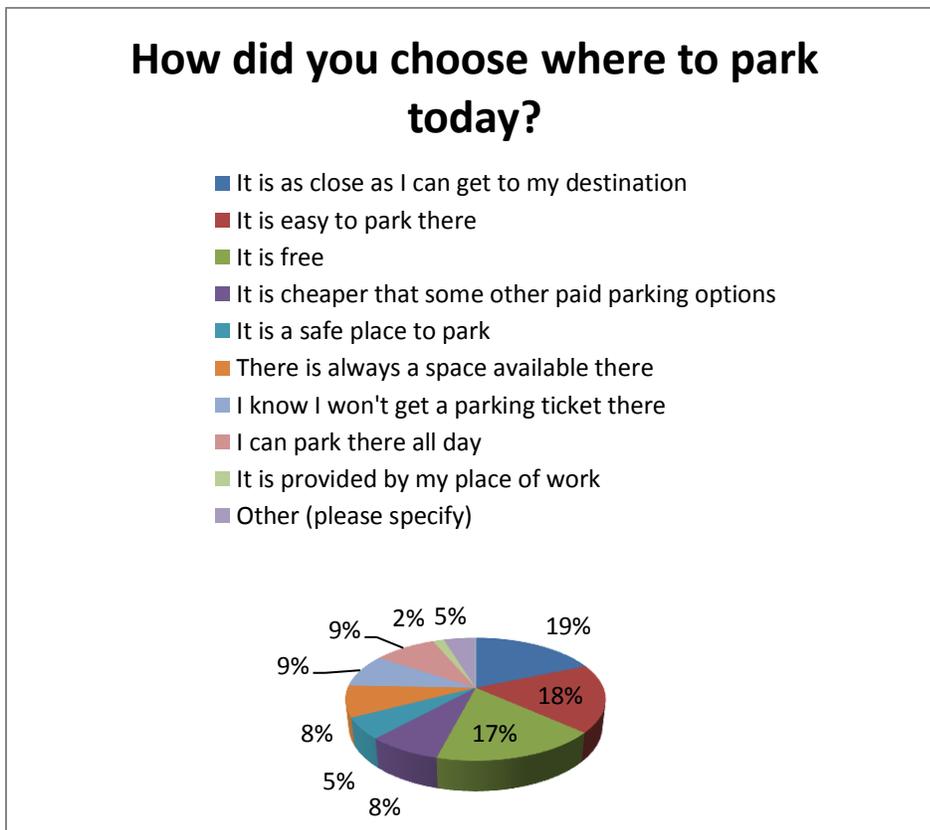
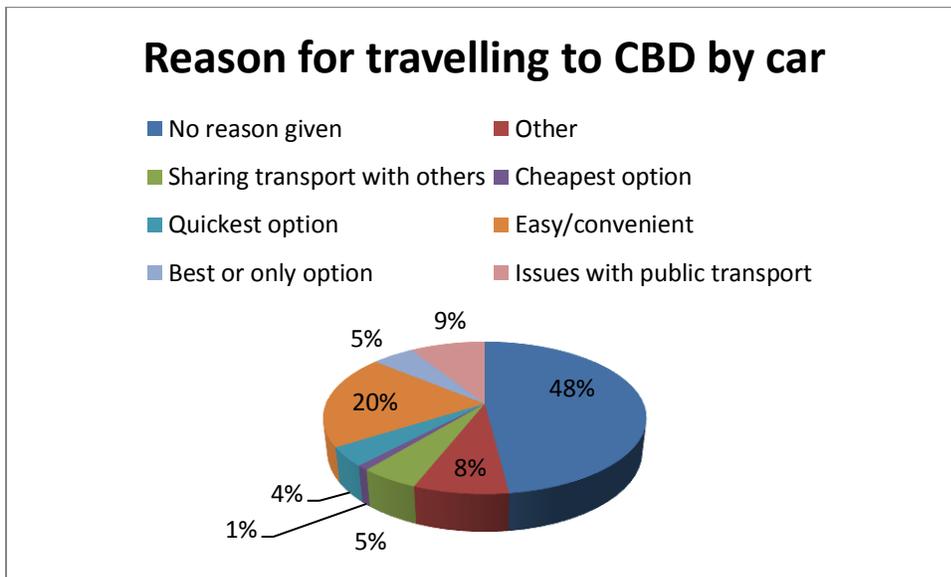


Figure 4.11 echoes this desire for convenience showing that 20% of the respondents chose to come by car because it was convenient. This is the largest category aside from 48% who chose not to give a reason.

Figure 4.11 CBD survey response relating to reason for travelling by car



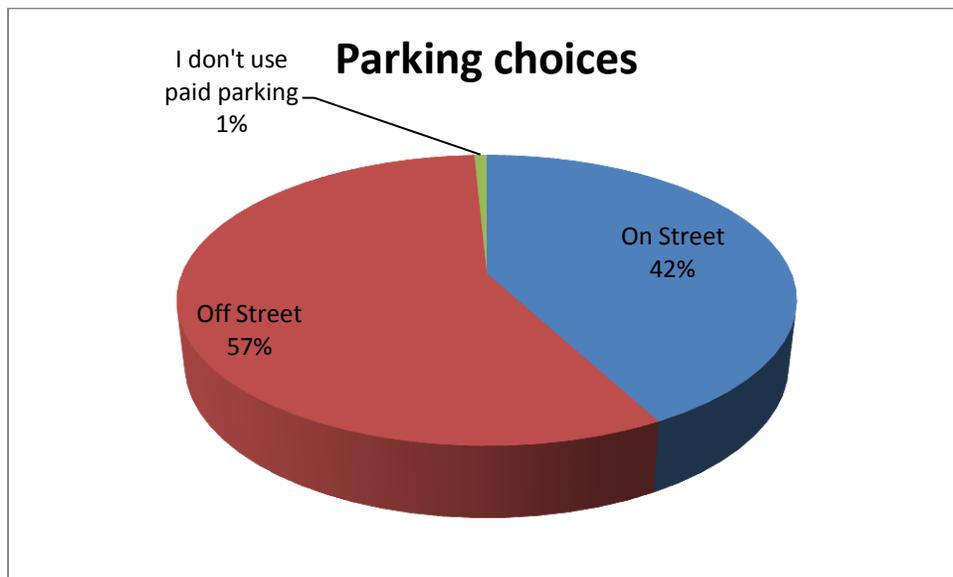
Of those saying they came by car because it was easy and convenient, 11% were negative about parking

“I hate the price of parking - too high”, “Getting parks is hard”, “Dunedin parking is terrible. The end”, “It’s ridiculously expensive. Extortionate I tell you!”

Despite this these people still chose to come into the CBD. This suggests that while they are not happy about increased parking charges and/or the ability to get the park they want, the costs are not beyond the threshold of what they are willing to pay. The comment that getting parking is hard is open to interpretation about whether the parking that is hard to get is free parking or any parking. Occupancy rates have unfortunately not been available from the council in order to determine whether Dunedin’s parking is overcrowded but interviews with council managers and Parking Working Party members suggests the level of use is determined by the perceived convenience. Parking buildings have tended to be underutilized due to people preferring on street

parking or off street surface level parking. Recognising this, the council made the parking buildings the cheapest place to park. When asked whether this has increased usage one response was *“No, that’s quite strange, it hasn’t really pushed them into the parking buildings. There is a slight increase but not what we would have thought given that they are the cheapest form of parking”*. This suggests that people visiting the CBD favour convenience over price and 42% of those driving into the city said they use on street parking despite this being more expensive than off street. One surprising comment from some of those who prefer off street parking was that they chose it because they cannot parallel park.

Figure 4.12 Parking choices



For those that are extremely price sensitive about parking and as a result choose to not come to town to shop as frequently if at all, a question that would be worthy of further research is whether these people are big shoppers. Shoup believes not, that those who are unwilling to pay for parking are also likely to spend less than the average. (2005, p399).

This leads to the question of who does spend the most? And what mode of travel do they use? Previous studies such as the Sustrans study in Bristol found that people who walked, bussed and cycled out spent those who came by car once the frequency of visits and the average spend were calculated together. Those on foot also tended to visit more shops each trip (Sustrans, 2006).

Using the CBD survey data Dunedin shows a different picture. This data is done with a rough calculation using averages of the spend and frequency categories and only looking at respondents who classified themselves as walkers, bus users, cyclists and car owners. Again, this difference may be because the survey included people in Dunedin for a variety of purposes. The detailed calculations are listed in Appendix Seven.

Figure 4.13 Mode, spend and purpose

Bicycle	Less than \$10	\$10 - \$20	\$21 - \$50	TOTAL
Estimated annual spend by cyclists	\$ 2,600	\$ 6,240	\$ 1,470	\$10,310.00

Bus	Less than \$10	\$10 - \$20	\$21 - \$50	\$51 - \$100	Over \$100	TOTAL
Estimated annual spend by bus users	\$ 9,100	\$ 8,700	\$ 48,440	\$ 86,750	\$ 65,100	\$218,090

Walking	Less than \$10	\$10 - \$20	\$21 - \$50	\$51 - \$100	Over \$100	TOTAL
Estimated annual spend by walkers	\$ 23,320	\$ 83,010	\$ 101,521	\$ 101,410	\$ 62,400	\$ 375,661

Own Car	Less than \$10	\$10 - \$20	\$21 - \$50	\$51 - \$100	Over \$100	TOTAL
Estimated Annual spend by car owners	\$ 24,130.00	\$ 127,380.00	\$ 182,770.00	\$ 241,800.00	\$ 285,000.00	\$861,080

Although much of the data above shows that while there is some unhappiness to pay for parking it does not seem to be a major deterrent for people wanting to shop in the CBD. It must be remembered however that this study was conducted two years after the parking changes were made, long enough to have blurred or erased the initial effects.

4.5 Impact on retailers

At the time of the changes in July 2009 there is strong empirical evidence to suggest that the new strategy had a major effect on retailers although the duration of these effects is unknown. The Otago Daily Times ran a remarkable number of articles about the changes and the retailers interviewed said they saw a dramatic immediate drop off in trade.

The day the new plan came out our morning trade disappeared basically we needn't have opened the shop until midday.

Immediately the changes happened we had a 40% downturn in business where we had a 20% growth before that.

The retailer survey provided a slightly less cohesive view although only two said the changes had a positive effect on their business. The survey sample collected door to door concentrated on the area from the Moray Place/Princes Street junction North to Albany Street. Coffee shops, chemists and food businesses were deliberately included because these were the types of shops mentioned by Chamber of Commerce, council managers and the retailers interviewed as having been strongly negatively impacted by the changes. The block of Frederick Street from George to Great King Street for example was included because one coffee shop in this block had expressed his concern about the effects of the changes on his trade. Unfortunately coffee shops tended to have rostered staff resulting in some surveys getting lost despite multiple attempts to collect them. An effort was also made to mostly target the independent shops, the malls were not surveyed other than the shops that were sent the survey by the Chamber of Commerce. The survey was broad enough that many different types of businesses were surveyed and the sample can be regarded as fairly representative. The by business types is shown below in Figure 4.14.

Figure 4.14 Retailer survey respondents by sector

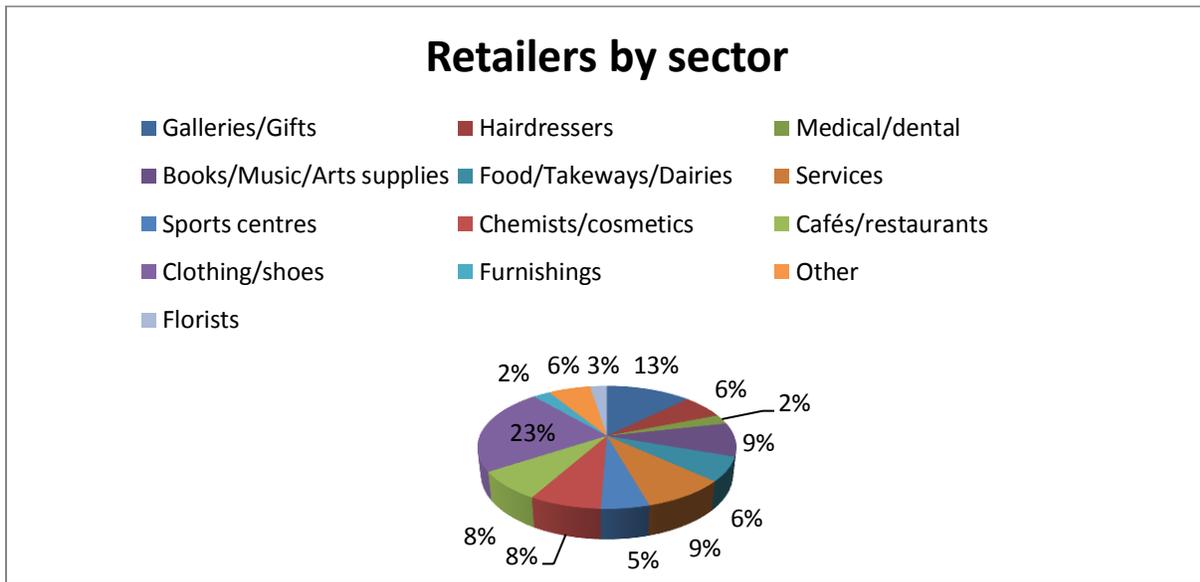
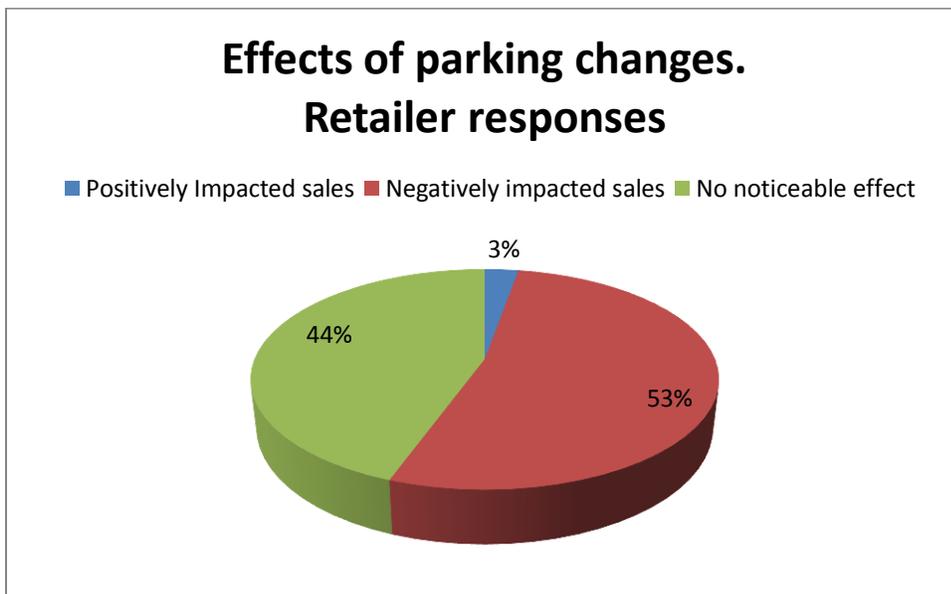


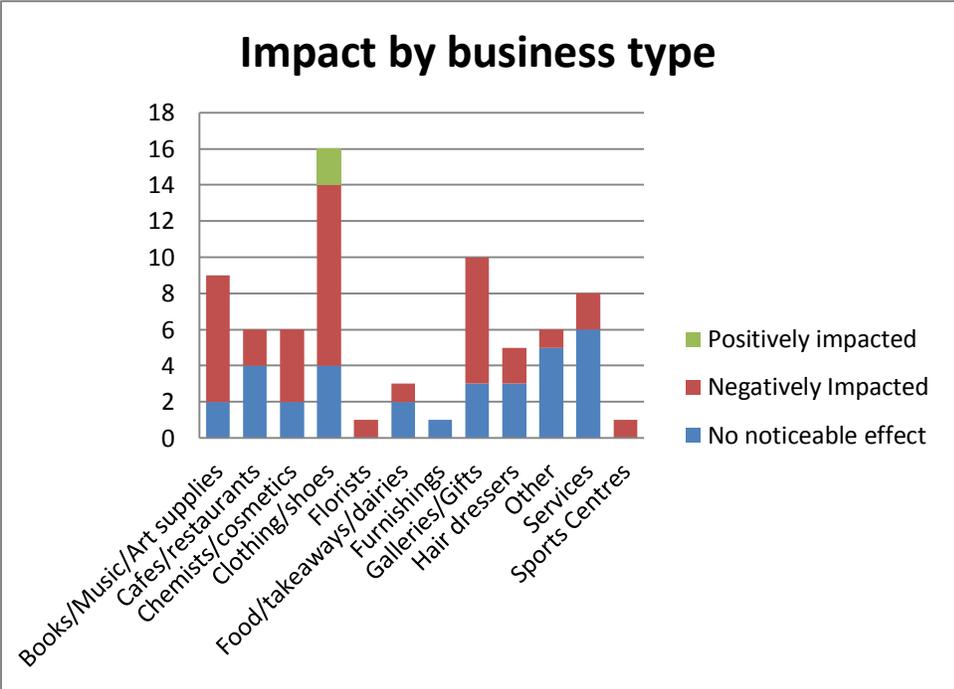
Figure 4.15 gives the overall responses about the effects on business according to the survey respondents. The percentage negatively impacted was 53% outweighing the combined percentages of those who noticed no effect and those who said there was a positive effect. The total number of completed retailer surveys was 78. The total number who said they had been negatively impacted: 38; positively impacted: 2; no noticeable effect: 32.

Figure 4.15 Overall effects from retailer survey



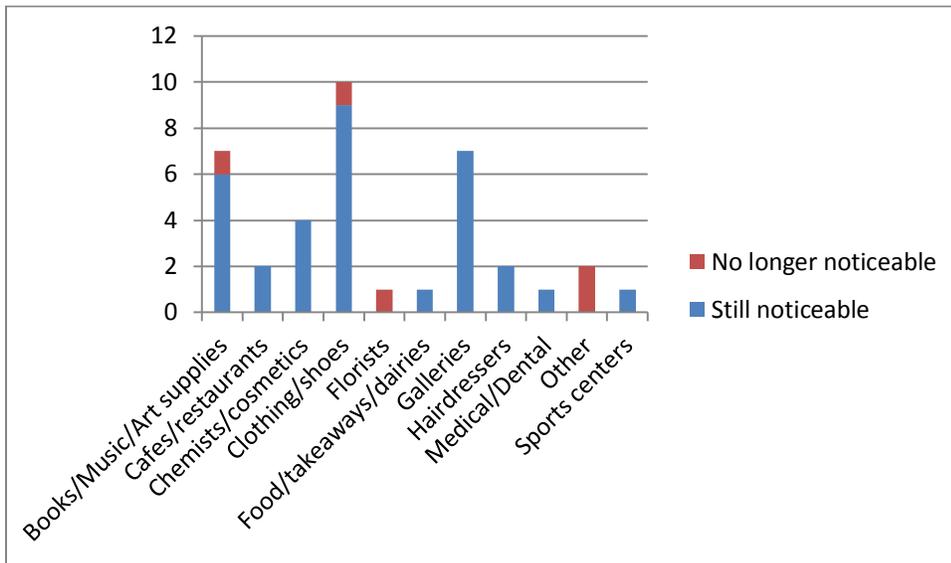
Some types of businesses showed a higher number of negatively impacted retailers than others. Chemists was one of these groups as many people had noted prior to the survey but cafes and food outlets including takeaways were lower than expected.

Figure 4.16 Retailer impact by business type



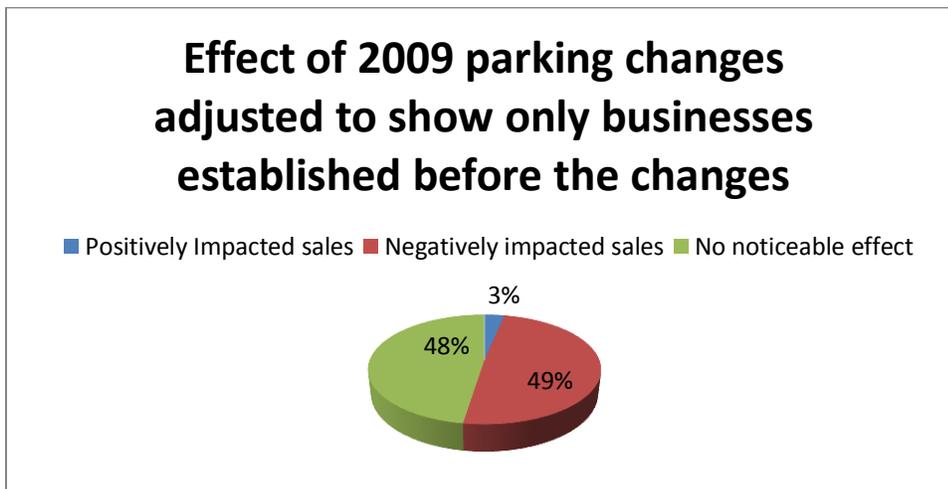
Of the businesses who said they were negatively impacted the majority believed they were still feeling the impact two years after the changes.

Figure 4.17 Negatively impacted retailers and number saying the effect is still noticeable



One of the interesting findings when the data was further analysed was that of the 38 who responded that they had been negatively impacted by the parking changes 8 were established after the 2009 parking changes. All of these claimed the changes are still noticeable. Of the 32 businesses that said there had been no noticeable effect 3 were established in 2010. Of the two that were positively affected, one was established in 1879 and moved to its current location nine years ago. The other is in the Meridian Mall which offers one hour off street parking free with a shopping receipt over \$10 from the mall. Figure 4.18 below shows the percentages adjusted to remove businesses established after the 2009 changes.

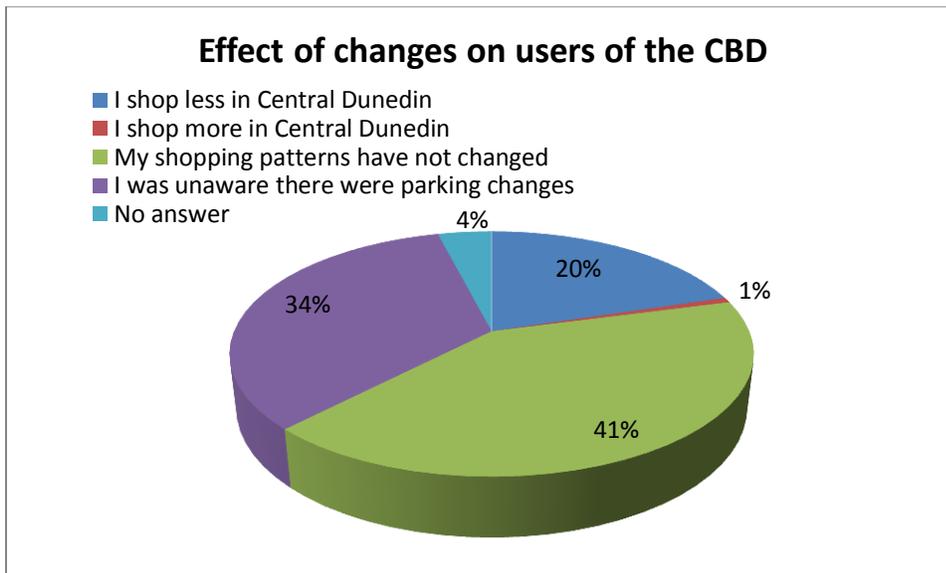
Figure 4.18 Effects adjusted to show only businesses established before the changes



4.6 Retailer perceptions and CBD street survey responses

So how do the retailers' perceptions match with the respondents in the CBD street survey? Figure 4.19 gives the responses of CBD street survey respondents when asked what effect the changes had had on their shopping behavior. As noted previously only people in the CBD were surveyed. Those that may have changed their shopping habits away from the CBD because of the parking are not represented.

Figure 4.19 Effects of parking changes on users of the CBD



In conclusion to the first research question, some retailers did experience a drop in business directly after the 2009 changes. This runs counter to the council's stated economic goal of assisting economic development. The council however is supporting business in the CBD through providing on and off street parking. Many cities either require businesses to provide parking or the council provides parking but requires businesses to pay an annual sum to offset the cost. The Dunedin City Council has taken the approach that it is better to not charge businesses in the interest of keeping a viable CBD and Dunedin has retained a strong, compact shopping area.

Other councils ask for a financial contribution in lieu of providing parking, which is then put into a big bucket and used to fund provision of car parks. Dunedin has been shy of doing this I think because we don't want to put people off locating in the CAA because then they may want to locate in out of town shopping malls etc. (Dunedin City Council Manager)

The council however has followed international trends towards paid parking but without providing a counterbalance. While the strategy of providing paid parking makes long term economic sense, reduces congestion, cruising for parking and pollution and increases the availability of parking; the council did nothing to mitigate the immediate negative effects on retailers and the resulting political fallout until after the parking restraint strategy was introduced.

4.7 Environmental sustainability

The second part of the council's goals under scrutiny is its move to ensure environmental sustainability through demand management for parking (Dunedin City Council 2008). Achieving this requires a transport mode shift for a proportion of the users of the CBD. The council has attempted to encourage this shift through pricing the parking to a level meant to discourage commuters from driving into the city and tying up parking spaces all day. The problem was that parking prices alone did not provide any support or offer any alternatives for commuters to change their transport mode. This was exacerbated by the Otago Regional Council increasing bus fares at the same time which defeated the intent to show a financial benefit to commuters to change. There has been some shift over the past two years with one DCC manager noting that while the council has had positive feedback from shoppers that they can now find parking *“we've got commuters who are complaining [that] they are parking out on the peripheral areas and have to walk further”*.

As can be seen in figure 4.20 people choosing to come by private car outweighs all other mode choices combined. This shows that a lot of effort needs to be made to encourage people into choosing other options. Sustrans UK has an Active Travel Toolkit and work with employers, families, educational institutions and neighbourhoods to encourage people to become more active, improve their neighbourhoods to improve walkability and easier cycling. While small steps are being undertaken in Dunedin to improve transport options such as bike racks on buses to encourage people to bike into the city knowing that they can catch a bus home, there does not appear to be an integrated approach to help people get out of their cars. Had an integrated plan been in place at the time of the changes the political and economic fallout could have been

substantially lessened. Of course doing this required funding and as mentioned in the background section it is funding for these types of projects that the current central government has cut. This would then require the Dunedin City Council to self fund as part of an integrated transport plan at a time that it is finding difficulty balancing its budget and seeking cuts in services.

Figure 4.20 Weekday travel modes by percentage

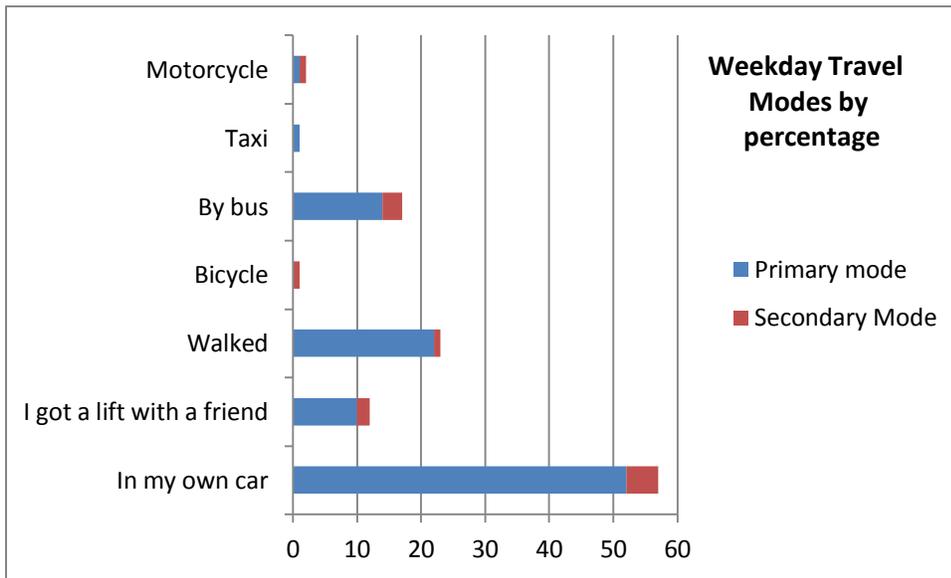
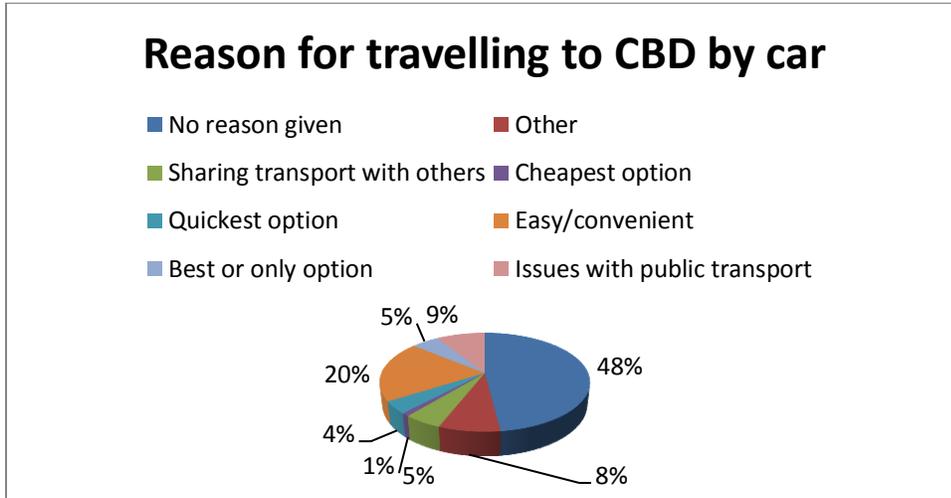


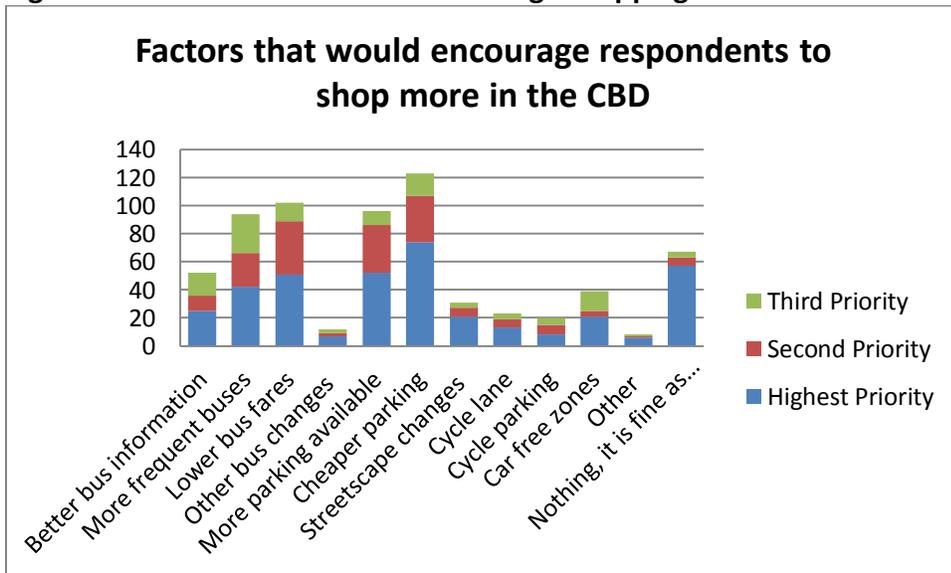
Figure 4.21 shows responses given when survey respondents were asked their reasons for choosing to come by car. 48% gave no reason. It is tempting to consider that these are people who choose to use their car out of habit and have not considered any particular reason other than that. As one respondent said *“I always do”* and several had negative opinions of the other options. *“The bus sucks!”* *“Buses are no good.”* *“The other options are rubbish.”* These are not opinions that are going to change quickly nor without better services, information and encouragement.

Figure 4.21 Reasons for travelling to CBD by car



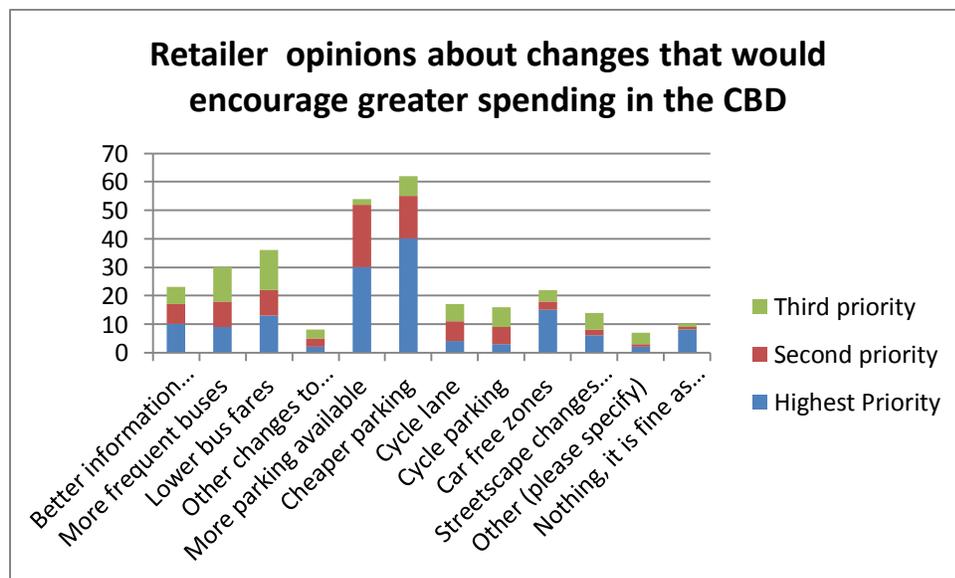
Determining ways to encourage modal shift is outside the scope of this study but would be an interesting research question. With its emphasis on parking strategy changes this study instead included a question about what would encourage respondents to shop more in the CBD.

Figure 4.22 Factors that would encourage shopping more in the CBD



Considering that 45% of respondents travelled into the CBD in their own car and only 11% rode the bus, there is a significant number of respondents concerned about improvement to buses and this is important when considering the council’s stated goal towards environmental sustainability. Four categories stand out: more frequent buses, lower bus fares, more parking available and cheaper parking. Retailers had a not dissimilar view on what would encourage greater spending as shown in Figure 4.23 below although the emphasis on parking was greater. The CBD street survey listed lower bus fares as the second most important change while retailers had this as a distant third to cheaper parking and more parking. This suggests that a mode shift to public transport could be possible for a proportion of the population if more emphasis was placed on making buses an easier and affordable option. This is of course difficult under the current split in transport between the Dunedin City Council and the Otago Regional Council.

Figure 4.23 Retailer opinions about changes to encourage more shopping



Looking solely at the top priority chosen shows a wider divide between the opinions of CBD street survey respondents and retailers. Street survey results show cheaper parking at the top of the list as does the retailer survey but after this there is a far wider spread within the street survey responses while the retailers show a strong belief that parking has a profound impact on spending. A much higher number of street survey respondents felt that there is nothing needed and the CBD is fine as it is while a much lower percentage of retailers held this view.

Figure 4.24 Highest priorities to encourage more spending – CBD street survey

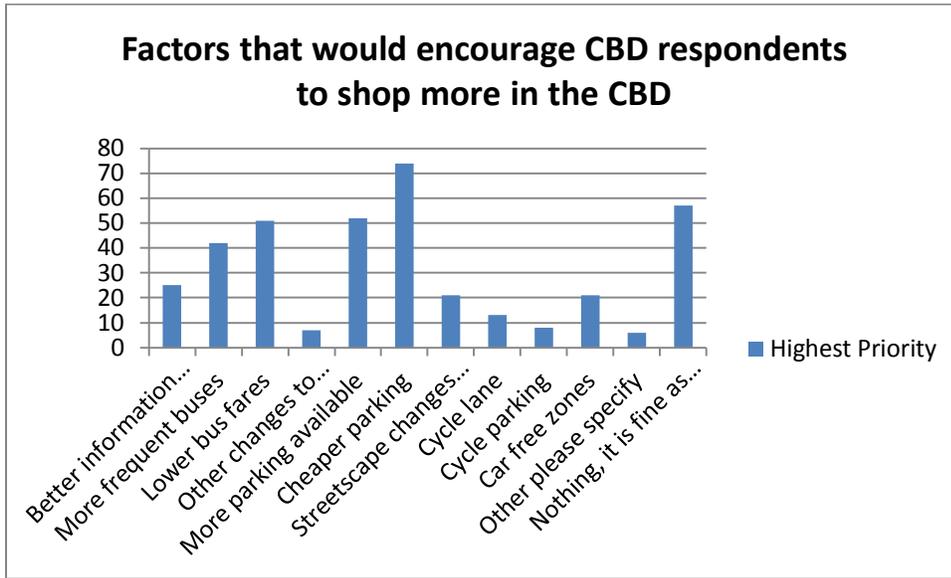


Figure 4.25 Highest priorities to encourage more spending – Retailers

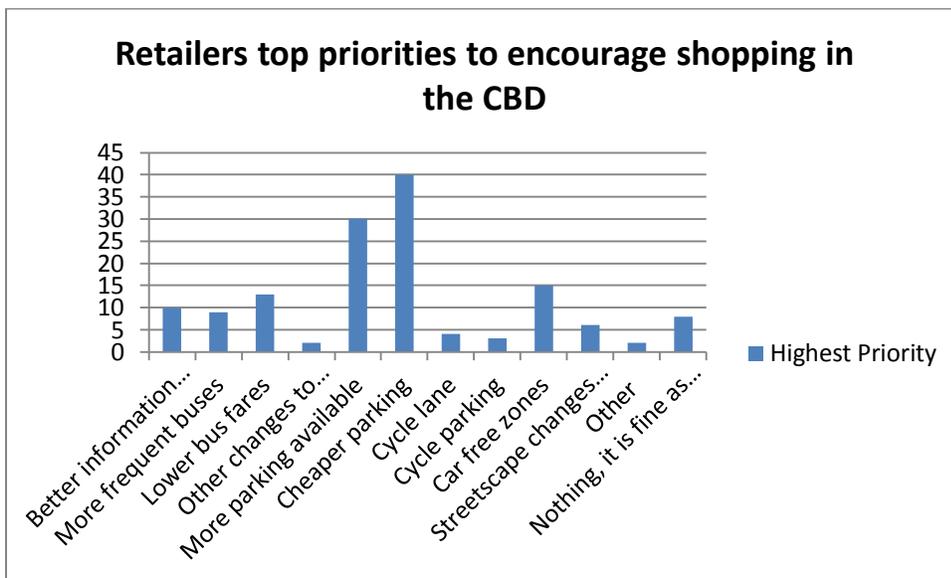
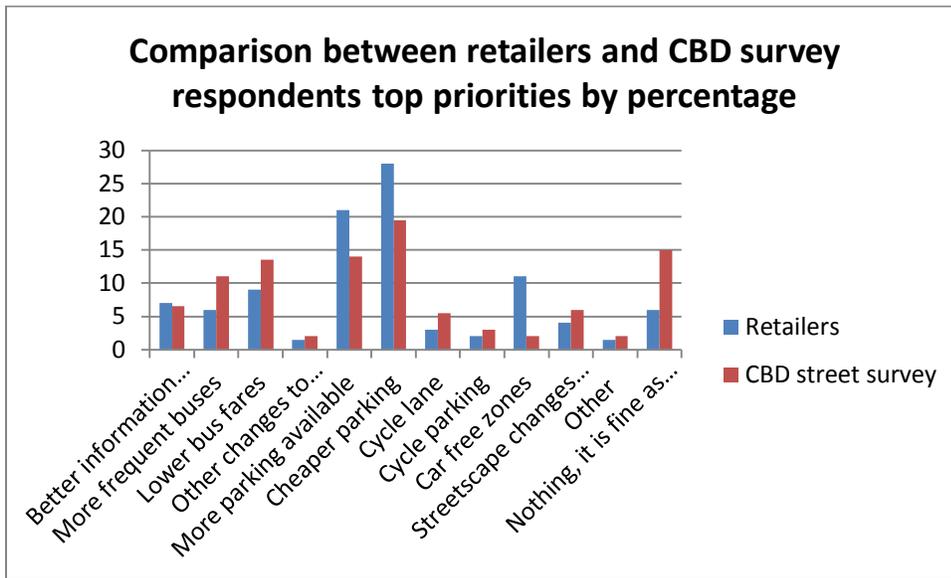


Figure 4.26 Comparison of top priorities by percentage



In conclusion the second research objective environmental sustainability shows that a great deal more can be done to encourage mode shift and that some residents may be open to doing so if they were given encouragement and incentives. One of the main issues is that managing the requirement for joined up policy where parking is part of a larger transport strategy with wide economic social and environmental goals is complicated by the requirements of various layers of government and the priorities of the city itself and its current management structure. These issues will be discussed in the final section of this dissertation.

CHAPTER Five: CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

There are a number of conclusions that can be drawn both directly from the data collected and also by examining research done elsewhere in the world. The council has understood the correlation between paid parking and improving traffic flow and has applied paid parking in an attempt to reduce cruising for parking, relieve congestion, reduce pollution and encourage people to use alternative methods to come to the CBD. The problem appears to be that there was a lack of integrated transport planning which resulted in the parking changes being implemented as a stand-alone initiative.

5.2 The importance of consultation

The Dunedin study shows in stark relief that implementing policy without adequate consultation is not the way to secure support from residents or businesses. Parking is political and parking changes made in isolation and with poor consultation are highly politically charged. The effects within the council are still being felt today just as they are among the retailers and this has led to a reactive strategy when dealing with parking.

It is important to talk a little about what consultation means. One council manager commented that consultation is:

a critical component [and it wasn't] at a level that the businesses could understand what the implications were....It wasn't clear even [to] the councilors....A business owner on the street didn't know what the changes were going to be outside his or her door until they happened.

The same manager then added:

I suspect if we had gone out and consulted more with the businesses there would have been an uproar about the introduction of paid parking and our councilors would have wilted and not wanted to.

This suggests a level of consultation that is about showing retailers what the council already had planned rather than involving retailers in the strategy. If the council is going to engage in

consultation it is important that it truly engages. Innes and Booher in Planning With Complexity acknowledge that “it is easier to make a decision if one does not include a difficult stakeholder or an interest that seems antithetical to the goals the organisers have” (2010 p 101) but ignoring those opinions and failing to engage can lead to bigger problems later. A true dialogue and an open discussion about the problems that are trying to be solved is time consuming but may be less time consuming than dealing with the fallout. And certainly less painful; as one council manager said “*someone made a comment at some point that we needed to review the parking strategy and I said immediately, I resign*”.

5.3 Blocks to effective consultation

Another problem the council encounters when wanting to consult with retailers is the lack of a cohesive retailer group. Nor is there a database of CBD businesses. The Dunedin City Council monitors food businesses for public health reasons and also has a list of building owners because it is building owners who are responsible for paying property rates. As one interviewee pointed out, the recent spatial planning public consultation included a meeting with retailers to consider their views. The Chamber of Commerce sent out a notice to its members but this is a small subset of the total number of retailers and the response was low. An attempt was made to go door to door but the final number attending was only four CBD retailers. It made for some good in depth discussion but represented a limited variety of views. This is relevant in terms of the council’s attempt at consultation about the parking changes. In that instance, according to one retailer, the council sent out letters to 600 retailers and received 30 responses. According to this retailer the council then assumed there was no major issue with the changes and went ahead. Whether this view was correct or not, the question remains how best the council could aim for a greater response rate on issues that may affect the CBD businesses. As the same respondent pointed out, retailers to a large extent are the CBD. The council has realized its mistake and did visit retailers after the changes were made but by then the damage, as far as the retailers were concerned, had been done.

5.4 Structural factors

Internal structure of the council appears to be a block to joined policy that could have resulted in an easier implementation.

we've got a transportation team who report to one general manager and we have a roading team who are more the operational roading staff who report to a different general manager (Council manager)

This created a situation where the people implementing the changes and having to defend those changes were not involved in the design nor the consultation process. This resulted in those involved in the implementation feeling caught between angry residents and retailers on one side and unhappy councilors on the other asking why they had gone so far with the changes.

External structures also create barriers to joined up policies with various levels of government having different responsibilities and funding criteria that change with a change of central government. When this is taken broader to encompass not just transport but economic, social and environmental goals then it is not difficult to see why parking strategies are complex.

5.5 How critical is parking on retail performance?

Research into parking in various parts of the world and the data collected in Dunedin show that local authority parking strategies impact significantly on retailers. In the case of Dunedin this needs to be broken into two parts. There was the backlash to the changes which was perhaps caused more by the way in which the changes were made than the changes themselves; and then there is the parking. These are two distinct and important categories for Dunedin.

Retailers commonly fear the introduction of paid parking believing it will drive their customers away. Research however suggests the opposite. Where paid parking has relieved congestion and increased convenience, where it has reduced or eliminated cruising for parking, city centres have developed into places people want to visit because it is a pleasant environment. McCahill and Garrick's study Influence of Parking Policy on Built Environment and Travel Behaviour in Two New England Cities lays out a stark contrast between Hartford Connecticut and Cambridge

Massachusetts and conclude that parking restraint strategies and the taming of traffic has been instrumental in encouraging a strong economy in Cambridge while Hartford has suffered through its failure to address parking as “part of a comprehensive transportation planning process” (2010 p2187) exacerbated by its continued emphasis on free parking through minimum parking requirements ordinances.

Still and Simmonds, Parking restraint policy and urban vitality reviewed “empirical, attitudinal and modeling studies” (2000, p291) and concluded that the evidence is mixed about the impact of parking policy on retailers but made two points of direct relevance to the Dunedin study. “The impact on land use and the urban economy is the least well understood issue regarding parking restraint”(2000, p14) and “if city centre parking restraint policies are introduced alone, then there will tend to be a decline in employment within the urban centre” (2000, p313). The key here is **if the policies are introduced alone**. The failure to integrate the parking restraint policy into a broader transport framework that supported the changes and increased transport mode choice was a major failing in the Dunedin implementation.

5.6 Parking choices

An effective parking strategy requires balancing supply and demand. Optimal parking rates are generally accepted to be between 80 - 85% occupancy (Shoup, 2005). If supply is plentiful then demand does not need to be tempered but if demand is pushing parking occupancy above the maximum it results in a range of impacts such as people cruising for parking, a loss of ability for shoppers to park close to their destination, increased pollution, increased traffic accidents and general degradation of the area leading to a loss of enjoyment for those visiting. Were these types of impacts issues in Dunedin? According to the Dunedin City 2007 Parking Study undertaken by Gabites Porter, parking inventory has been growing at a slower rate (2.5%) than the number of private cars (8%) over the 2001 - 2007 period (Gabites Porter, 2007 p2). The 2007 Parking Study encompassed a broader area than the CBD area so it is hard to exactly compare its figures with the area of this dissertation however the Gabites Porter study does break out some findings into two sub areas: retail north and retail south. These areas combined give the on street parking total is 1869, with 835 north of Stuart Street and 1034 south of Stuart Street

(2007, p14). The same study notes that while off street parking demand overall has increased it still only averaged 55% occupancy in 2007. While the occupation rates of CBD parking buildings has increased slightly they are still below optimal rates. One council manager noted in particular that the Great King Street parking building tends to be underutilised.

According to the 2007 study on street time restricted parking showed distinct peaks with P120 zones reaching 95% occupancy between 9 – 10 in the morning and all day parking peaking at 85%. Other zones were lower and it is hard to extrapolate occupancy specifically for the CBD. Unfortunately current information was unavailable from the council however an informal survey by walking the CBD showed current occupancy, particularly north of the Octagon to be well utilised as shown in the following photos.

Photo 5.1 Octagon Dunedin midday on a weekday.

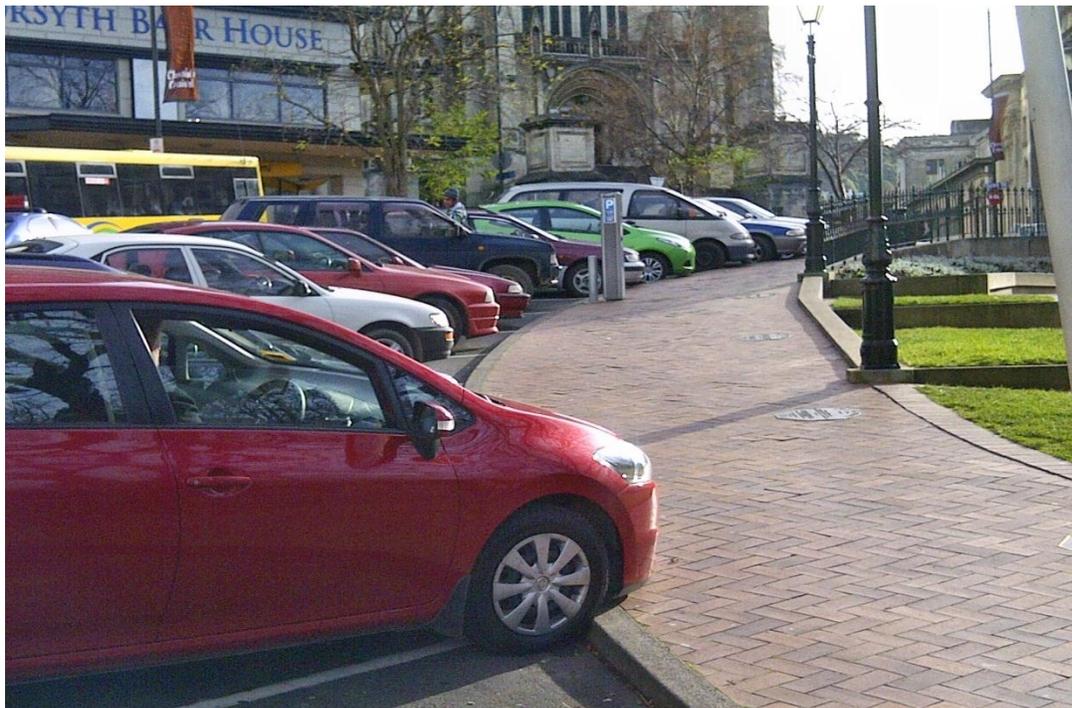


Photo 5.2 George Street main shopping area midday on a weekday



Photo 5.3 George Street north end of the CBD midday on a weekday



Photo 5.4 Warehouse district south of the Exchange. An area utilised by workers and visitors to local businesses more than shoppers.



Photo 5.5 Exchange area midday on a weekday



In relation to off street parking, the 2007 study reveals an interesting statistic which is backed up in this study. A survey conducted at between 12:30 - 13:00 showed The Great King Street parking building at 67% full (\$1.60 per hour); the Moray Place parking building 84% full (\$1.60 per hour); Meridian/Kmart parking building 68% full (\$1.50 per hour with first hour free with \$10 shopping receipt) and Farmers surface level car park 89% full (\$1.80 per hour). This shows a preference for surface level parking over parking buildings that outweighs price. There is no room in the CBD to add more on street or surface level parking without demolishing buildings, narrowing footpaths or removing bus stops. The preferred choice then is to manage parking demand through price and transport mode shifts.

People's choice of where to park is made up of a variety of factors and these can change depending on the amount of time available to get to a destination, the weather, mobility, travelling companions, price. Overall, two main factors are price and convenience. Despite complaints about the cost of parking, research suggests that many users of the CBD are choosing convenience over price.

5.7 What about the money?

Some interviewees raised the point that the council now relies on the revenue from parking. One council manager said that he has had councilors coming to him wondering if they should revert back to time limited but free parking to which he responds that they can but that they need to remember that it will result in a shortfall that will then require a rates increase. In a recent move by council to increase the parking rates for monthly commuter parking only a small minority of councilors (interestingly all women) voted to tag the money for transport. The majority wanted the increase to go into the general fund. This results in parking costs being applied as a stick measure but without any carrots to make the changes more palatable. One carrot that will be discussed further in the recommendations section is the allocation of parking revenue for improvements on the streets it was collected on.

Interestingly, the question asked of all interviewees: What is the purpose of regulated parking? did not elicit a single comment about revenue raising. All said it was a control measure to ensure that people could get where they needed to go, to provide freedom of access and to be fair to all sectors. The question of parking revenues came out later in interviews but only with a few of the respondents.

Parking buildings make a slight loss....but overall...we make about a 2 million dollar surplus. That 2 million goes in to offset rates.” (Dunedin City Council manager)

If you reduce the cost of on street parking to a point where you get rid of the 2 million dollars...we'll just get gridlock and secondly we'll need to put the rates up by 2%.....and also we wouldn't be getting enough revenue to fund the parking meters.” (Dunedin City Council manager)

This last comment shows that the \$2 million that goes into the general council fund is absorbed before all costs to provide the parking is recovered.

When there are empty parks around [ticketing] is purely a harvesting thing. It should be about the flow and the turnover but it seems to be about the money. (Retailer)

The money being put into the general fund does not provide any guarantee that it will be used to offset the costs of parking. These are far greater than just the direct costs. As noted by a number of researchers (Shoup; Litman; and Verhoeft, Nijkamp and Rietveld), the true cost of parking includes capital value of creating the parking, opportunity cost of loss of valuable land, the cost of the land itself, environmental cost and health and safety costs. When all of this is factored in the cost of providing parking is considerable.

5.8 The trouble with buses

Concern about the effectiveness of Dunedin's bus service was raised repeatedly over the period of this study by retailers, parking working party committee members, and shoppers. This was also a major focus in the spatial planning public forum. The Dunedin City Council does not provide the bus service in Dunedin and has just sold its bus company Citibus to a private sector company because it was losing money. Central government provides some public transport subsidies to regional councils who are then tasked with providing public transport in their regions. The relationship between the Otago Regional Council and the Dunedin City Council is

outside the scope of this study but the decision of the ORC to increase bus fares just as the DCC raised parking charges suggests a less than optimal dialogue between the councils.

5.9 The trouble with meters

The 2009 parking changes included the introduction of new pay and display meters. These meters should provide valuable data about parking to the council and provide various payment methods to remove the need for people to carry the correct change or to be anxious about running out of money in the meter. The council attempted payments by mobile phone and payments by debit card but these proved to be flawed and were withdrawn.

“Now we have fewer machines so you can’t actually pull up at a car park, step out of your car and fill the meter. You now have to lock your car, walk some distance, come back” “There are a whole lot of things that have changed that don’t acknowledge how people function...such as do people carry money with them all the time. No they don’t”. (Retailer)

The council has recognized this as a problem and is implementing an in car “smart park’ device. “A new electronic "in-vehicle parking meter" has been launched in Dunedin, designed to ease the pain felt by motorists grappling with city parking meters on a daily basis” (14 ODT July 2011) This device will require \$50 prepaid parking and a \$7.50 monthly rental of the device so is more aimed at companies with employees who spend work related time in the CBD rather than short term shopping use.

5.10 The role of the media

The confusion and anger which followed the parking changes were fuelled by articles in the Otago Daily Times [Parking Anger Boils Over](#) (10 July 2009); [Parking protests by bagful](#) (28 September 2009); [Businesses back parking protestor](#) (18 September 2009); [Students Struggling with Parking in Campus Area](#) (25 July 2009); [Woman incensed at parking charges](#) (7 August 2009); [Parking fines generate \\$2.4m a year](#) (17 December 2009); [Council Scrambling to Quell Parking Furore](#) (8 August 2009).

The articles have slowed but are still evident Parking ticket tally tops 70,000 (1 February 2010) Irate cafe owner rips up parking signs (24 May 2010); Drivers fuming at rise in parking fees (10 June, 2011).

The council is now taking a reactive approach to parking and there is a great reluctance to reopen the issue. Changes are being made on a case by case complaints basis which results in retailers effectively driving the strategy by initiating the requests for changes. The council then asks for proof that the change is acceptable to other businesses on the block and if so, the change is likely to be approved.

It's about getting a balance and sometimes you don't get it right first time.....and now it is harder for us to tweak the system to get it to work better because if we go anywhere near it the perception is that there is going to be a big outcry again (Dunedin City Council manager)

5.11 Role of the Parking Working Party

The Parking Working Party (PWP) proved helpful in getting the council through the worst of the fallout and consequent changes. It has not met since the election in October 2010. Its purpose is described differently depending on who is asked.

The Parking Working Party is meant to be looking at the bigger picture (PWP member)

I would like to see it having more of a role in monitoring the parking strategy....so potentially [the council] will do that in combination with the Parking Working Party and maybe report back to them regularly on the monitoring (Dunedin City Council manager).

The role is to look at the issues, what are the requirements and come up with the best and fairest availability to the users.”(PWP member)

It is not its role to be money making but rather to control regulatory parking in a satisfactory manner” (PWP member).

The councilors wanted it set up as a sounding board for working through some of the changes (Dunedin City Council manager).

The PWP chair and DCC staff now handle most situations and will email suggested solutions to the PWP if needed.

I'm keeping a watch on behalf of the collective members for the hot spots (PWP chair).

It is the group's role to get in and work with both staff and the people who are concerned about the change and see if there is a way through that will suit all parties so it is an arbitration role, watchdog role (PWP chair).

The Parking Working Party could be strengthened and utilized for more than just the reactive role it is filling currently. This is the one forum CBD businesses, the Chamber of Commerce, the university, the hospital, the community, councilors and council staff have to discuss proactive parking strategies.

5.12 Effects on surrounding areas

The university and hospital areas remain problematic for parking and have some impact on the CBD and vice versa. Residential parking is also being pressured by more commuters parking further out and walking the last segment of their journey to work. These are areas the Parking Working Party could involve itself with.

5.13 General comments

Some CBD street survey respondents still hold the belief that they should be able to park anywhere at any time for free.

I would like to see a lot more free parking spaces as it is our right as citizens of Dunedin.

I feel the parking is expensive in town and I will not pay for parking while I am at work.

Others disagree.

Dunedin residents have unrealistic expectations to park in CBD.

Lovely shopping area, there should be less emphasis on cars.

And some covered both sides.

Cheaper parking. Dunedin people are spoilt and lazy.

Attitudes to parking could be a study of its own including attitudes towards enforcement. There is not room in this current study to focus on parking officers and ticketing but it was raised repeatedly and people who would never consider not paying rent for housing do consider there should be leeway for not paying rent for the public space used for parking spaces.

Lower prices of parking and increase expiration time before a ticket is issued.

My parking fines = \$1,600, I'm a student! (CBD survey respondent)

The council appears to do very little analysis of parking data despite having parking machines that can provide the raw data. It is unknown how time consuming this is but knowing more about occupancy rates by zone would help the council fine tune its parking and potentially help to change the attitudes of Dunedin users of the CBD towards parking. Lack of signage was also cited as one of the problems for visitors, especially those arriving in Dunedin for the first time.

I watch time and again camper vans are ticketed, these are people who don't know the rules of the city, they've arrived in town, they haven't understood it, they're confused. They don't pay and next thing they have a \$40 ticket (Retailer).

There's things that could help, for example if we had signage that spaces were available in the car park (Dunedin City Council manager).

An unanswered question related to attitudes is did retailers make the problem worse for themselves by being so vocal? There was a sense in 2009 that people stayed away from the city centre immediately after the changes as a perverse way of showing support for the retailers by voting with their feet, or rather cars, and refusing to pay the increased charges. This provided proof for the retailers claims of the effects of paid parking but was counterproductive for retailers' profitability.

Recommendations

- That the council devises a consultation process that involves the affected parties before decisions are made rather than after.

- Offer alternatives to driving into the CBD such as better bus services, bus passes for commuters, ride share opportunities, permit parking further out from the CBD. The Gabites Porter study recommended the introduction of a “high frequency centre city shuttle” (2007 p3) and this was echoed by many survey respondents and the interviews.
- Create District Improvement Associations and give the parking proceeds, all or a percentage, back to these associations for improvements in the area the money was collected. Two districts could be created in the CBD one north of Stuart Street and one south of Stuart Street. While this would take money out of the council general fund there will be some savings because the District Improvement Associations and the council may have some of the same goals and plans for investment in the area. San Diego runs Community Parking Districts “There are currently six designated community parking districts within the City. A portion of the revenue from parking meters within these districts may be used to implement solutions such as parking lots, parking structures, valet parking, parking/transportation signage, and related extraordinary landscaping, maintenance, and security”. (City of San Diego website 2011). San Diego also runs Business Improvement Districts (BIDS) which are funded through benefit assessment fees levied on the local business that range from \$40 to \$500 per annum although some newer BIDs have higher levies. “A BID provides a business area with the resources to develop marketing campaigns, increase awareness and lobbying efforts, secure additional funding and enhance public improvement and beautification projects in partnership with the City” (City of San Diego website 2011).
- Longer term, if the District Improvements Associations mentioned above proved successful Community Improvement Associations could be introduced. These could allow free or discounted parking for residents but permit parking for commuters. This can relieve congestion and provide neighbourhoods with funds for improvements. In the university area for example funds could be used to improve street cleaning services and security.
- Improve analysis of parking data to then be able to make informed adjustments to its parking strategy. The new pay and display meters can be programmed for different rates for different times and days allowing them to more closely match the demand. While it is

important to listen to businesses about parking that is not working well for outside their shops, the current reactive approach is piecemeal and as one council manager noted:

we often have time restricted parking that is installed at the request of the businesses....then the business moves out or the business says actually we got it wrong we wanted this instead so that's a pretty big problem for the council in terms of resourcing.

- Make parking part of an integrated transport plan. Parking is mentioned in the council's transport strategy and it was out of this that the parking strategy was developed but it is still not integrated. Had it been integrated the 2009 changes would not have been made in isolation.
- Create a more active role for the Parking Working Party. This is a valuable tool that is currently being underutilised.
- Improve maps and signs so people know where parking is available. Gabites Porter suggested putting up real time signage to alert people of free spaces in off street parking.

In Summary

Integrated transport planning and effective consultation could have made the implementation of the 2009 parking changes a much easier process with fewer negative results. Some retailers experienced a downturn in trade severe enough to lead to a prolonged backlash. This in turn has led to reluctance by council to continue to adjust parking to bring it into closer alignment with its stated economic and environmental transport goals. While this is understandable it is a lost opportunity to find solutions that could work not only for the council but also for retailers. The Parking Working Party is underutilised and could provide an excellent forum to explore the recommendations above to determine what will work best within the Dunedin context.

APPENDICES

**A Report for the Otago Regional Transport Committee 2010
Section 1.4 Progress in implementing the RLTS: Overview**

ACCESSIBILITY

**Assessment of how successful interventions concerning accessibility were
How successful were we in increasing everyone's access to appropriate means of transport, enhancing employment, social participation and independence and reducing social exclusion?**

We don't know; there are no means of measuring this definitively at the regional (or district) scale at present. Census results are contradictory, showing, on the one hand, a reduction in the number of Otago households without access to a car and more walking being done and, on the other hand, reduced use of bus and cycling to travel to work.

How successful have we been in enabling local needs to be met locally?

We don't know; there are no means of measuring this at the regional (or district) scale at present.

How successful have we been in making alternative modes (walking, cycling and public transport) viable means of travel?

We certainly made some improvements in walking and cycling facilities at several localities.

Walking and cycling remain less safe and therefore less viable than travelling by car however, because we are retrofitting cycleways and walkways onto roads designed for motor vehicles while continuing to give motor vehicles priority.

Have we improved access from rural areas and small centres, including Oamaru, to essential (and other) services?

Slightly, through some roading improvements.

9

Assessment of whether accessibility targets were met

**Target: Increase the peak travel share of modes other than single occupancy motor vehicles in Queenstown and Dunedin in order to reduce current levels of congestion
Dunedin journey-to-work census data shows the following changes between 2001 and 2006: On the positive side, the proportion of people ridesharing increased by one percent; on the negative side, number of people driving a company vehicle increased by 1% and the numbers cycling to work dropped one percent. Queenstown journey-to-work census data shows the following changes between 2001 and 2006: On the positive side, there was a one percent decrease in the proportion of people driving a vehicle and a one percent increase in proportion of people catching a bus; on the negative side, there was a two percent decrease in the proportion of people walking to work.**

Target: 4.5 percent of all trips (to be) made by public transport

Only census journey to work data is available. This shows a decline in the number and proportion of trips made to work by bus from 2001 to 2005.

Target: 15 percent of all trips to work to be made by walking

Only census journey to work data is available; this shows an increase in the number of walking/jogging trips made to work from 2001 to 2005, but a decline in the proportion of all trips to work made by this mode.

Target: 6 percent of all trips made by cycle

Only census journey to work data is available. This shows a decline in the number and proportion of cycling trips made to work from 2001 to 2005.

Target: No congestion within Queenstown or Dunedin City outside peak periods

The 2008 data shows that there are two intersections in Dunedin where this target has not been met: the Southern Motorway/Riselaw Road/Mornington Road (level of service E); and

the Jetty Street/Princes Street/Manse Road Intersection (level of service D).

Queenstown Lakes District Council (QLDC) holds no trend data as yet, although it established a baseline in 2009.

Target: Contain the length of congested roads within Queenstown during peak periods to two lane kilometres or less

QLDC holds no trend data, nor does NZTA.

Target: Contain the length of congested roads within Dunedin City during peak periods to three lane kilometres or less

The 2008 data shows Dunedin has met this target, with the length of total lane kilometres exceeding the acceptable standard set in the RLTS (level of service F) totalling 0.1 km in the

morning peak, and 1.6 km in the evening peak.

10

Target: Reduce peak hour motor vehicle travel from 2004 levels by organisations or suburbs where demand management programmes are applied

As above, QLDC has no trend data on this; neither does Dunedin City Council (DCC) at this stage.

Conclusion regarding validity of targets: These targets continued to remain important and appropriate over the life of the RLTS, but we need to put mechanisms in place to measure them.

APPENDIX 2: Explanations and approval forms accompanying surveys and interview forms

**Central Dunedin Shoppers Transport Survey
Cardiff University Graduate Study
June 2011**

This survey is part of an independent transport study by a graduate student of Cardiff University, Wales. The purpose of this study is to consider the impact of transport and parking management strategies on retail performance in Dunedin.

Results of this survey will be used in a graduate dissertation and made available to the Otago Chamber of Commerce, the Dunedin Parking Working Party, the Dunedin City Council, and interested members of the public.

Thank you for helping us by completing this short survey.
It should take no more than 10 minutes of your time
This is a voluntary survey
You can stop at any time
You can refuse to answer any question
Your replies will be anonymous

**Central Dunedin Retailers Transport Survey
Cardiff University Graduate Study
June 2011**

This survey is part of an independent transport study by a graduate student of Cardiff University, Wales. The purpose of this study is to consider the impact of transport and parking management strategies on retail performance in Dunedin.

Results of this survey will be used in a graduate dissertation and made available to the Otago Chamber of Commerce, the Dunedin Parking Working Party, the Dunedin City Council, and interested members of the public.

Thank you for taking the time to complete this short survey. It should take less than 10 minutes of your time.

Either complete this survey form or complete it online at the following address.

<http://www.surveymonkey.com/s/DunedinRetailersTransportSurvey>

This is a voluntary survey. You can choose not to answer any question. Your replies will be anonymous.

If you have any questions about this study or would like to comment further please contact:

[Name and contact details were included here]

Permission Form for Interviews.

Dunedin Transport and Parking Study, June 2011

Conducted by:

[Name Given], Graduate Student, Planning Department, Cardiff University.

I understand that this interview is voluntary, I can stop at any time and I can choose not to answer any or all questions. I also understand that this interview will be recorded and my answers may be used in a Cardiff University graduate dissertation that will also be made publically available.

Because of the small number of interviews it is possible my answers will be recognised as coming from me and I understand that I can request that specific parts of this interview be disguised to ensure my anonymity.

Date: _____ Signed: _____

Name: _____

Role: _____

I would like to receive a copy of the completed dissertation when available.

____ Yes

____ No

APPENDIX 3: Surveys

Central Dunedin Shoppers Transport Survey

1. What is your primary purpose for being in Central Dunedin today?

I work here

I am here for business reasons

I live here

I'm meeting friends

I'm shopping

I'm visiting CBD businesses other than shopping

Other (please specify) _____

2. How often do you visit Central Dunedin?

5 or more days a week

2 to 4 days a week

3 or 4 times per month

1 or 2 times per month

1 to 4 times per year

Less than once per year

This is my first time here

3. How much money in total do you expect to spend in Central Dunedin shops today?

Nothing

Less than \$10

\$10 - \$20

\$21 - \$50

\$51 - \$100

Over \$100

Over \$500

4. How much on average do you spend each time you visit Central Dunedin?

Nothing

Less than \$10

\$10 - \$20

\$21 - \$50

\$51 - \$100

Over \$100

Over \$500

5. Would any of the following transport factors encourage you to shop more in Central Dunedin? Rank your top three with 1 for highest priority, 2 for the second priority, 3 for the third priority.

Better information about buses

More frequent buses

Lower bus fares

Other changes to buses (please specify) _____

More parking available

Cheaper parking

___ Streetscape changes for example more seating, wider footpaths, changes to crossings

(please specify) _____

___ Cycle lane

___ Cycle parking

___ Car free zones

___ Other (please specify) _____

___ Nothing, it is fine as it is

6. How did you get into Central Dunedin today?

(Use 1. for main mode of transport and 2 for all else that apply).

___ In my own car

___ I got a lift with a friend

___ Walked

___ Bicycle

___ By bus

___ Taxi

___ Motorcycle

___ Skateboard

___ Other (Please specify) _____

7. Dunedin implemented changes to its parking strategy in 2009. As a result of these changes:

___ I shop less in Central Dunedin

I shop more in Central Dunedin

My shopping patterns have not changed

I was unaware there were parking changes

7a. Do you have any general comments you would like to make about the Central Dunedin parking strategy?

No

Yes (Please specify) _____

Skip to question 14 if your main mode of transport today was not by car.

If you came to Central Dunedin by car:

8. Why did you choose to come by car today? _____

9. Where did you park? _____

10. Why did you choose to park there? (Check all that apply)

It is as close as I could get to my destination

It is easy to park there

It is free

It is cheaper than some other paid parking options

- It is a safe place to park
- There is always a space available there
- I know I won't get a parking ticket there
- I can park there all day
- It is provided by my place of work
- Other (please specify) _____

11. In general when you use paid parking do you prefer on street or off street?

- On Street because _____
- Off Street because _____
- I don't use paid parking because _____

12. In general, how far are you prepared to walk from where you park to where you want to shop?

- Less than a block
- Two to three blocks
- Four to six blocks
- Six to ten blocks
- More than ten blocks
- It depends (give reasons) _____

13. Do you park in multiple places during a single trip to Central Dunedin?

- Yes because _____

___ No because _____

___ Sometimes because _____

All respondents

14. Where do you live? Dunedin – give suburb. Other town, other country (please specify)

15. Any general comments? _____

Thank you for your participation

To be completed by the surveyors

Location survey carried out _____

Time survey completed _____

Date of survey _____

**Central Dunedin Retailers Transport Survey
Cardiff University Graduate Study
June 2011**

1. What is your type of retail business? Example: clothing, café, takeaway, gifts, chemist...

2. What year was the business established? _____

3. What street is the business located on? _____

4. Has it always been at this location?

___ Yes

___ No

If no, when did it move to this location? _____

5. What percentage of your customers do you estimate

- Come via private car to Central Dunedin to shop? _____%
- Walk to Central Dunedin to shop? _____%
- Bus to Central Dunedin to shop? _____%
- Cycle to Central Dunedin to shop? _____%
- Come by taxi to Central Dunedin to shop? _____%
- Use some other form of transport? _____%

6. In mid 2009 the Dunedin City Council made changes to their parking management plan. Did this:

___ negatively impact your sales

___ positively impact your sales

___ have no noticeable effect

6a. Is this impact still noticeable?

Yes

No

Not applicable

Comments: _____

7. Do you believe any of the following transport factors would encourage your customers to shop more in Central Dunedin?

Rank your top three with 1 for highest priority, 2 for the second priority, 3 for the third priority.

Better information about buses

More frequent buses

Lower bus fares

Other changes to buses (please specify) _____

More parking available

Cheaper parking

Cycle lane

Cycle parking

Car free zones

Streetscape changes for example more seating, wider footpaths (please specify)

___ Other (please specify) _____

___ Nothing, it is fine as it is

7. Are you:

___ the shop owner

___ the shop manager

___ a shop employee

___ other (please specify) _____

Thank you for taking the time to complete this survey.

APPENDIX 4: Interview Questions

Parking Working Party members

1. What is the key purpose of regulated parking?
 2. Are there any problems with Central Dunedin's parking?
 - 2a. If yes, what?
 3. What is working well with Central Dunedin parking?
 4. What is the role of the Parking Working Party?
 5. How well is the Parking Working Party fulfilling its role?
 6. If you were in charge of the city's parking strategy, what would you do?
-

Dunedin City Council Managers

1. What is the key purpose of regulated parking?
2. Are there any problems with Central Dunedin's parking?
 - 2a. If yes, what?
3. What is working well with Central Dunedin parking?
4. What is your role in relation to the DCC parking strategy?
5. How well is the Parking Working Party fulfilling its role?
6. If you were in complete charge of the city's parking strategy, what would you do?

Retailers

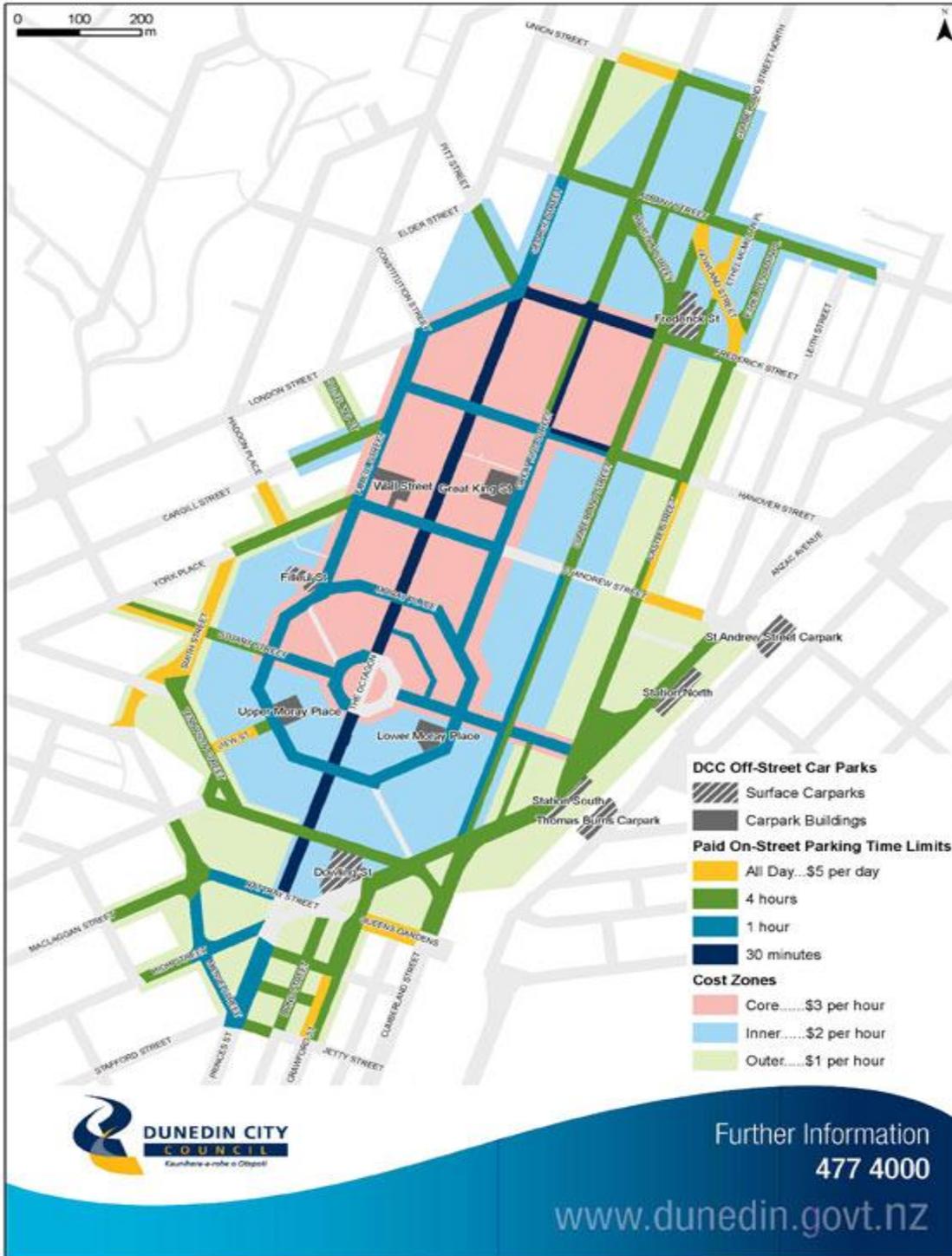
1. What is the key purpose of regulated parking?
2. Are there any problems with Central Dunedin's parking?
 - 2a. If yes, what?
3. What is working well with Central Dunedin parking?
4. Do retailers have a role to play in relation to Dunedin's parking strategy?
 - 4a. If yes, what is that role?
 - 4b. If yes, how well are retailers fulfilling this role?
5. If you were in charge of the city's parking strategy, what would you do?

APPENDIX 5: Interviews

The following people were interviewed for the purposes of this study.

- Professor Herbert Harris – Community Representative Parking Working Party
- Malcolm Dixon – Retailer and Business Owner
- David McLeod – Retailer and Business Owner
- Sarah Connolly – Dunedin City Council Transport Planning Manager
- Emma O’Neill – Dunedin City Council Urban Design Project Manager
- Michael Brazil – Traffic Engineer, MWH
- Syd Brown – Dunedin City Councillor and past chair of the Parking Working Party
- Christopher Staynes – Dunedin City Councillor and current chair of the Parking Working Party
- Tony Avery – Dunedin City Council General Manager City Environment
- Kevin Thompson – Dunedin City Council Development Services Manager (via email)

APPENDIX 6: Dunedin City Council Parking Zones



APPENDIX 7: Breakout of spend calculations CBD Street Survey

Bus	Less than \$10	\$10 - \$20	\$21 - \$50	\$51 - \$100	Over \$100	No answer
5 or more days a week (15)	7	2	2	3	1	
2 to 4 days a week (8)			5	2	1	
3 or 4 times a month (4)		1	2	1		
1 or 2 times a month (5)		1		2	1	1
Spend 5 days a week	9100	7800	18200	58500	39000	
Spend 3 days per week	0	0	27300	23400	23400	
Spend 3.5 times a month	0	630	2940	3150	0	
Spend 1.5 times a month	0	270	0	1700	2700	
estimated annual spend by bus users	\$ 9,100	\$ 8,700	\$ 48,440	\$ 86,750	\$ 65,100	TOTAL \$218,090

Bicycle	Nothing	Less than \$10	\$10 - \$20	\$21 - \$50	
5 or more days a week (3)		2	1		
2 to 4 days a week (2)	1		1		
3 or 4 times a month (1)				1	
Spend 5 days a week		2600	3900	0	
Spend 3 days a week	0	0	2340	0	
spend 3.5 times a month		0	0	1470	
Estimated annual spend by cyclists	\$ -	\$ 2,600	\$ 6,240	\$ 1,470	TOTAL \$10,310

Walking	Nothing	Less than \$10	\$10 - \$20	\$21 - \$50	\$51 - \$100	Over \$100	No answer
5 or more days a week (39)	3	13	13	6	3		1
2 to 4 days a week (33)		8	13	7	3	1	1
3 or 4 times a month (10)			3	5	2		
1 or 2 times a month (5)		2		2	1		
1 to 4 times a year (2)				1	1		
Spend 5 x per week	0	16900	50700	54600	58500	39000	
Spend 3 x per week	0	6240	30420	38220	35100	23400	
Spend 3.5 x per month	0	0	1890	7350	6300	0	
Spend 1.5 x per month	0	180	0	1260	1350	0	
Spend 2 x per year	0	0	0	70	150	0	
Annual spend by walkers	\$ -	\$ 23,320	\$ 83,010	\$ 101,521	\$ 101,410	\$ 62,400	TOTAL 375,661

Own Car	Nothing	Less than \$10	\$10 - \$20	\$21 - \$50	\$51 - \$100	Over \$100	No answer
5 or more days a week (54)	3	16	18	6	4	4	3
2 to 4 days a week (46)		4	13	13	11	2	3
3 or 4 times a month (20)		1	3	5	2	8	1
1 or 2 times a month (11)			3	2	4		2
1 to 4 times a year (3)						2	1
Spend 5 x per week	0	20800	70200	54600	15600	156000	
Spend 3 x per week	0	3120	50700	118300	214500	78000	
Spend 3.5 x per month	0	210	5670	7350	6300	50400	
Spend 1.5 x per month	0	0	810	2520	5400	0	
Spend 2 x per year	0	0	0	0	0	600	
Annual spend by car owners	\$ -	\$ 24,130.00	\$ 127,380.00	\$ 182,770.00	\$ 241,800.00	\$ 285,000.00	TOTAL \$861,080

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