WHAT IS THE ECONOMIC CONTRIBUTION OF CYCLISTS COMPARED TO CAR DRIVERS IN INNER SUBURBAN MELBOURNE'S SHOPPING STRIPS?

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ABSTRACT

This research evaluates the economic impact of shoppers who drive to Lygon Street, Carlton, compared with those who ride bikes. Comparisons are drawn between the retail 'spend' of car drivers and cyclists. The findings challenge the assumption that car parking is an integral component of economically successful inner urban shopping strips. A critical review of the literature is structured looking the gaps between academic and practitioner knowledge. The literature examines the paradox between academic case studies and local government retail transport policy in Melbourne. The former having an emphasis on pedestrianisation and the later having an emphasis on importance of short-term car parking. The literature review highlights a significant gap in local understanding of the possible negative impacts caused by parking in inner urban shopping strips. This research aims to progress the debate in Australia by giving a quantifiable measure to the economic good reaped by provision of car parking. This is achieved through comparisons of how much car drivers and cyclists spend in relation to the amount of public space required to cater for each transport mode. Implications for policymakers, the urban form and appropriate use of public space are discussed.

1 INTRODUCTION

1.1 SCOPE OF RESEARCH

In the period from March 2006 to March 2007 there has been a ten percent rise in the number of cyclists commuting to work in Melbourne (Bicycle Victoria[1], 2007). Bikes are increasingly being seen as a legitimate way to get around and former perceptions of bike riders being young people, sports fanatics or those who can't afford a car, no longer apply. Such changes to how inner Melburnians travel challenge the 20th Century reorganisation of Melbourne to accommodate the movement and storage of cars in our public spaces. The responsiveness of inner Melbourne's Councils to reverse this trend is a philosophical challenge to the knowledge of many decision makers in Government; however is a necessary change in a maturing bike culture.

Some inner city municipalities have for some time been aware of a need to identify the actual users of shopping strips. Studies undertaken by the Cities of Yarra and Port Phillip have typically identified that locals generate the overwhelming majority of trade in their local shopping strips. The City of Port Phillip has used such results to justified removing car parking spaces in Acland Street for footpath widening and landscaping works. These locally based studies supplement similar international studies focussed on broader application of such market research to introduce pedestrian malls, car free areas in city centres and other such regulation to curb cars and car parking.

This research focuses on one local shopping precinct forming part of Lygon Street Carlton, in inner suburban Melbourne. The study area is interesting there are constant demands made by retailers for more and cheaper car parking for patrons, whilst also having an overwhelming and visible demand for bike parking (**Figure** 1).

Figure 1 Bike parking in Lygon Street, Carlton

1.2 Research Goals

This research uses a new test to justifying public space use in retail precincts based on the economic productivity and required space for different travel modes. It is hoped that this research will be a catalyst for a reallocation of public space from car parking to bike parking. It is also hoped that this research will provide an argument that there is no economic basis for the current allocation of public space to car parking. This research will provide an overview as to the real and perceived importance of car parking and bike parking in the retail economy of the case-study area.

1.3 Outline of Research Method

The methods used are focussed on two areas; visitors travel and spending patterns and measurements of public space allocations. Central to this research question is identifying the average spend of people driving or cycling to the case-study area. This information will be used to compare the amount of bike and car infrastructure provided in the case-study area. These two data sources will reveal both the value of retail input of cyclists and car drivers and the efficiency of providing public space supporting these transport modes.

1.4 Structure of Dissertation

An overview of academic literature, locally based municipal transport policies and studies and media depictions of trader opinion is provided in Chapter 2. There is little academic literature available about car parking as it relates to retail trade. Therefore the first part of this chapter, entitled *What is Appropriate Use of Public Space*, concentrates on academic studies looking at pedestrianisation and anti-pedestrianisation discussions and case-studies. The second part of this chapter, entitled *Current Understanding of Parking in Inner Melbourne*, reviews Melbourne-based car parking studies and policies. The impact of creative design is also the focus of this chapter as it relates to a social movement towards rethinking the private car in the public realm. Chapter 3 details the hypothesis and a justification is provided for each of the four sub-question central to addressing this topic. This chapter discusses the method and process of analysis of data for each of the research methods; visitor travel survey and public space mapping. Chapter 4 discloses the results of the research and also builds discussion around the findings, how they relate to the larger discourse on public space, pedestrianisation and car parking. This chapter also discusses potential policy changes, implications for infrastructure provision and further uptake in cycling and the potential for similar approaches to be taken in shopping strips around Melbourne. Finally Chapter 5 makes some conclusions about the appropriateness of current public space allocations in relation to the potential for space to be used more efficiently and productively to provide greater economic support for shopping strips.

2 LITERATURE REVIEW

There is a gulf dividing the perspectives presented in the media, academic literature and policy documents about car parking and retail productivity. A small amount of academic literature suggests pedestrianisation and urban design is more important to the economic success of retail areas. On the other hand a vast amount of discourse presented in the media suggests that parking and convenience is behind the economic functioning of shopping precincts. Local government parking management policies do not reflect their own study findings. These studies have found that the origin of retail 'spend' in shopping strips is from people using a variety of travel modes rather than purely car-based.

2.1 WHAT IS APPROPRIATE USE OF PUBLIC SPACE?

The purpose of the Planning and Environment Act 1987 is to 'establish a framework for planning the use, development and protection of land in Victoria in the present and long-term interests of all Victorians' (State Government of Victoria, 1987). Section 4 of the Act states that the objectives of planning in Victoria includes

> *(a) to provide for the fair, orderly, economic and sustainable use, and development of land;*
>
> State Government of Victoria, Planning and Environment Act, 1987

The Planning and Environment Act states that public space (a public asset) should provide for the benefit of the community, be fair and contribute to the economical use of the land. So the question arises: Does parking on public land contribute to the economic benefit of the community or any other social or environmental benefit?

The poor social and environmental credentials of parking are well established. The links between latent demand and the provision of car parking have been proven. For example, in his study of the effects of free parking and commuter mode choice Hess states that 'when commuters can park their cars free at work they are more likely to drive alone' (Hess, 2001: 1). Likewise, the connection between household car use and environmental degradation is well understood (**Figure** 2). By establishing that car parking increases the likelihood of driving as a mode choice it is possible to extrapolate that the provision of car parking contributes to environmental pollution. Banfield suggests that parking creates 'anti-social' spaces stating that one of the attractive features of the city is intense human activity, visually interesting streetscapes and the opportunity to observe, interact and learn from others. He concludes where 'buildings that once accommodated human activity are replaced by car parks, the intensity of human activity is reduced and its associated benefits lost' (Banfield, 1997: 2). It is therefore understood that car traffic and parking are connected with socially and environmentally compromised environments. It is presumed then that an economic benefit for communities or businesses must give good reason for tolerating the social and environmental externalities of the car. Unfortunately there is very little evidence to suggest the economic

advantages of providing car parking in shopping areas, particularly in inner urban shopping strips.

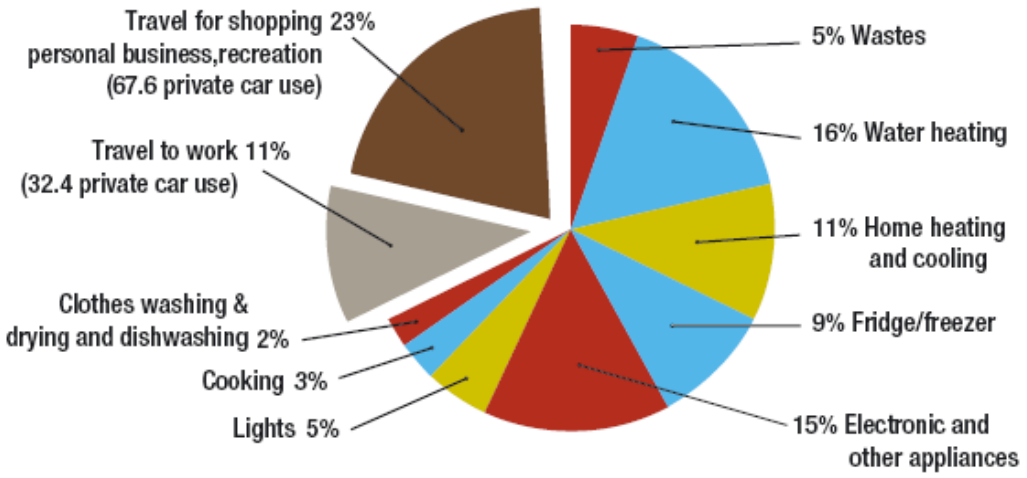

Figure 2 Household greenhouse gas emissions (Graph Source: Cool It, Australian Greenhouse Office, Federal Government, 2007)

2.1.1 *Pedestrianisation Case Studies*

There is a body of case-studies which have shown a connection between pedestrianisation and an upturn in retail trade. In the United States, the architect-planner Peter Calthorpe has won a great deal of acclaim for his ideas for 'pedestrian pockets', which encourage people to walk to shops or public transport stops; (Kelbaugh et al., 1989; Calthorpe, 1993 cited in Hall, 1997). Pedestrianisation case-studies undertaken in Cario by Fahmi (2003), in Singapore by Yuen and Chor (1998), in Copenhagen by Berdichevsky (1984) and in Melbourne by Gehl (2004) all conclude that there are increased social interactions and economic advantages to the implementation of pedestrianisation measures in retail areas. These studies offer a compelling trend: that it is good quality pedestrian environments, not parking, that create successful retail centres.

Despite significant trends amongst studies of pedestrianisation the conundrum still stands: that distilling the impact of pedestrianisation is difficult in complex urban environments. The many variables offered by urban environments make it difficult to know whether it is indeed pedestrianisation which has had a favourable impact on retail trade. Still and Simmonds offer that the interrelationships between parking and other policies and urban conditions complicate any attempt at analysis (2000: 295). An actual economic value of pedestrianisation can be derived from removing all other variables other than the pedestrianisation measures through a temporal analysis before and after changes are made. Copenhagen's Stroget (**Figure** 3) stands alone as the only widely recognised case-study which provides data indicating retail trade before and after pedestrianisation has occurred. After pedestrianisation of Stroget sales were reported to have increased by 30 per cent (Berdichevsky, 1984, cited in Yuen and Chor, 1998) or more generally in a range of between 25 and 40 per cent (Wallar, 2007, website). The

Stroget case study offers compelling evidence of the impact of pedestrianisation and car-free environments on retail trade.

Figure 3 Copenhagen's car-free Stroget (Image Source: Denmark Tourism, Website: www.danmarkstur.no)

2.1.2 *THE ANTI-PEDESTRIAN ENVIRONMENT*

To look at the inverse of pedestrianisation does add some weight to an argument in favour of the importance of the contribution a pedestrian makes to a vital retail setting. Whilst some studies have shown a preference amongst some populations for skywalks (see Robertson 1993) most literature treats them as inherently anti-pedestrian as they remove the pedestrian from the most convenient urban environment at ground level to accommodate the car. Michael Hebbert's study of vertical segregated pedestrian circulation routes, or 'skywalks' provides an insight into the modernist belief that the efficiency of the city required modal separation- with the convenience of the car and parking as primary. **Figure** 4 highlights the idealised concept of the shopper parking at ground level. The built result of these grand auto-city plans was far from the desired convenience and lush simplicity dreamt of. Hebbert concludes that the partially build skywalks of London are some of the most hated and unmanageable urban environments in urban Britain (Hebbert, 1993: 434). There are parallels between the modernist views of the proponents of pedestrian separated skywalks and those who today still hold strong opinions regarding the importance of car parking in shopping areas.

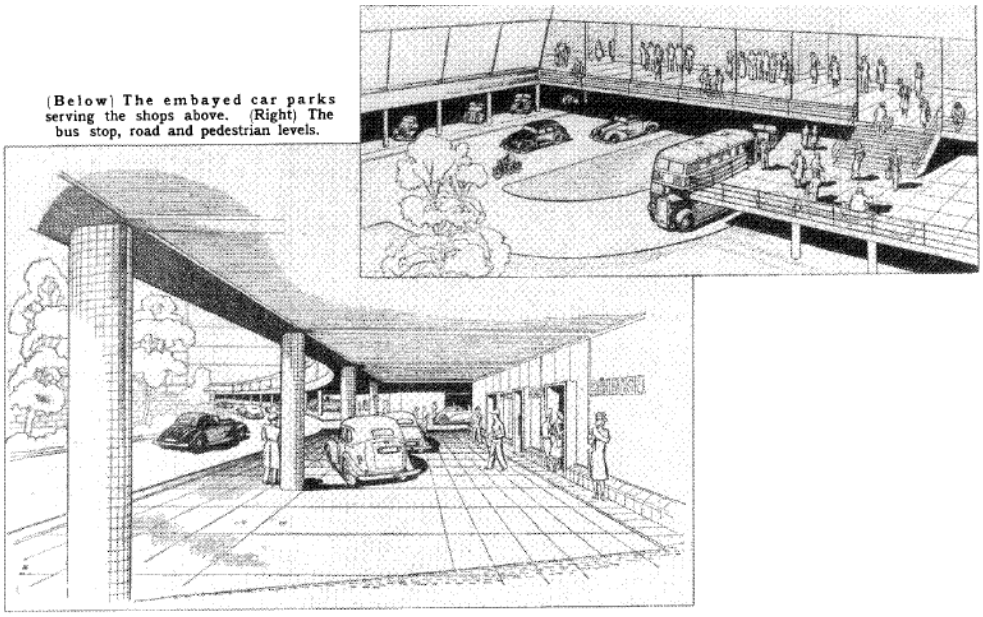

Figure 4 William and Aileen Tatton-Brown's concept of the pedestrian deck, presented in the summer 1941 issue of *Autocar* magazine (from Hebbert, 1993: 435)

2.1.3 *DEPICTIONS OF TRADERS OPINION OF PARKING RESTRAINT AND PEDESTRIANISATION*

Traders groups have become expert at using the media to sway political opinion in favour of car parking. Local print media outlets regularly print 'trader parking outrage' type stories in response to parking restraint or pedestrianisation measures (see appendicis 1, 2 and 3 for a selection). For example, with the 2006 introduction of parking meters into Lygon Street a spate of stories were printed or distributed online where traders claimed that "unless people can park close to where they want to eat, they will just go somewhere else [other than Lygon Street]" (Kleinman, 2006) and that parking meters will "kill… Lygon Street in Carlton" (ABC News Online, 2006). And later, in response to a similarly toned plan by the City of Moreland to ban cars in Sydney Road in Brunswick "most of our customers drive here...this is going to kill us" (Lallo, 2007). Further examples of trader oposition to car parking restriction can be found at Appendix 1, 2 and 3.The depiction of traders opinions on parking restraint in Lygon Street and inner Melbourne suggest a strong belief amongst this group that parking is intergral to the economic functioning of their shopping strips.

2.1.4 *SOCIAL ACTION IN PROTEST OF PARKING*

In more recent history what could be considered a social movement has begun protesting against what people consider is the too-extensive use of public space for car parking. The first Park(ing) Day was are now held on September 21st 2005. Conceived by a San Francisco-based art collective, Park(ing) Day is a one-day, global event where artists, activists, and citizens collaborate to temporarily transform on-street parking spaces into "Park(ing)": temporary public parks (Park(ing) Website: 2007). Parking days operate under the assumption that car parking is public space and should be used by all members of society not just car drivers. Participants turn car parking spaces into urban 'parks' for a few hours or a day,

encouraging passers-by to feed the meter and visit the 'park' (**Figure** 5). Such social movements have used the internet effectively to distribute their messages on websites such as Treehugger, The Cool Hunter, Flickr (photo sharing website), Project for Public Space (PPS) and others.

Figure 5 Park(ing) Day in Glasgow, Scotland in 2006 (Image Source: John Gilbert Architects, UK)

Designers in particular are challenging the assumptions about appropriate uses of car parking spaces. As an embodiment of these ideas Adrien Rovero an industrial designer operating out of Switzerland has designed a car-shaped bike rack that fits six bikes into one car parking space. This piece of design makes a comment on space efficiency and the right of others to use car parking space (**Figure** 6). Along a similar vein Michael Rakowitz a New York based designer has come up with P (LOT) a car-shaped tent which can be set up in a parking space (**Figure** 7). The tent can be used as a respite from the busy city streets. P (LOT) questions the dedication of public space and encourages reconsiderations of "legitimate" participation in city life (Rakowitz, 2007). This design based social movement questions fairness of public space being used for car parking through social action and design in the public realm. The public-ness of the movement is intended to create greater awareness and critical thinking on the issue.

Figure 6 Designer Adrien Rovero's Bike Rack

Figure 7 Designer Michael Rakowitz's P (LOT)

2.2 CURRENT UNDERSTANDING OF PARKING IN INNER SUBURBAN MELBOURNE

2.2.1 POLICY AND PRACTICE OFF LYGON STREET, CARLTON

The relationship between parking and retail productivity is contentious. It is perhaps for this reason that in inner Melbourne the politically charged environments of local governments produced no clear position on the issue in a policy context. A case in point is the City of Melbourne's Transport Strategy *Moving People and Freight.* Adopted in 2006 the strategy was a vast improvement on earlier iterations of transport policy in the City of Melbourne. For the first time political discourse moved toward a policy of prioritisation of sustainable transport or space efficient transport over car-based transport. The City of Melbourne now prioritises walking, cycling and public transport (City of Melbourne, 2007: 3). Despite the emphasis on sustainable transport the strategy continued the Council's earlier policy of providing affordable short-stay[1] parking and the conversion of commuter parking[2] into short-stay parking for shopper and other visitors to the Central City (City of Melbourne, 2007: 24). Whilst many earlier Council policies and convictions were questioned in *Moving People and Freight* that the importance of short-stay car parking to City retailing was not questioned is testament to the firmly held belief of those developing and deciding on urban policy-transport planners, transport engineers, politicians and the retail lobby.

Evidence of this policy in action was recently displayed in a City of Melbourne Planning Committee Report on the removal of 127 centre-road car parking space in Faraday and Cardigan Streets in Carlton. Put to the Council by the Carlton Residents Association the proposed scheme sought the introduction of a grassed and treed median strip in the place of these car parking spaces. The Report states in reference to a newly constructed off-street public car park, that:

> *Recent parking surveys undertaken on Wednesday 14 March 2007 of these on street areas have indicated that these centre of road spaces are heavily utilised by short term parkers and their removal could have a negative impact on the number of visitors driving to the Lygon Street shopping centre.*
>
> City of Melbourne, Planning Committee, 2007: 3

This advice was based on the high levels of occupancy in the affected streets. The Report states that the 'number of vehicles using these spaces between 7:30am and 6pm was 794 and the overall occupancy rate was 97 per cent in Faraday Street and 99 per cent in Cardigan Street between 9:30am and 5.30pm' (City of Melbourne, 2007:3). Based on occupancy rates the conclusion is drawn that removal of these spaces would have a detrimental impact on the Lygon Street shopping centre. Whilst there is a clear demand for car parking in these parts of Faraday and Cardigan Streets associated with visitation to Lygon Street, the connection that

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[1] Short-stay car parking is parking up to 4 hours in duration but in the case of the CBD is usually 1 or 2 hours.

[2] Commuter parking, also known as long-stay parking is parking greater than 4 hours in duration

people driving equates to substantial retail trade should not be assumed as it is in this instance.

2.2.2 *VISITOR TRAVEL AND SPEND STUDIES UNDERTAKEN IN INNER MELBOURNE*

Studies on visitor travel and spend seek to quantify the value of shoppers using various modes of transport to access inner city shopping strips. Data collected through studies contracted by Local Governments in inner Melbourne have quantified the significance of car parking and sustainable transport modes on retail productivity. The principles of these studies could easily be applied to decision making in other municipalities such as the City of Melbourne determining the removal of car parking spaces adjacent to Lygon Street. Studies have been completed in the Cities of Yarra and Port Phillip, providing data suggesting that people who walk to shops in inner Melbourne shopping strips input more economically to those shopping strips than those who drive. These two studies, detailed below, have shown that local people visit more frequently and over time spend more than those who drive from farther afield and may spend a greater amount in one visit.

City of Port Phillip: Acland Street, St Kilda

In St Kilda in 2003 the Acland Street Precinct Traders Association undertook market research, with support and funding from the City of Port Phillip, into ways to make their shopping strip more 'vibrant'. The focus of this study looked at how people shopping in Acland Street travelled there, where they came from, the frequency with which they visited and how much they spent. The Acland Street Precinct Traders Association found that the walkability of the area was a driving force behind its success and that it was this feature which made it attractive to shoppers and therefore successful in a business sense. Specifically it was found that, of the locals who visited the shopping strip, over half walked. The key visitor groups who drove to the shopping strip were rural and regional Victorians, metropolitan Melbournians[3] and to a lesser extent residents within the area but not classified as 'local' to St Kilda[4] (Acland Street Precinct Association, 2003: 1). Whilst the emphasis had often been on the shopping strip's 'tourism' role, it was found that whilst local residents (half of who walked) accounted for nearly 86 percent of expenditure and interstate and internationals (most of who drove) only 1.2 and 0.5 per cent respectively (Smith, 2004: 1). It should be noted that these findings prompted the removal of nine car parking spaces in the shopping strip to create wider footpaths and a more amenable environment for pedestrians. The success of this project appears to be that Acland Street Precinct Traders Association were the source of these findings. This approach has not been replicated in other shopping strips in the City of Port Phillip and the Council continues to come up against opposition to reallocation of parking space to other uses (Appendix 4). The removal of car parking spaces based on these findings indicates a recognition of the overemphasis on car based transport and car parking as the driver of economical success in Acland Street retailing.

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[3] Metropolitan Melbournians were classified as those who lived beyond a 15km radius

[4] Postcodes 3182, 3183 and 3184

City of Yarra: All Major Shopping Strips

In 2002 the City of Yarra employed Charter Keck Cramer (CKC) to undertake a comprehensive study of the municipality's five main shopping strips, Bridge Road, Brunswick Street, Smith Street, Swan Street and Victoria Street. The objective of the CKC study was to provide the Council with an analysis of the current function and performance of these five shopping strips and to identify any future implications for the economic vitality of these strips such as competitive influences including availability of as car parking and what they coined 'consumer amenity' (Charter Keck Cramer, 2003: i). The results of this study support the findings of the Acland Street Trader's smaller market based research in Acland Street. The CKC study showed that the majority of shoppers in City of Yarra shopping strips were local residents (**Table** 1) and that this group was the most likely to walk (68 per cent) and least likely to drive (sixteen per cent) to get to the shopping strip (**Table** 2). Whilst Yarra residents spent less on average per visit ($20) than other visitors ($50) (**Table** 3) their overall impact on the economy was greater as, like Acland Street locals, they visited the City of Yarra's shopping strips more frequently (**Table** 4).

	Bridge Rd.	Brunswick St.	Smith St.	Swan St.	Victoria St.
Yarra Resident	57%	66%	61%	74%	59%
Local Worker (non-resident)	12%	11%	14%	11%	6%
Other Visitor	31%	23%	25%	15%	35%

Table 1 Expenditure Share by Visitor Group (City of Yarra)

	Yarra Resident	Local Worker (mom-	Other Visitors	All Visitors
Car driver	16%	42%	43%	32%
Car passenger	2%	10%	36%	10%
Walk	68%	17%	8%	33%
Bicycle	3%	3%	2%	2%
Tram	10%	24%	25%	19%
Train	1%	3%	3%	2%
Bus	1%	1%	1%	1%
Taxi	1%	1%	2%	1%

Table 2 Mode of Transport by Visitor Group (City of Yarra)

	Bridge Rd.	Brunswick St.	Smith St.	Swan St.	Victoria St.	All Centres
Yarra Resident	$20.00	$22.00	$20.00	$20.00	$20.00	$20.00
Local Worker (non-resident)	$15.00	$25.00	$12.00	$18.75	$14.50	$15.00
Other Visitor	$100.00	$30.00	$50.00	$30.00	$30.00	$50.00
All Visitors	$50.00	$30.00	$30.00	$20.00	$20.00	$30.00

Table 3 Individual Medium Expenditure by Visitor Group (City of Yarra)

	Daily	less frequently than daily but at least weekly	less frequently than weekly but at least monthly	less frequently than monthly
Yarra Resident	51%	40%	6%	3%
Local Worker	21%	59%	9%	11%
Other Visitors	4%	25%	23%	48%
All Visitors (survey respondents)	24%	35%	15%	26%

Table 4 Frequency of Visit by Visitor Group (City of Yarra)

The secrecy with which car parking and retailing data is held suggests its contentious status. The openness of the results of the City of Port Phillip's study is perhaps its success. The City of Yarra study, however, is not even widely circulated within the business communities to which they relate, nor transport planning practitioners. For example, the City of Yarra's *Encouraging and Increasing Walking Strategy (EIWS)* states that when consulting businesses in the municipality about the importance of walking there was 'general agreement that improving the footpaths and encouraging walking would be good for business… however, businesses were also concerned about the lack of parking' (Grant et al, 2005:13). Records indicate that in response to this concern raised by businesses that EIWS consultants suggested a survey which would provide an analysis of the walking / parking relationship to business viability, similar to that undertaken in Acland Street (Grant et al, 2005: 13), despite the CKC study being undertaken just three years earlier, being able to provide the data required and being available on the internet (see Appendix 5).

Council Knowledge does not Translate into Action

Neither the place-based findings from Acland Street nor the more extensive study undertaken in Bridge Road, Brunswick Street, Smith Street, Swan Street and Victoria Street have been translated into a broader policy positions in either the City of Port Phillip or the City of Yarra. As Cairns articulates "policy is critical to travel choices, as the attractiveness of many transport options fundamentally depends on publicly funded infrastructure…and design decisions" (2002:38). Perhaps because of this lack of policy position the literature on the Acland Street case study stands out as the only case where car parking removal has successfully been carried out in inner Melbourne with the support of traders as a means to improve the economic vibrancy of a shopping strip[5]. It appears as though Local Governments are careful to side step any reference to the importance or otherwise of car parking when developing policy, even when armed with knowledge and data to suggest other modes of transport input more into local shopping strips.

2.3 Current Understanding of Cycling Infrastructure and Latent Demand

There are significant amount of data available which suggest that cycling infrastructure changes travel behaviour. People choose to cycle because the paths and places to park are available, it is convenient and social norms have expanded to encompass cycling as a legitimate travel mode. This can be shown internationally and in a Melbourne context:

The City of Copenhagen's *Copenhagen Cycling Account*, a biannual census of cycling behaviour in the Copenhagen suggests that as expenditure on cycling increases the amount of cycling increases. Between 1995 and 2006 the length of bike lanes increased from 293 kilometres long to 332 kilometres long (**Figure** 8). As the bike lanes increased so did the

[5] Another case is currently being underway in Rathdowne Street Carlton, where traders have requested the removal of on-street car parking in front of their premises in order for footpath widening to occur (Appendix 6).

number of cyclists. In the same period of time the amount of cycling increased from 800,000 kilometres cycled every day to 1,150,000 kilometres cycled every day (**Figure** 9). In 1995, 2484 kilometres were cycled for every one kilometre of bike lane. In 2006 this increased to 2964 kilometres cycled for every one kilometre of cycling track. These figures would suggest that a critical mass of cyclists has been achieved in Copenhagen. This social norm has been developed, in turn creating its own momentum such that each kilometre of bike track now sees greater utilisation. Copenhagen provides a good case study of people flowing towards the easiest and most convenient transport mode for many trips: cycling. This situation has been created by an investment in this transport mode.

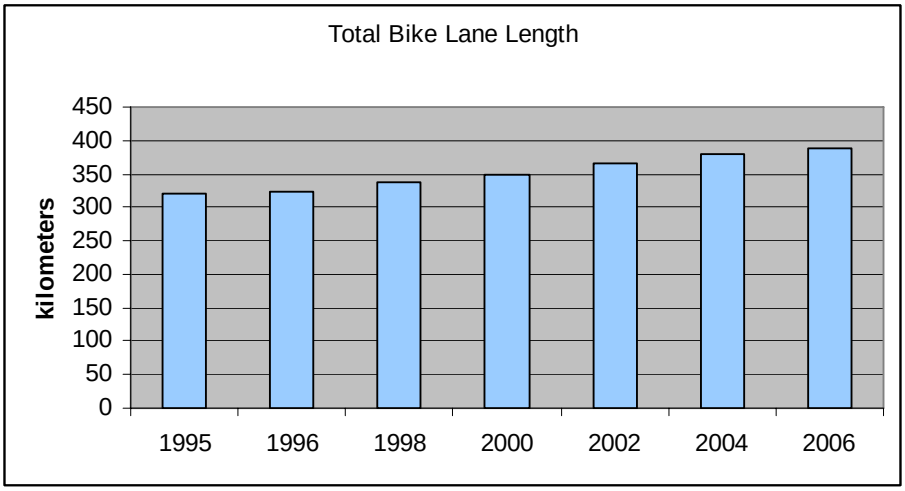

Figure 8 Total Length of Cycle Track in Copenhagen (Source: Copenhagen Bicycle Account 2006: 5)

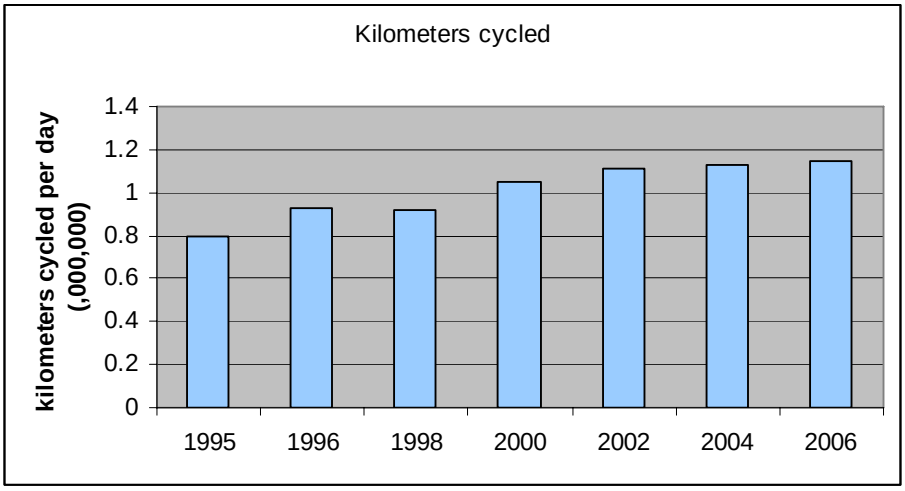

Figure 9 Total Kilometres Cycled per day in Copenhagen (Source: Copenhagen Bicycle Account 2006: 5)

Figures from the City of Melbourne's *Melbourne Bicycle Account*, a 2007 report based on the *Copenhagen Bicycle Account* model, suggest that Melbourne is moving toward a point like what has been achieved many years ago in Copenhagen, where cycling, at least in inner

Melbourne is *becoming* a social norm. The *Melbourne Bicycle Account* reports massive increases in the number of cyclists on key 'cycling arterials' in the morning peak hour[6] between March 2006 and March 2007. These include Footscray Road which has seen 37 per cent more cyclists, Canning Street which has seen 35 per cent more cyclists and the north and south banks of the Yarra River which has grown by 33 per cent in the same period. St Kilda Road has become a key route for commuters travelling both north to the city and south. In March 2007, bicycles made up 22 percent of St Kilda Road morning peak traffic (**Figure** 10) (City of Melbourne[1], 2007: 3). Whilst not understanding the possible economic benefits of cycling local Councils are increasingly embracing cycling as a transport mode in their municipalities due to bikes being non-polluting and also space efficient.

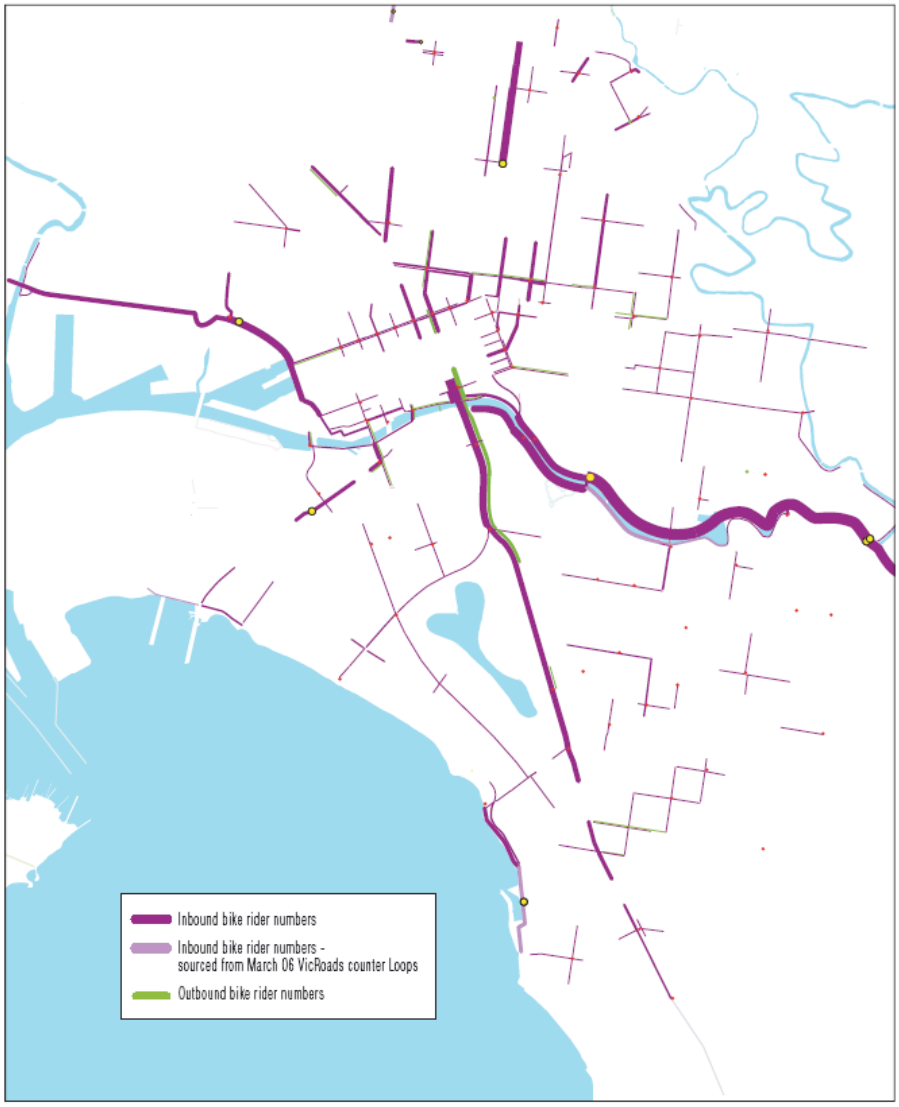

Figure 10 Cycling Traffic Flows to the City of Melbourne, AM Peak, March 2007

6 From 7am to 9am

2.4 CONCLUSION

It is important to ask whether the available literature suggests that public space used for car parking satisfactorily addresses the requirements set out in the Planning and Environment Act 1987. That is, that the use of public space in such a way is of benefit of the community, fair and contributes to the economical use of the land. This can be done in three ways:

Firstly, a look at whether car parking in retail shopping strips benefits the community. Depictions of trader's opinions in the media would suggest that car parking benefits the community as it provides convenience and possibly even a necessity for shoppers who do not have access to other transport modes. The second opinion displayed by traders in the media is that car parking is of a benefit to the business community as without it they would be financially disadvantaged. Neither of these opinions is supported by the evidence in the literature. These academic studies are backed up by a range of case studies which show that retail environments that have been pedestrianised, and therefore have penalised car based transport, have had surprising results in changing trader opinion on the need for the car in the retail mix.

Secondly, a look at whether car parking in retail shopping strips is a fair use of public land. There are strong environmental arguments suggesting that car parking is not a fair use of public space. This is based on the environmental externalities derived from car driving, made worse by car parking realising a latent demand amongst potential drivers. An historical look at pedestrian skywalk projects suggests any move to reallocate surface road space away from pedestrians to improve traffic flow and the convenience of the car are doomed to fail due to people's inherent dislike of using them.

There is scant evidence to prove or disprove that car parking in retail shopping strips produces some economic advantage. Whilst there are strong case study examples of cities undertaking pedestrianisation measures and removing car access the only case study providing a figure for the economic upturn resulting from pedestrianisation is the Stroget in Copenhagen. Whilst there are strong suggestions in past studies done by the Cities of Yarra and Port Phillip as to the importance of pedestrians to the retail income of shopping strips there has not been any direct analysis done as to the spatial and economic benefits of providing for bike parking rather than car parking.

What is needed in this debate is not an environmental or social argument as to why car parking in retail shopping strips does not constitute appropriate use of that space but an economic argument. This research seeks to address some of the short comings in the understanding of this matter of the possible economic benefits of removing car parking and providing for bike parking.

3 RESEARCH DESIGN AND METHOD

3.1 HYPOTHESIS

The assertion is often made that ready access to cheap or free car parking leads to the success of retail in shopping precincts. Decisions about the use of public space in shopping strips therefore often sway toward the provision of parking. This is particularly so as there is little quantifiable information available which would suggest a different use of public space may be more profitable for traders.

Urban observation and some case-study literature suggest that it is street life rather than car parking which creates vibrant and economically vital retail environments, given the right urban context. Where traffic has decreased and more space given to pedestrians and cyclists traders have in some cases learnt the value of trade walked or cycled to their centres. Case-study examples where the public space allocation favours people rather than cars suggests that:

The public space allocated to cars in shopping strips such as Lygon Street is not warranted by the input into the retail economy made by car drivers and their passengers.

To determine whether this is the case, it is necessary to question the economic contribution of cyclists compared to car drivers in shopping strips. These two transport modes have been chosen as this is primarily a question about parking and public space management- and they are the only two transport modes dominant in the study area which require parking in the public realm.

The right mix of urban ingredients is required for this hypothesis to be applied to a particular shopping centre. The location of the shopping area is important. The travel behaviour of those accessing an inner urban shopping strip compared to a shopping strip from the middle ring suburbs, such as Niddrie or Camberwell. Various travel constraints exist in out of centre developments which often make using any transport mode other than the car difficult. The shopping area type is important also. Shopping strips function very differently to the 'Big Box' retail model, such as Bunnings Warehouse or Kmart, just to name a couple. The latter tend to trade on convenience and their identity as a precinct is far less important. Given the particular travel behaviours and functioning of inner city shopping strips this hypothesis will not necessarily be applicable to shopping areas in other locations and of other types.

3.2 RATIONALE OF REQUIRED DATA

3.2.1 HOW MUCH DO CYCLISTS AND DRIVERS SPEND?

In order to identify the economic contribution made by cyclists and car drivers to shopping strips it is necessary to be able to quantify the amount of money that cyclists and car drivers spend in each shopping trip. In order to keep the scope of this research tight a case-study shopping strip showing a high demand for both car parking and bike parking has been chosen. This research compares the average spend of *a* cyclist and *a* car driver or passenger rather

than the *total* spend of all car drivers and cyclists, as a total number of people using each mode is not taken into account. Literature suggests that cycling will increase as investment and the amount of cycling infrastructure increases. Therefore, absolute numbers of people using various transport modes is less important as it changes depending on what becomes easiest and most convenient.

3.2.2 *How much space is allocated to cars compared to bikes?*

On-street car parking spaces, footpaths, on-street bike hoops, roads and bike lanes are all public spaces. Local and State authorities who have responsibilities for these public spaces also have responsibilities to ensure that public space is used for the most appropriate purpose. In shopping strips it would not be unforseen that public space be provided to create economic vibrancy as well as safe and attractive places for people to socialise. Various equations have been developed to calculate the space efficiencies of various transport modes but pedestrians use somewhere in the order of twenty times less space than a car (Wallar, 2007 website). The City of Melbourne recognises the comparative space efficiency advantages of walking and cycling over the car (**Figure** 11).

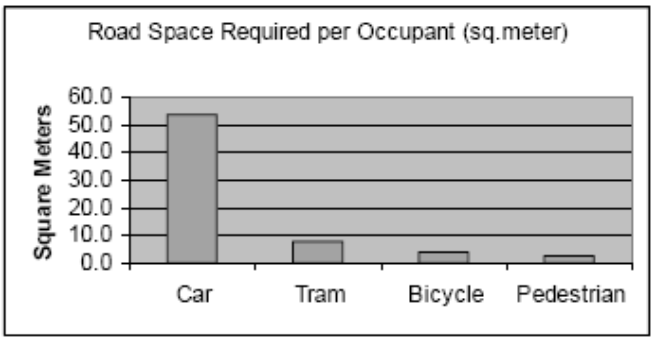

Figure 11 Space Efficiencies of Car, Tram, Bicycle and Walking (Graph Source: City of Melbourne, Cycling Issues Paper, 2005)

To come to any conclusion regarding whether the economic contribution of car drivers justifies the amount of public space allocated to the car a square meter figure measuring the amount of space allocated to car parking and bike infrastructure including parking, is required.

3.2.3 *How important do traders think parking is to their shopping strip?*

Whilst the media depicts traders opinions toward car parking removal very negatively it is possible that these opinions do not represent the wider views of traders. Furthermore, there is little known or reported about trader sentiments toward cyclists.

3.2.4 *Are there certain shopping trips that can only be made by car?*

It is highly likely that certain types of shopping trips are made using particular modes of transport. It is less likely that someone would choose to do the weekly grocery shopping by bike. Similarly, specialty retailers (for example, bridal wear shops or a 'Two Chef's Hat' reviewed restaurant) have a broader catchment area and are more likely to attract people who

need to use mechanised transport such as cars. Whether some retail types are of shopping trips will be disadvantaged through removing car parking spaces needs to be considered.

3.3 Method and Process of Analysis

This chapter discusses the methods used to gather data to answer the sub-questions identified above (see 3.2) and investigates the broader issue of the economic contribution made by cyclists and car drivers in Melbourne's shopping strips. Three research methods are to be employed to gather the required data (**Figure** 12).

Research methods are focussed on three areas; visitor travel/spending patterns (visitor travel survey), public space allocation (GIS Public Space Audit) and perceived opinion of importance of parking (Group Interview).

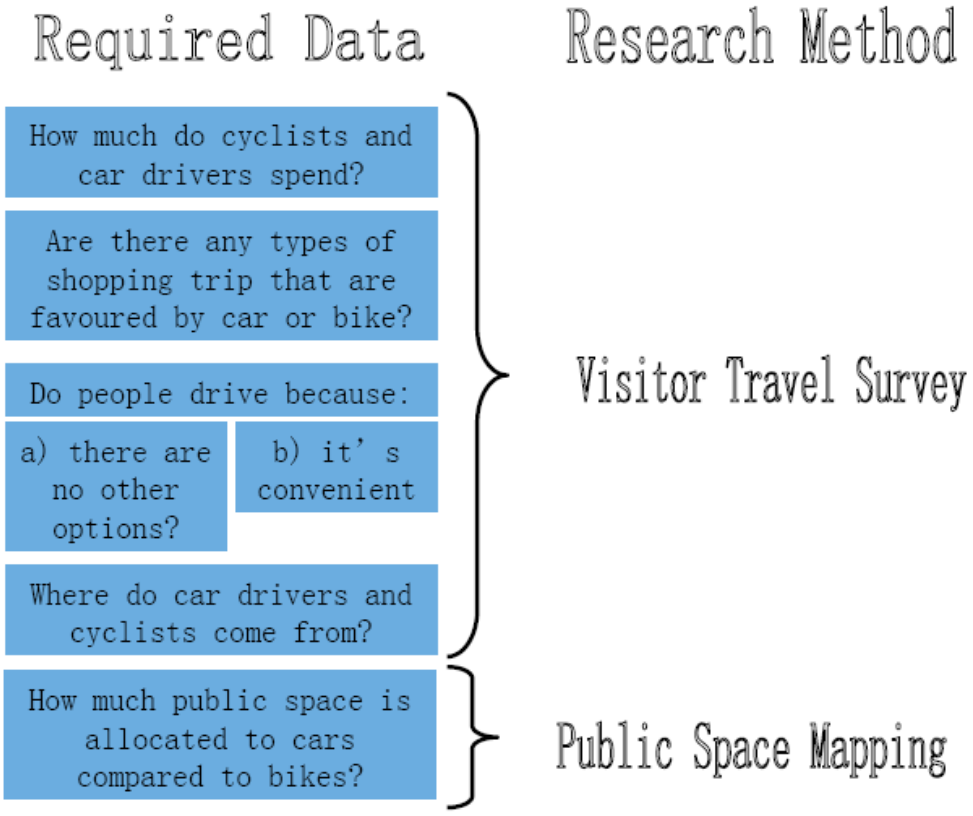

Figure 12 Research methods used to obtain required data

3.3.1 Case-Study Selection

Lygon Street Carlton has been selected as an exemplar, a shopping strip which has a high demand for both on-street parking and bike parking as well as competition for foot-path space between pedestrians and bike parking. Due to the high demand placed on public space by people using various transport modes, Lygon Street is in a good position to consider a possible transference of car parking spaces to bike parking spaces without risking new bike parking spaces laying unused and thus creating less productive public space.

Within Lygon Street the area around Lygon Court Shopping Centre has been chosen (**Figure** 13a).

Figure 13a and 13b Lygon Court Case Study Area and Observations of Bike Parking Demand

Observational data indicates that there is both a high demand for cycling and car infrastructure (Figure 13a this particular part of Lygon Street most likely because the mixture of shops, including the Nova Cinema, Readings and Borders Bookstores, Safeway and King and Godfrey Deli and Bottle Shop, is the most likely to attract local as well as visitors from further a field.

3.3.2 *VISITOR TRAVEL SURVEY*

METHODS FOR DATA COLLECTION

Shoppers in Lygon Street were intercepted and asked about their travel and spending patterns on that day. Over five sessions 1020 people were surveyed and their answers recorded to provide data for this study.

The timing of surveys was spread over a range of points in the day and a mixture of days to determine whether there are differences between of visitor type or purpose between day and night and weekday and weekend (**Figure** 14). Three people conducted the survey questionnaire for a period of between two to four hours each (**Figure** 14).

Day	*Time*				*Total*
	9am - 11am	*12pm - 2pm*	*5pm - 7pm*	*1pm - 5pm*	
Monday	40	0	0	0	**40**
Tuesday	35	51	0	0	**86**
Wednesday	35	0	0	0	**35**
Thursday	0	0	118	0	**118**
Friday	35	90	41	0	**166**
Saturday	1	0	1	275	**277**
Sunday	0	0	0	298	**298**
Total	**146**	**141**	**160**	**573**	**1,020**

Figure 14 Day and time surveys completed

A complete set of the raw data collected through the visitor travel survey can be found at Appendix 7.

SAMPLING

It should be stated from the outset that this research does not provide data on the modal split of visitors to Lygon Street, as is common in many other visitor travel surveys. As previously discussed, this is due to the modal split being dependant on the ease with which people can drive, cycle, walk or catch public transport. As such it is unnecessary to get a representative sample of people using the full range of transport options to the area to partake in the survey. The survey design has however needed to ensure the sample is representative of a range of different budget types and points in the shopping trip. Given these needs survey points have included locations away from popular bike parking areas (**Figure** 15 Point 1) where a high incidence of survey requests may be made of people who have just arrived at Lygon Street and therefore not yet spent money, rendering the survey response invalid.

Each person walking past the survey points at the designated times was asked to take the survey, with the exception of the survey administer being occupied. As such the survey people taking the survey are randomly selected. The three survey administers have been located in front of Lygon Court Shopping Centre, requesting people coming in and out of Lygon Court to undertake the survey, Readings Bookshop requesting people travelling north and south along Lygon Street to undertake survey and in front of either Witchery or Country Road (depending on most busy point) requesting people travelling north and south along Lygon Street to undertake survey (**Figure** 15).

Figure 15 Location of Survey Administers in Lygon Street

The survey has been given verbally asking the questions given in **Figure** 16 and recorded in the survey template Appendix 8). The typical procedure for getting permission to administer the survey to visitors in Lygon Street and the subsequent administering of the survey is shown in **Figure** 16.

1. What is your postcode?
2. How did you get here? (Choose Predominant mode)
    a. Cyclists
    b. Drivers
    c. Pedestrians
    d. Public Transport
3. How long have you been here?
4. What is the total amount of time you anticipate being here today?
5. How much money have you spent today?
6. What is your main activity whilst here? (Choose one)
    a. Restaurant/Café
    b. Entertainment (including gallery, show, movie, etc)
    c. Grocery Shopping
    d. Recreational Shopping (Clothes, Books)
    e. Services (doctor, post office, police station, etc)
    f. Working
    g. In transit through strip

Figure 16 Lygon Street Visitor Survey Questions

METHODS FOR DATA ANALYSIS

Postcode data has been used to identify the amount of trade that is local, semi local or from elsewhere. The residential postcode rather than the trip origin postcode has been asked for simplicity and to avoid respondents explaining possibly complex multi-modal trip patterns.

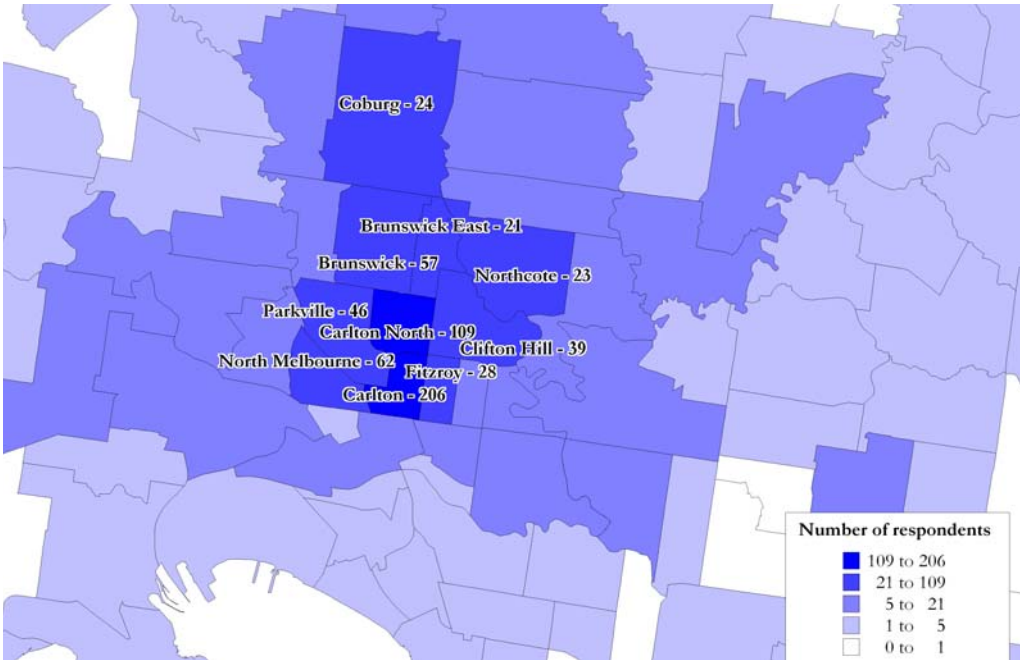

Figure 17 Residential suburb of survey respondents. Top 9 most common locations of residence for visitor to Lygon Street listed

Bi-variant analysis of Question 1 (postcode) and 2 (transport mode) has provided data about whether travel modes use to get to Lygon Street are based on the visitor being local, semi-local, a metropolitan visitor or tourist. This analysis has identified whether the removal of car parking spaces may disadvantage visitors from a particular geographic area.

Question 2 (transport mode) in combination with Question 6 (trip type) will be used to identify whether particular types of social, entertainment or shopping trips are favoured by particular transport modes. It would not be unforseen that visitors whom identify grocery shopping (6g) as their main activity that day may have a higher incidence of car usage. Likewise, a similar pattern may be experienced during a night time survey for people who identify entertainment (6b) as their main activity due to perceived safety factors or climate.

There are significant complexities associated with designing the survey to best gauge the per trip expenditure of visitors to Lygon Street. Asking about 'anticipated spend' (as was done in the Acland Street Visitor Survey) will provide a less robust answer as they do not take into account unplanned purchases. Furthermore, simply asking how much has been spent at the time of survey has it's own problems as the survey will not necessarily be administered after the last purchase has been made. These problems have been addressed through a series of questions, Questions 3 (time spent), 4 (anticipated visit duration) and 5 (spend).

FUNDING

Funding and coordination of data collection was carried out by contractors employed by the City of Melbourne in accordance with the approved contract brief (Appendix 9). This follows a commitment made in their municipal transport strategy, *Moving People and Freight*, to: 'Carry out a study to determine the 'real' versus 'perceived' links between retail productivity and on street parking and review activity centre parking management when the results of this research are known' (City of Melbourne, 2006: 47). The funding body is likewise interested in being empowered with information to support an economic argument for public space allocation. Whilst funding the research the City of Melbourne have committed to having no sway over how the data is used in this research or in the use of data collected for this research in the future.

3.3.3 *PUBLIC SPACE MAPPING*

METHOD OF DATA COLLECTION

The GIS Map base of the Lygon Street case study has been used to calculate the amount of public land is allocated to car parking, car driving, walking and cycling. The case study area has been further refined in this task to only encompass an area representing a short walking distance from the central point of the case study area, the entrance to Lygon Court Shopping Centre, to a car park or bike park (**Figure** 18). The study area includes examples of public space which is allocated to pedestrians, cars, bikes, buses and trams.

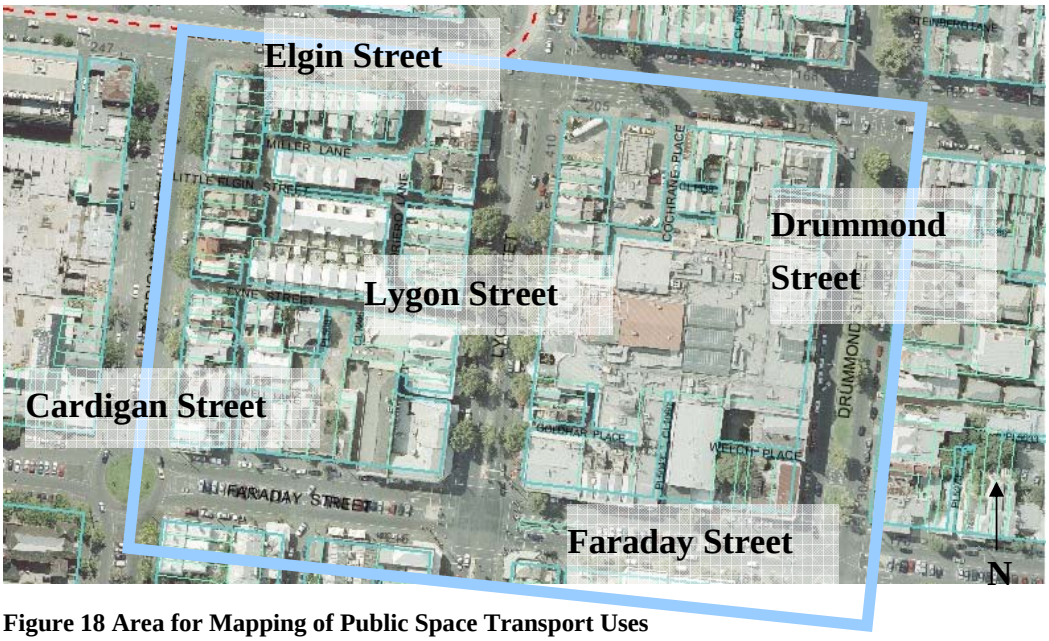

Figure 18 Area for Mapping of Public Space Transport Uses

METHOD OF DATA ANALYSIS

In some instances public spaces allocated to one particular transport mode will have a secondary transport user. The primary user of the space is the user which uses it for the longest period of time or has priority over the other potential users the space for a lesser amount of time or only when it is not in use by the primary user (**Figure** 19).

This exercise only recognises principal transport users of public space. For example, it is recognised that there is significant use of footpath space by cyclist for bike parking. To a lesser extent there is also use of bike lanes by motorists as part of the road space. Furthermore, footpaths are used for more than walking. There are a range of activities which are carried out in these spaces; street dining, Big-Issue selling, street furniture such as benches and poster pillars. These legitimate but non-transport or informal uses of public space are significant and should be recognised in the overall analysis of the use of public space but cannot be included in the initial calculation which only encompasses measurements of space as defined by pedestrian, cyclists, public transport, and car movement and parking.

Public Space Type present in Study Area	**Primary** User of Public Space	**Secondary** User of Public Space
Footpath	Pedestrian	Bike Parking (informal)
Pedestrian Line Crossing	Car	Pedestrian[7]
Car Parking Space	Car	-
Road	Car	Pedestrian[8], Cyclist[9], Bus[10]

[7] Pedestrians are considered secondary users of pedestrian line crossings as they use the space for less time than the space is in use by cars as part of the road network.

Bike Hoop	Bike	-
Designated Bike Lane	Bike	-
Bus Lane	Public Transport: Bus	-
Bus Park	Public Transport: Bus	-
Tram Lane	Public Transport: Tram	-
Tram Stop	Public Transport: Tram	-

Figure 19 Types of public space in study area and its primary and secondary users

A map of the public space mapping exercise can be found at Appendix 10.

[8] Pedestrians are considered secondary users of roads as they must give way to cars

[9] Cyclists are considered secondary users of road space as they use the road for less time than cars

[10]

4 SUMMARY OF RESULTS AND DISCUSSION

4.1 CAR DRIVERS INPUT MORE MONEY PER CAPITA INTO LYGON STREET

Whilst car drivers spend more per capita than people using other transport modes there is a high cost associated with providing space and infrastructure to accommodate the car. Cyclists spend an average of $19.97 at the time of survey interception compared to car drivers who spend $40.23 (**Figure** 20). On the surface this figure may be used to justify the importance of car parking to the retail economy. But reflecting on the many pedestrianisation case studies undertaken over several decades and continents, which have shown positive economic results (see 2.1.1) suggests there is more to understanding the relationship between the amount spent by an individual and a successful retail economy. Indeed Still and Simmonds maintain that different methods of examining the impacts of parking restraint, whether they be reading opinions in the media, parking studies or other literature, will produce very different conclusions (2000: 291). Attitudinal evidence suggests that there is a high level of sensitivity to parking provision, whereas aggregate statistical studies tend to suggest only a weak relationship (Still and Simmonds, 2000: 291).

Figure 20 Amount spent in Lygon Street by Transport Mode

In the following section a more detailed analysis of travel and spending patterns considers other factors in the equation such as: the time taken to spend money and the public space required to store cars compared to bicycles. The results also fuel discussion about whether people driving cars do so out of convenience or necessity and whether if space were reallocated from car to bike infrastructure whether a shift in transport mode would result.

4.2 CYCLISTS AND PEDESTRIANS HAVE A GREATER TURNOVER IN LYGON STREET THAN CAR DRIVERS

The duration of the visit to Lygon Street has a relationship to the amount spent. The most frequent duration of visits to Lygon Street was between one and two hours with 27 per cent of all respondents staying in the street for that period of time. The average cyclist stayed quarter of an hour less than the average car driver or passenger. The average cyclist's trip duration being 1 hour 14 minutes (1.24 hours) compared to car drivers and passengers who stayed for an average duration of 1 hour 29 minutes (1.48 hours) (**Figure** 21). The reason why the public transport users had an average trip length in excess of other transport modes is partially due to the higher likelihood of people catching public transport to be working in the area as their main activity (11.4 per cent) compared to the average (7 per cent). Otherwise the shopping centre management mantra, which decrees the longer people stay the more money they spend, is as applicable in Lygon Street as it would be in Chadstone or any other suburban 'big box' type shopping centre or mall development.

Figure 21 Hours spent in Lygon Street by transport mode

The average cyclist spends $0.27 per minute in Lygon Street ($19.97 over 74 minutes). The average car driver or passenger spends $0.45 per minute in Lygon Street ($40.23 over 99 minutes). An explanation for this is that car drivers are more likely to come from suburbs that are located a greater distance from Lygon Street (see **Figure** 25 and **Figure** 26). This plays a role as, those living a greater distance from Lygon Street will be more likely to wait until they have several items to buy or reasons to visit Lygon Street before making a trip. In comparison, cyclists and pedestrians may visit Lygon Street for a single purpose, spending less, but visiting more frequently. People who use transport modes which typically have shorter durations of stay in Lygon Street also spend less on average however may visit more frequently due to their higher likelihood of living in close proximity to the study area.

4.3 REMOVING CAR PARKING WOULD BE AN ADVANTAGE TO CAFES, RESTAURANTS, CLOTHING AND COMPARISON GOODS RETAILERS

There is a definite trend showing that mode choice is related to trip type. Certain trip purposes are more likely to be undertaken by a particular transport mode. Car drivers and passengers are more likely to undertake trips for necessities to Lygon Street than visitors cycling. Grocery shopping is more likely to be done by car (12 per cent) than bike (8.8 per cent). Visiting services (such as doctor, post office, bank etc) is marginally more likely to be done by car (5 per cent) than by bike (4.8 per cent). Inversely, visits made to 'impractical' purposes, or trips for non-necessities, are more likely to be done by bike. Visiting restaurants and cafes is much more likely to be done by bike (22.4 per cent) than by car (17.5 per cent) and clothing and comparison goods shopping is likewise more likely to be done by bike (37.6 per cent) compared to car (34.6 per cent). The exception to the rule is trips undertaken for entertainment purposes (not a necessity) which are significantly more likely to be done by car (20.1 per cent) compared to by bike (13.6 per cent) (**Figure** 22). A likely explanation for this is entertainment venues such as the Nova Cinema (an art house cinema renowned for not showing standard cinematic fare) and La Mama Theatre, which likewise has a far greater catchment, are therefore more likely to attract people from beyond a walking and cycling distance. Also, these trips are more likely to occur at night. It can be concluded that those grocery shopping are more likely to be driving than cycling, both statistically and in real terms. This is not surprising given that the weight of grocery shopping if it is done infrequently enough would not be conducive to riding a bike (**Figure** 23). It can also be concluded that those shopping for comparison goods, clothing and visiting restaurants and cafes are statistically more likely to be cyclists than car drivers.

Activity	*Bicycle*		*Car*		*Pedestrian*		*Public transport*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Restaurant/cafe	28	22.4%	70	17.5%	51	17.5%	37	18.3%
Entertainment	17	13.6%	80	20.1%	33	11.3%	44	21.8%
Grocery shopping	11	8.8%	48	12.0%	70	24.1%	17	8.4%
Clothing & comparison goods shopping	47	37.6%	138	34.6%	70	24.1%	50	24.8%
Services	6	4.8%	20	5.0%	14	4.8%	10	5.0%
Work	10	8.0%	28	7.0%	10	3.4%	23	11.4%
Commuting	6	4.8%	15	3.8%	43	14.8%	21	10.4%
Not stated	2		0		0		1	
Total	**127**	**100%**	**399**	**100%**	**291**	**100%**	**203**	**100%**

Figure 22 Activity by method of travel to Lygon Street

Figure 23 Grocery shopping by bike? (Image Source: Reuben Miller Design, Website: reubenmiller.typepad.com)

The higher likelihood of cyclists shopping for clothing and comparison goods and visiting cafes and restaurants may also be behavioural. It has long been said that 'cars don't buy things, people do'. It could also be said that it is people going at a lower speed passing through Lygon Street on their way from point A to point B that are more likely to become sidetracked by window shopping and the unintended purchase. In her European study of pedestrianised shopping areas Wallar goes further to suggest that there are economic advantages to pedestrianisation saying that shopkeepers along pedestrian malls in Essen, Bonn, Cologne, Hamburg and Munich, initially in opposition to the street closure, now believe that people take more interest in window displays in traffic-free zones than elsewhere (2007,website). When considering those that pass through the area those that travel at a slower pace are more likely to contribute to retail economy than those driving through given the likelihood of making an unintended purchase.

It could be argued that reallocation of on street car parking space to bike parking may disadvantage grocery shops but advantage clothing, restaurants, cafes, and comparison goods. However, the relative space efficiency of the bike in comparison to the car can produce greater density of visitors and therefore greater spend for grocery as well as in other sectors. This will be discussed in greater detail in section 4.6.

4.4 A LARGE PORTION OF PEOPLE DRIVE TO LYGON STREET BECAUSE DRIVING HAS BEEN MADE EASY

Often the argument is made that car parking is required for people who do not have access to transport modes other than the car. Either they live in an area without convenient public transport, or at a distance that walking or cycling are not feasible. Results in this section show that there are a large proportion of car drivers in Lygon Street who drive to the area out of convenience, rather than necessity. There is an underlying question here about the role that convenience plays in transport mode choices to this area. Does the success of retail in Lygon Street depend on convenient access for car drivers to the area?

4.4.1 26.9 PER CENT OF CAR DRIVING VISITING LYGON STREET ARE FROM THE SURROUNDING AREA

These findings show that a significant proportion of car drivers reside within easy walking and cycling distance or within easy access to public transport. The findings show that the three most likely suburbs from which people who drive to Lygon Street reside are: Carlton North (5.8 per cent of respondents), North Melbourne (5.5 per cent of respondents) and Carlton (5.3 per cent of respondents) (**Figure** 24). Put another way, 26.9 per cent of car drivers to Lygon Street are from the surrounding area (Carlton North, North Melbourne, Carlton, Brunswick and Clifton Hill). All these suburbs are within four kilometres of the study area, reflecting similar findings made by RMIT University which show that in Melbourne, 38 per cent of car trips are less than three kilometres and 53 per cent are below five kilometres, (RMIT University, 1999). It is recognised that some of these car trips may have been made by car out of necessity- such as travelling with infants or stopping in on the way to another location. Notwithstanding this however, these findings strongly suggest that there are a high proportion of people who drive to Lygon Street because the car has been made the most convenient mode of transport.

Bicycle		
Postcode	*Number*	*Percent*
Carlton North	27	21.3%
Carlton	16	12.6%
Brunswick	13	10.2%
Northcote	8	6.3%
North Melbourne	7	5.5%
Parkville	6	4.7%
Brunswick West	6	4.7%
Fitzroy	6	4.7%
Clifton Hill	6	4.7%
East Melbourne	3	2.4%
All other postcodes *(22 postcodes)*	29	22.8%
Total	**127**	**100%**

Car		
Postcode	*Number*	*Percent*
Carlton North	23	5.8%
North Melbourne	22	5.5%
Carlton	21	5.3%
Brunswick	21	5.3%
Clifton Hill	20	5.0%
Northcote	11	2.8%
Brunswick East	10	2.5%
Coburg	10	2.5%
Thornbury	10	2.5%
Regional/Rural Victoria	9	2.3%
All other suburbs *(100 suburbs)*	240	60.5%
Total	**397**	**100%**

Pedestrian		
Postcode	*Number*	*Percent*
Carlton	159	55.2%
Parkville	28	9.7%
Carlton North	28	9.7%
North Melbourne	21	7.3%
Fitzroy	13	4.5%
Brunswick	8	2.8%
Melbourne	7	2.4%
Clifton Hill	4	1.4%
Interstate	3	1.0%
Collingwood	2	0.7%
All other postcodes *(15 postcodes)*	15	5.2%
Total	**288**	**100%**

Public transport		
Postcode	*Number*	*Percent*
Carlton North	31	15.3%
Brunswick	15	7.4%
North Melbourne	12	5.9%
Coburg	11	5.4%
Carlton	10	5.0%
Brunswick East	9	4.5%
Clifton Hill	9	4.5%
Melbourne	7	3.5%
Interstate	7	3.5%
Regional/Rural Victoria	6	3.0%
All other postcodes *(48 postcodes)*	85	42.1%
Total	**202**	**100%**

Figure 24 Top ten postcodes of residence by transport method

4.4.2 *THE ABILITY TO DRIVE ENSURES EQUITY OF ACCESS FOR ALL VISITORS WHO WANT TO VISIT LYGON STREET*

Interestingly, there is very little difference between the top ten suburbs which car drivers reside in compared to users of public transport, pedestrian and cyclists. Some exceptions are residents of East Melbourne's presence as cyclists in Lygon Street, residents of Thornbury's presence as car drivers in Lygon Street and residents of Collingwood's presence as pedestrians in Lygon Street (**Figure** 24). There is however significant difference in the range of locations which car drivers reside in (250 locations), public transport users reside in (58 locations), cyclists reside in (39 locations) and pedestrian reside in (25 locations) (**Figure** 24). This suggests that there is similarity between the most common suburbs of residence of those driving, cycling, walking and catching public transport. **Figure** 25, **Figure** 26, **Figure** 27 and **Figure** 28 map the different suburbs of residence of respondents who drove, cycled, walked and caught public transport to Lygon Street. This suggests that when considering the whole population of people accessing Lygon Street by various transport modes there is significant variation between the ranges of suburbs of residence.

Allowing car drivers access to Lygon Street ensures those from further away can visit the area. Car parking management which produced inclusive access to Lygon Street is to be

encouraged. However, there are a high proportion of people who drive to Lygon Street who live within easy walking or cycling distance. This is indicative that management of car parking has not been balanced such that it is unattractive for those who have access to other transport choices whilst still allowing access to the area for those who do not.

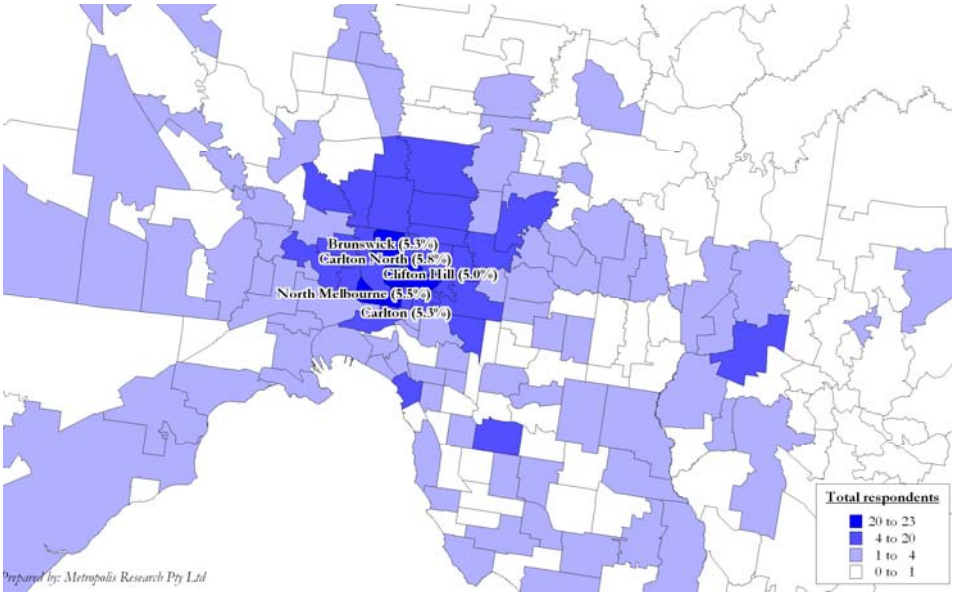

Figure 25 Suburb of residence of respondents travelling by car

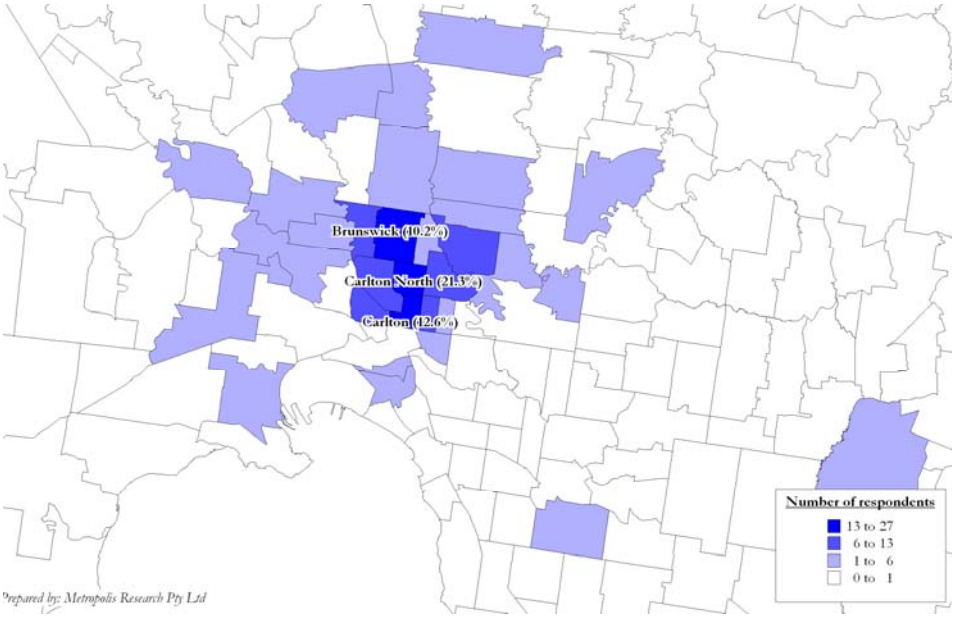

Figure 26 Suburb of residence of respondents travelling by bike

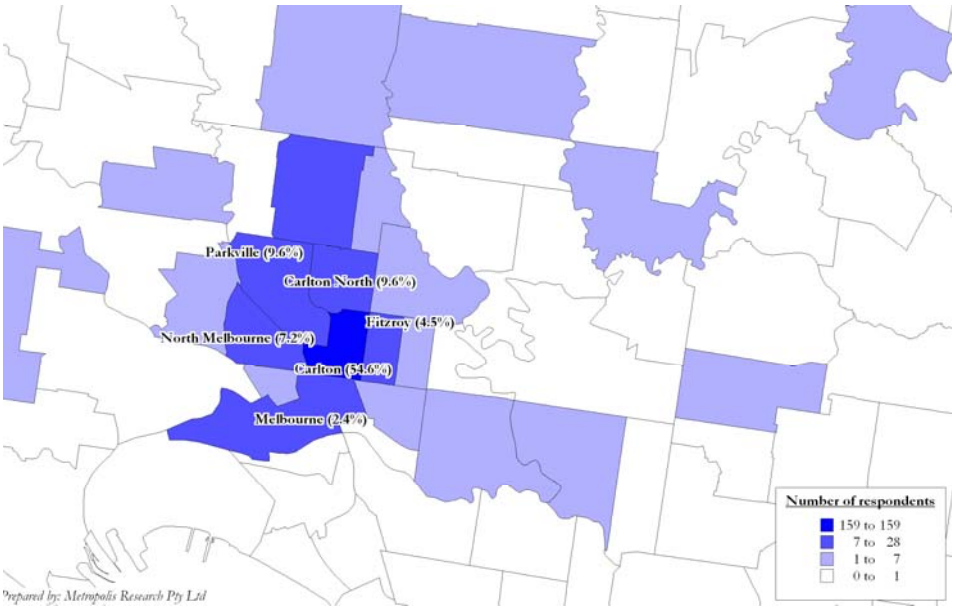

Figure 27 Suburb of residence of respondents travelling by foot

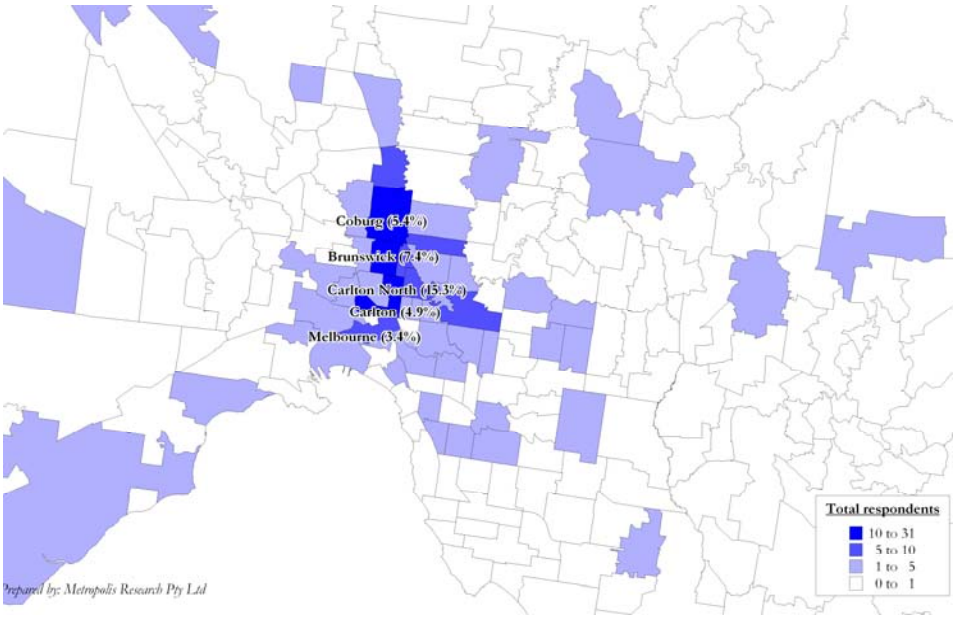

Figure 28 Suburb of residence of those travelling by public transport

4.5 SPACE ALLOCATED TO CAR DRIVERS IS NOT JUSTIFIED BY THEIR ECONOMIC INPUT

The majority of public space in the study area is allocated to car parking. There is 18124m2 of public space in the area bounded by Faraday, Drummond, Elgin and Cardigan Streets. 40.7 per cent of the study area comprises of public space. Of the public space, 67 per cent of public space is allocated to cars, 27 per cent to pedestrians and less 3 per cent each respectively to cyclists and public transport. The high proportion of space allocated to cars is indicative of the effect of the car reaching far beyond the mere presence of the cars themselves. Cars create a maze of driveways garage doors asphalt and concrete surfaces, and building elements which

people cannot use (Alexander, 1977). Car drivers, who on average spend twice as much as cyclists, are allocated 37 times the amount of public space. This is a reflection of the amount of road space required to carry and store cars compared to bikes. For example, car parking is significantly less space efficient than bike parking with six bikes able to be parked easily in the space of one car park. If looking at space efficiency as the only measure a justified use of space for parking may be that a car driver should spend 6 times the amount as a cyclist given that six bike parks can fit in the space of one car park.

The modernist view of the city where efficiency is primary and the convenience of the car of foremost importance in the functioning of the city has not occurred.

Transport Mode	Public Space Area	Percentage of Total
Pedestrian	4936m2	27%
Cyclists	621m2	3%
Car	12022m2	67%
Public Transport	545m2	3%
TOTAL	**18124m2**	**100%**

Figure 29 Public space allocation to all transport modes in case study area

4.6 PUBLIC SPACE RELOCATED FROM CAR PARKING TO BIKE PARKING COULD PRODUCE 3.6 TIMES THE RETAIL SPEND

The opportunity to accommodate more visitors into the same area, if realised could create a far greater retail spend in the area. A standard on-street car parking space in Lygon Street is 13m2, or 2.5 meters in width and 5.2 meters in length. The average retail income justifying this spaces existence in Lygon Street is $27 per hour (average car drivers spend per minute multiplied by 60) (**Figure** 30). An area of 13m2 could accommodate three bike hoops, allowing six bikes to park in that space. With an average spend of $16.20 (cyclists spend per minute multiplied by 60), this space has potential to earn a retail spend of $97.20 per hour (**Figure** 31). That there is a positive economic relationship between removing car parking and retail spend should not be unexpected considering the positive returns experienced in Copenhagen's Stroget when it became a car-free environment (see 2.1.1).

Figure 30 Retail spend per hour generated by one car parking space allocated to car parking in Lygon Street, Carlton, where the car park is fully utilised at all times by a car.

Figure 31 Retail spend per hour generated by one car parking space allocated to six bike parking spaces in Lygon Street, Carlton, where the car park is fully utilised at all times by six bikes.

4.7 IF BIKE INFRASTRUCTURE IS PROVIDED PEOPLE WILL CYCLE

The line of argument presented thus far is dependant on whether people will ride simply because bike parks are provided. The literature review identified the connection between length of bike lane and the amount people cycle in the City of Copenhagen. Whilst this data deals only with bike lanes, rather than including bike parking space, it nonetheless provides a valuable lesson. It is likely that it is the combination of bike parking and bike lanes increase the number of cyclists. It is all very well to cycle, but what if parking is inconvenient? Inconvenient bike parking presents a disincentive to cycle. In a recent opinion survey undertaken by the City of Melbourne, only 24% of respondents agreed that they were satisfied with the amount of bike parking in the City of Melbourne (City of Melbourne[1], 2007: 8). There is no reason to suggest that Melbourne will not experience similar upward cycling trends to those experienced in Copenhagen if consistent and ongoing investment and road space allocation for both bike parking spaces and bike lanes is provided.

4.8 CONCLUSION

That car drivers and passengers spend on average double the amount that cyclists spend seems to be a solid justification for their importance in the retail economy of Lygon Street. Even taking into consideration the shorter trip length of the average cyclist compare to the average car driver or passenger, a cyclists still spend just 60 per cent that of a car driver or passenger. A more detailed analysis of the merits of car drivers and cyclists, which considers public space allocations for both transport modes, points to the merits of public space allocation favouring cyclists.

The Planning and Environment Act 1987 requires that the use of public space must be both fair and economically sustainable. The results from this study can show that the current allocation of public space in Lygon Street is neither fair nor economically sound public space management. This can be done in three ways:

Firstly, whilst there is a trend for people grocery shopping and attending entertainment venues to drive a realignment of public space will not necessarily harm these retailers. This argument in favour of bike parking is reliant on the space efficiency of the bike in the urban environment. Space efficiency is a significant consideration given that area such as Lygon Street are densely 'built out' environments in which space is a finite resource to be managed to achieve efficiency in delivering visitors to retail. A removal of car parking spaces could be said to disadvantage shops selling groceries and entertainment venues. However the space efficiency of the bike, in comparison to the car, can produce greater density of visitors. With a increased density of people visiting the area it is likely that there will be a greater economic input into all forms of retail.

Secondly, a realignment of car parking management can be achieved fairly so as not to disadvantage those for whom the car is the only available transport mode. The power for car parking management to change the demographic of visitors to an area is acute. The shutting off of an area for regional visitors or those from outer suburbs which do not have access to public transport is exclusionary and should not be pursued as a goal in parking management. However the high proportion of drivers in the study are who live close to the study are is indicative that an appropriate balance between management of car parking so as not to be exclusionary but in a manner which encourages local travel on sustainable transport has not been achieved. There are a large proportion of car drivers to Lygon Street who drive to the area out of convenience not necessity. Lygon Street has more to attract shoppers than convenience and therefore this approach should not be overemphasised as integral to the workings of the area.

Thirdly and finally, the current skewed balance, which sees car parking dominating public space allocation, is not economically sound. If managed properly the removal of car parking and replacement with denser bike parking will increase the possible economic input available to retailers. This is a relatively simple equation about density.

The implication of these findings will be discussed in more detail in Chapter 5. In particular, what appropriate policy might look like and the implications for public space management in Lygon Street and other similar shopping strips.

5 CONCLUSION: IMPLICATIONS OF RESEARCH FINDINGS

5.1 IMPLICATIONS FOR PUBLIC POLICY AND PUBLIC SPACE

5.1.1 CAR PARKING REVIEW: CITY OF MELBOURNE

This finding calls into question the current City of Melbourne policy, also replicated in practice across municipalities in the inner region, of providing short-stay parking to ensure shoppers access to retail areas (City of Melbourne, 2006:24). That on-street parking enhances the retail economy has been found to be baseless. That there is policy replicating this fiction challenges the assumption made by many that such policies are based on sound evidence-based planning principles. Indeed it is more likely that this particular policy is based on the less-sound political-based planning processes that often result when lobbyists (in this case, the retailers) shape public policy.

In their transport strategy, the City of Melbourne committed to the short-term action to:

> *Carry out a study to determine the 'real' versus 'perceived' links between retail productivity and on-street parking and review activity centre parking management when the results of this research are known*
>
> City of Melbourne, *Moving People and Freight*, 2007: 47

Consistent then with the stated course of action contained in the City of Melbourne's transport policy this research could provide a catalyst for the revision of activity centre parking management to de-emphasise the importance of parking in City of Melbourne's shopping strips.

5.1.2 CAR PARKING REVIEW: INNER REGION SHOPPING STRIPS

The findings of this study can be assumed to hold some weight in shopping strips in the inner region displaying similar traits. However, it is recognised that getting truly accurate results taking into account the particular travel and spending patterns of each inner Melbourne shopping strip would require surveying of each particular area. There is an opportunity for the Inner Melbourne Action Plan (IMAP) grouping of Council's[11] to pursue this course of action.

5.1.3 RESPONSIVE BIKE PARKING IMPLEMENTATION

There is a connection between cycling infrastructure and the number of people who choose to cycle. Lessons from Copenhagen show however that this is a progressive process. Time and

[11] The IMAP grouping of Council's consists of: City of Melbourne, City of Port Phillip, City of Yarra and part of the City of Stonnington

patience is required for culture of Melbourne's inner region to identify bike riding as a social norm. Cycling growth over the last 10 years has shown us that if bike tracks are supplied people will ride (City of Melbourne[1], 2007: 8), however the inner region has some way to go before its population en masse think of the bike as their preferred mode of transport in a variety of circumstances. The challenge is retrofitting the city's urban form to pre-empt and respond to this process as more people begin to ride. Therefore, removing all car parking spaces and installing lines of bike parking hoops may not be a recipe for a successful retail economy in Lygon Street. The progressive removal of car parking spaces and replacement with bike parking would slowly create:

- A greater density of shoppers;
- Greater retail spend;
- A more equitable allocation of public space; and
- Difficulty for people within walking and cycling distance to park.

Not to mention it would also create a more socially connected and environmentally sound urban form.

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APPENDICES

Appendicis.

APPENDIX 1 *MEDIA COVERAGE OF MELBOURNE SHOPPING STRIP TRADER ADVERSITY TO PARKING REGULATION 'LYGON STREET TRADERS REJECT PARKING METER PLAN'*

By Rachel Kleinman

May 25, 2006

Alan Watson from Jimmy Watson's Wine Bar doesn't want parking meters in Lygon Street.

A proposal for parking meters in Lygon Street would "handicap" traders in the Italian dining strip, restaurateurs say.

Melbourne City Council will suggest charging customers for street parking as part of today's proposed annual budget.

But restaurateurs such as Alan Watson, who owns Jimmy Watson's Wine Bar, said parking meters would be an unwelcome addition. "(The) street will be handicapped because, unless people can park close to where they want to eat, they will just go somewhere else," he said.

Several councillors told The Age they supported parking meters in Lygon Street because other strips, such as Errol Street in North Melbourne, already had them.

Cr Carl Jetter said restaurateurs and retailers always complained that business was bad.

"Just because they are complaining, it doesn't mean it is a bad idea," he said. "Why should Carlton be the exception to any other shopping strips?"

Carlton Business Association president Connie Paglianiti said the council had already failed to enforce a one-hour parking limit in the street. "I cannot see how parking meters will solve this problem except for generating revenue for the City of Melbourne," Ms Paglianiti wrote in a letter to the council.

The Age believes it would cost about $200,000 to install the meters, which would raise about $100,000 a year in revenue.

Plans to contribute up to $1 million to promote the 2007 FINA World Swimming Championships have also proved controversial.

Cr Catherine Ng said there was no business case for ratepayers to subsidise the event, which will take place at the Rod Laver Arena next March.

"What do we get for this money? If we don't spend it, does that mean fewer people will turn up to the championships?" she said.

The city's budget is also expected to propose:

- Increasing rates by 3.8 per cent, in line with Lord Mayor John So's wishes and the CPI.
- Retrieving up to $4 million from the council's $244 million investment portfolio to buy a derelict heritage building in Queensberry Street from the State Government and convert it into a child-care centre.

APPENDIX 2 *MEDIA COVERAGE OF MELBOURNE SHOPPING STRIP TRADER ADVERSITY TO PARKING REGULATION 'LYGON STREET TRADERS FIGHT PARKING METER PLANS'*

ABC News Online, Website

Wednesday, May 24, 2006. 6:27pm (AEST)

LYGON STREET traders are fighting plans to introduce parking meters along the popular restaurant and shopping strip at Carlton in inner Melbourne.

The Melbourne City Council is considering installing meters between Queensberry and Elgin streets.

Carlton Business Association president Connie Paglianiti says the meters would have a detrimental effect on local trade.

"I think it would actually kill it because Lygon Street in Carlton actually relies on others visiting the area, even for a cup of coffee," she said.

"It could be 10, 15 minutes, half an hour stop, it actually almost doubles the coffee."

APPENDIX 3 *MEDIA COVERAGE OF MELBOURNE SHOPPING STRIP TRADER ADVERSITY TO PARKING REGULATION 'TRADERS SAY: KEEP IT OPEN'*

Michael Lallo

The Age, Website

January 7, 2007

SAM ASSAAD, owner of the La Cigale cafe on Sydney Road in Brunswick, didn't hesitate when asked about Moreland City Council's plan to convert a large part of the road into a car-free pedestrian promenade.

"It's bullshit," he said of the proposal to ban motorists from the four-kilometre strip between Brunswick Road and Bell Street. "Most of our customers drive here. This is going to kill us."

Mr Assaad is not alone in his assessment. Every local trader and resident *The Sunday Age* spoke to expressed concern about the proposal, with most insisting it should not proceed.

Many feared it would only worsen traffic congestion in surrounding streets and scare off car-dependent shoppers.

Fruiterer Steve Semaan estimated his revenue would halve if cars were banned.

"Most of our customers are elderly," he said. "We have to carry boxes of fruit to their cars. They won't come if they can't park right in front of the store."

Mr Semaan said his sales plummeted when Sydney Road was closed to cars for six hours during last year's Cyclovia street festival.

"It might be good for the restaurants and cafes, but not for us," he said.

Mitch Renzella, whose parents run The Office Cafe, was ambivalent about the proposal, despite the fact that most of his customers were locals who walked to the shop.

"This could make or break us," he said. "We really need to think about this."

But most other Sydney Road traders said the idea was not even worth considering.

"Keep it open," said Elif Uzun, an assistant at Pamukkale Bakery. "Everyone drives these days.

"People will stay away if we close it."

A bridal boutique manager, who didn't want to be named, said the road's many bridal boutiques relied on passing traffic.

"Most of our customers are not local, so they see us when they're driving past," she said.

"This will not be good for us. No way."

She had a simple message for Moreland City Council Mayor Mark O'Brien, who is pushing the proposal. "Settle down, mate," she said. "Maybe Mark O'Brien should spend a week on Sydney Road to see what it's really like."

In addition to concerns about clogged side streets, some residents fear the absence of cars would diminish the road's raffish charm. "It could take away the vibrancy," said Brunswick local Louise Forthun.

"The traffic is annoying, but it's not that bad."

Appendicis.

Appendicis.

APPENDIX 4 *PROPERTY COUNCIL STATE OF PLAY WHO SAID THE UPPER HOUSE WAS BORING?, 16 MARCH 2007*

State of Play

PROPERTY COUNCIL WEEKLY UPDATE
VICTORIA DIVISION

16 March 2007

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LONG AWAITED TRAFFIC CONGESTION REPORT FINALLY RELEASED

The Victorian Government this week finally released the long awaited Victorian Competition and Efficiency Commission's report *Making the Right Choices: Options for Managing Transport Congestion*, as well as its 38-page response. In the latter, the Bracks Government fully or partly supports 52 of the 58 recommended options. Treasurer John Brumby said that tackling congestion required an integrated approach using a range of options including new infrastructure, the most efficient use of existing networks and a better integration of planning and consultation. An interesting position given the Government has committed to keeping the Car Parking Tax, a levy the Property Council has reiterated has not tackled the congestion issue at all and is simply a grab for cash. In its submission to the Government on this issue in December 2005, the Property Council made it clear that Melbourne needs a long term strategy to tackle congestion that includes major infrastructure and public transport upgrades. We will be reviewing the VCEC report and the Government's response in the near future.

WHO SAID THE UPPER HOUSE WAS BORING?

Parliament sat this week and a number of issues relating to the industry were raised by members of the Legislative Council. Liberal Member for Southern Metropolitan, Andrea Coote, reiterated her party's opposition to Melbourne 2030, and in particular, a petition signed by 170 residents objecting to the removal of on-street parking places in Danks, Rouse, Pickles and Johnston Streets which are located in the City of Port Phillip. David Davis (pictured right), also Southern Metropolitan region, had an entertaining 'duel' with the Minister for Major Projects, Theo Theophanous (pictured above left), in relation to the Bracks Government's position on water infrastructure. Minister Theophanous also outlined the Government's re-examination of the building of Melbourne's new stadium to cater for rugby and soccer announcing that stakeholders have agreed the stadium's capacity will increase from 20,000 to 27,750 with the potential to be expanded to 31,500 if required. In interesting banter on the issue, Minister Theophanous responded to David Davis' interjections by stating "I am trying to talk about a rectangular stadium, not your blockhead, not your square head" with David Davis responding with "You're the one with the square boots". Who said the Upper House was boring?

On planning issues, Shadow Minister, Matthew Guy, raised the issue of housing affordability and reiterated his opposition to Melbourne 2030 policy, the later of which he interestingly described "as the key driver of rising housing costs over the last few months".

Planning Minister, Justin Madden, reiterated in Parliament his focus on cutting red tape in relation to the planning system. Mr Madden said that "one of the key principles of that is to make sure we are taking away the red tape that might require planners, particularly at local government level, to process and administer applications which are time consuming and taking them away from their core tasks". Encouraging news from the Minister. Cutting red tape is long overdue and an issue that the industry has repeatedly voiced its concerns to the government.

MONEY FOR SUSTAINABILITY INITIATIVES

Sustainability Victoria is seeking expressions of interest for its $300,000 Commercial Office Building Energy Innovation Initiative. The initiative assists developers, property owners and tenants to demonstrate innovation in the design and application of sustainable energy in new buildings, major refurbishments, tenancy fit outs and building services upgrades. See www.sustainability.vic.gov.au for more information.

SUSTAINABILITY BRIEFING – THE ENERGY EFFICIENCY OPPORTUNITIES ACT

Are you a property owner, manager, land lord, tenant or consultant? Our Sustainability Briefing scheduled for Wednesday 28th March is outlining the new Energy Efficiency Opportunities Act detailing what industry / companies need to know in order to comply with the new legislation. We will also look at what approach Investa has taken in complying with the new legislation and the lessons learnt during the process. Please click here for more information.

LEASING FUNDAMENTALS COURSE – COMMERCIAL AND RETAIL

Leasing Fundamentals, scheduled for the 3rd & 4th May is a two day workshop for those new to the property industry, or working in the industry less than two years and wishing to expand their knowledge on the leasing process and its key players. The second day of this course will split into two streams, with attendees concentrating on the specifics of either commercial or retail leasing. For more information please email Natalie Wilson on nwilson@vic.propertyoz.com.au

WIN A TRIP FOR TWO ON THE GHAN FOR CONGRESS07: 22 – 24 JULY, 2007

Great Southern Railway, proud operators of The Ghan Indian Pacific and The Overland, are delighted to offer two Gold Kangaroo Service rail tickets on The Ghan travelling from Darwin to Alice Springs or vice versa for the Property Council's upcoming Congress in Darwin. Once aboard, the lucky winner will enjoy the many benefits of travelling in Gold Kangaroo Service; travel in a twin sleeper cabin with upper and lower bunks, private ensuite, all meals and a complimentary bus transfer to or from the Darwin Terminal. Register for Congress07 by 27 April 2007 and go into the draw to win this unforgettable trip on The Ghan. Further information can be found at www.trainways.com.au or visit the Congress07 website.

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WHATS ON ?

Sustainability Briefing
28th March

Property Fundamentals
30th March 2007

Division Lunch
19th April
Property Panel

Leasing Fundamentals
3-4th May

Ball & Charity Auction
12th May
Crown Towers
HURRY AS TABLES ARE SELLING FAST!

Sustainability & Property Assets Course
13th July
Rendezvous Hotel

Congress 07
22nd July
Darwin

DIARY NOTES

CRE Briefing
18th April

Division Breakfast
24th April 2007

Future Directions
26th April

Future Directions
young people in property

APPENDIX 5 *CITY OF YARRA REPORT 'RETAIL ACTIVITY CENTRES PERFORMANCE, FUNCTION AND FUTURE DIRECTIONS'*

Prepared for City of Yarra, March 2003

Can be accessed at:

http://www.yarracity.vic.gov.au/Business/Economic%20development/pdf/retail.pdf

APPENDIX 6 *LETTER FROM RATHDOWNE STREET TRADERS REQUESTING REMOVAL OF CAR PARKING SPACES*

Rob Sanders
Zucca Restaurant
176 Rathdowne Street
Carlton 3053

Date

Dear Lord Mayor

I refer to the meeting you attended with myself and representatives from Rathdowne Street businesses on the 2 April 2007 to discuss street beautification and other City of Melbourne initiatives available to Rathdowne Street. We appreciate your time and interest in our street and businesses.

From this meeting at Zucca Restaurant and in regard to the two proposals put forward by the City of Melbourne, the consensus by the majority of business owner/operators (see signatures below) is the acceptance of Option B. This option provides for the widening of the existing footpath, tree planting and the removal of all car spaces on the East side of Rathdowne Street between Kay Street and Pitt Street.

We look forward to these changes and now ask that these works be programmed in formalising Option B to be implemented as soon as possible.

I am available to discuss this further and again thank you for your interest.

Yours sincerely

Rathdowne Street Businesses

Rob Sanders
Zucca Restaurant

Michael D'Cruz
Blue Truffle

BRAD MARTIN
SIPPERS

Giovanni Mico
La Contdina Restaurant

Jenny Walsh
Moretons

JENNIFER WALSH

John Pham
Mai Vy Restaurant

John Xie
Fu Lu

Cc; Kate Wright. Place Manager, Carlton and Parkville

APPENDIX 7 *COLLATION OF VISITOR SURVEY RESPONSES*

(See over page).

***APPENDIX 8** SURVEY TEMPLATE*

TIME	Person	What is your postcode?	How did you get here? Choose Predominant mode) 1 Bike 2 Drove or was driven 3 Walked 4 Caught Public Transport	How long have you been here?	What is the total amount of time you anticipate being here today?	How much have you spent today?	What is your main activity whilst here? (Choose one) 1 Restaurant/Café 2 Entertainment (including gallery, show, movie, etc) 3 Grocery Shopping[12] 4 Recreational Shopping (Clothes, Books) 5 Services (library, post office, police station, etc) 6 Work	How often do you come to Lygon Street?
3:23	*(example)*	*3066*	*1*	*30 minutes*	*1:15minutes*	*$23*	*1*	

[12] NOTE: For the purposes of this survey 'shopping' as an activity also includes 'window shopping' or 'browsing' in recognition that these activities whilst not undertaken with the intention of spending money often do result in spend

APPENDIX 9 CITY OF MELBOURNE PROJECT BRIEF FOR VISITOR SURVEY

RETAIL STRIP VISITOR TRAVEL SURVEY –
CONSULTANTS BRIEF

1 BACKGROUND

1.1 The City of Melbourne is undertaking research into car parking and cycling transport choices in inner city shopping strips, using Lygon Street as a case study.

1.2 **Key Words/Concepts**: Car parking; Bike Parking; Transport Choice; Sustainable Transport; Shopping Strips; Economic Vitality: People (#) and Amount Spent ($); Appropriate Use of Public Space

1.3 **The overall research question is**: What is the economic contribution of cyclists compared to car drivers in shopping strips?

2 OBJECTIVES

2.1 The main objective of this project is to:

2.1.1 establish whether the retail spend of car drivers compared to people using more space efficient transport modes (i.e. Cycling) justifies the amount of public space allocated to car parking; and

2.1.2 to provide an economic argument for reallocation of road space to cyclists.

2.2 This brief relates to one component of the overall research, undertaking survey questionnaires at Lygon Street, Carlton

See Appendix 1 for exact location.

3 STRATEGIC CONTEXT

3.1 In 2006 the City of Melbourne adopted a transport strategy *Moving People and Freight*. The Strategy set out that Council was to:
Carry out a study to determine the 'real' versus 'perceived' links between retail productivity and on-street parking and review activity centre parking management when the results of this research are known.

4 KEY TASKS

4.1 Inception Meeting at City of Melbourne offices to discuss survey method

4.2 Three people carrying out survey questionnaire for a period of between two to four hours each over four separate occasions, as follows:

Location	Day/Date	Time	Duration
Lygon Court	Saturday	1-5pm	4 hours
Lygon Court	Sunday	1-5pm	4 hours
Lygon Court	Weekday	5-7pm	2 hours
Lygon Court	Weekday	12-2pm	2 hours
TOTAL			12 hours
			People hours= 36

4.3 Each person walking past the survey point must be requested to take the survey, unless those giving the survey are otherwise occupied, or the person declines to be surveyed.

4.4 The survey will be given verbally asking the questions given in Appendix 2 and Appendix 3. A typical exchange will be

4.4.1 *"Excuse me could I please ask you 4 questions for a survey. It should take about 30 seconds"*
If agreed to, then continue.

4.4.2 Hand person 'Plain English Statement' (Appendix 4) to take away and read.

4.4.3 Administer questionnaire

4.5 All responses must be entered in an Excel spreadsheet

5 OUTPUTS

5.1 The output of the consultancy will be an electronic Excel spreadsheet showing all responses to the questionnaire. Spreadsheet should be split into the different surveying dates and should also contain a combined spreadsheet with data from all surveying dates. The consultant shall also submit all hard copy survey sheets used on the days surveyed.

6 TIMELINES

6.1 A date for formal commencement will be 15 June 2007.

6.2 Inception meeting 15 June 2007

6.3 Surveys undertaken

7 FEES AND CONSULTANT SUBMISSIONS

7.1 The fee is dependant on consultant's proposal submitted and agreed to by the City of Melbourne, prior to undertaking work.

7.2 The fee should be invoiced as follows:

7.2.1 One Hundred percent (100%) of the fee shall be payable upon completion of the four survey sessions;

7.2.2 The limiting fee (including disbursements) will not be exceeded without prior written authority from Council.

PROJECT MANAGEMENT AND REPORTING

Alison Lee
Transport Policy Officer
City of Melbourne
Ph 9658 8513
Email: Alison.Lee@melbourne.vic.gov.au

Signed.....Date.....

APPENDIX 10 *MAPPING OF CASE-STUDY AREA BY LEGITIMATE TRANSPORT USE*

(See over page).