Sub-regional Bike Planning Study: Hornsby

- Final Report
- 29 July 2009
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Executive Summary

Sinclair Knight Merz (SKM) was appointed by the NSW BikePlan project team to develop a sub-regional bicycle strategy for Hornsby. This report provides a review of the study area and current cycling levels and the proposed strategy and implementation plan.

By any standards Hornsby has low levels of cycling. However, the Shire has a core of people and organisations that, for many different reasons, have an active interest in getting more people from Hornsby to cycle. These people have shown themselves willing to take part in planning and creating imaginative solutions.

As part of our work, we have gathered together and become actively involved with a steering group. The steering group consists of committed, enthusiastic people ranging from those involved in a policy/planning perspective (e.g. PCAL, RTA, Hornsby Council), to experienced cyclists (e.g. local Bicycle Users Groups), to local organisations (e.g. police, TAFE, Colleges and schools, bike shops and other local businesses and service organisations). All of these are keen to encourage higher levels of cycling in Hornsby. This steering group has actively participated in three workshops to assist in identifying current hindrances to cycling and the identification of opportunities for change. The group has been instrumental in identifying viable, meaningful and implementable actions which can be taken forward rapidly in Hornsby. This package of measures is documented in this final report, with particular emphasis on strategies developed by the group that can be taken forward in the short term.

Our work with the steering group resulted in five action plans being developed. These action plans are:

- Develop Hornsby Park to serve as a community hub focused on providing advice and support to new or tentative cyclists (Section 7)
- ‘Breaking down Barriers’ event which would engage the community with a cycling event (Section 8)
- Signage around the town to alert motorists to the presence of cyclists and to help cyclists feel more confident (Section 9)
- Ensure that the Council Planning Regulations provide for cyclists through en route and end-of-trip facilities in new developments (Section 10)
- An Annual Hornsby Hospital Bicycle Ride that will encourage cycling in Hornsby and provide funds for the Hornsby Hospital (Section 11).

In this report we provide action plans for how these activities could be enacted. The steering group will be critical to the success of these actions, and so we are encouraged by the keen support of the steering group in developing these actions.

SINCLAIR KNIGHT MERZ
While understanding the local context is vital in maximising the likelihood of success of these measures, the principles are likely to be transferrable more widely to other locations in NSW. Most importantly, these principles are:

- engage with local stakeholders to encourage ownership of the plan,
- incorporate both infrastructure and non-infrastructure measures to leverage the complementary benefits that both can bring to encouraging cycling, and
- incorporate cycling into wider activities that facilitate a sense of community.

In addition, we have identified shortcomings in the current cycling guidelines. The most important is that most of the existing guidelines do not comment on the use of non-infrastructure approaches. Moreover, we note what we see as a relatively limited definition of ‘promotion’ in the RTA “How to prepare a bike plan” guide. Recognition of the wider approaches to community engagement, consisting of a more tailored approach recognising the differences of individuals and community segments would be a useful enhancement to the guide.
1. Introduction

Cycling can play an important role in addressing social health concerns, social inclusion (particularly for those who by choice or out of necessity do not have access to a car), reducing congestion and emissions.

Cycling’s adoption by the public as a preferred mode of travel is dependent on a wide range of issues such as convenience, availability, safety (both actual and perceived), suitable infrastructure, social attitudes, lifestyle and suitability to the specific travel task at hand.

When financial resources are limited and there are competing demands on available road space, it is imperative that a strong stakeholder group can advocate for cycling’s share of resources and enunciate a clear vision for cycling. This leadership is a critical component of a successful cycling strategy, and is essential to bringing tangible benefits to cyclists in Hornsby.

In the recent past, the perceived inadequacy of safe infrastructure has been a major impediment to increased cycling. Progressively this has been addressed through initiatives at the State and Local Government level, although there are still numerous opportunities for simple but effective infrastructure enhancements. There is increasing evidence that the most effective approach to encouraging cycling is to both provide high quality cycling infrastructure combined with promotion and education campaigns to promote the benefits of cycling. The most effective, and indeed most cost effective approach, will almost certainly be a combination of both infrastructure and non-infrastructure investment.

In addressing individual sub-regions of Sydney to enhance cycling, it is important to consider local issues and attitudes towards cycling. Only by examining the specific local issues can a relevant plan of action be developed to bring forward the benefits of cycling as an important part of the transport system, and as a utilitarian form of transport integrated into the daily lives of the local community.

1.1. Background to the study

On 30 August 2008 the NSW Minister for Roads and the NSW Minister for Climate Change & the Environment announced the preparation of a new plan for cycling in NSW, under the leadership of the Premier’s Council for Active Living (PCAL).

The PCAL NSW BikePlan will encourage more people across the state to use bicycles as a clean and healthy transport choice, particularly for short trips, and will replace the 1999 NSW Government document Action for Bikes: BikePlan 2010.
The PCAL NSW BikePlan is a whole-of-government initiative led by a joint project team of the RTA and the Department of the Environment & Climate Change. The project team is assisted by representatives from a number of NSW Government agencies who form the steering group for the BikePlan: PCAL, Department of Education & Training, Ministry of Transport, NSW Health, Department of Planning, RTA NSW Centre for Road Safety, Department of the Arts, Sport & Recreation, Department of Local Government and Department of Premier & Cabinet.

The preparation of five sub-regional bike studies of town centre areas within Sydney has subsequently been commissioned. These town centres have a high proportion of short car trips and hence a large pool of potential trips which can be converted to cycling. In addition there were two bike studies commissioned in regional NSW, i.e. Pt. Macquarie and Dubbo.

The five sub-regional studies and two NSW regional studies are part of a pilot program to test the initiatives and scope proposed for inclusion in the revised NSW BikePlan. The sub-regional studies will also generate a range of initiatives to encourage cycling, and provide feedback on the RTA Guideline “How to prepare a BikePlan – a 3 Step Guide”.

The sub-regional studies will be used by the NSW BikePlan Project Team as part of the collection of information regarding possible plan inclusions under the following six broad themes:

1 – *Promote existing opportunities to ride*: “I’m thinking about making the switch to bike riding, or about riding more often and further.”

2 – *Build more places to ride*: “I want to find space on roads and paths where I can ride my bike.”

3 – *Keep cyclists safe*: “I want to feel safe on a bike, and I especially want my kids to be safe when they’re having fun exploring their world by bike.”

4 – *Plan cyclable suburbs*: “I want my neighbourhood to be planned so that I can ride my bike to the places where I catch a train, work, shop, go to school or have fun – and so that I can park my bike (or take it with me on the train) when I get there.”

5 – *Grow the direct economic contribution of cycling*: “I want to make it my business to grow cycling.”

6 – *Put cycling at the heart of what organisations do*: “I want all the levels of government, different departments, my local Council, my neighbourhood shopping centre and my employer to work together to make it easier for me to ride my bike.”
1.2. Study objectives

This report relates to the Hornsby sub-regional area. There are three broad objectives for the Hornsby sub-regional bike study:

- To identify specific cycling encouragement initiatives for the local area;
- To generate transferable ideas for the wider promotion of bicycle use via the NSW BikePlan; and
- To highlight required improvements and updates to the Roads & Traffic Authority (RTA) guidelines “How to Prepare a Bike Plan – An Easy 3 Stage Guide” (2002).

As well as suggested local infrastructure improvements, the studies will produce ideas for sustainable local programs to encourage cycle use for a wide range of common trip purposes. These programs will be designed to be implemented successfully through partnerships between government and community-based stakeholders.

The overall objective of the study is to identify innovative and realistic initiatives to encourage a greater percentage of cycle use for short trips within the Hornsby town centre area.

The objective is to create an environment in which more people cycle, thus creating the demand for more cycling infrastructure. In turn, the improved infrastructure will make cycling safer, encourage more cycling and create a virtuous circle (Figure 1.1). Underpinning this cycle is recognition that attitudes to cycling are critical. No amount of infrastructure will encourage cycling if the perceptions of utility, safety and social appropriateness are not consistent. Equally however, without a highly visible and high quality cycling network it will be very difficult to change perceptions towards cycling.

![Figure 1.1: The virtuous circle of cycling investment and cycling rates](image)

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**SINCLAIR KNIGHT MERZ**
1.3. **Study approach**

Creating an environment in which cycling is widespread (not just for recreation but for utilitarian purposes) requires an integrated approach. This integrated approach needs targeted infrastructure improvements (particularly safe routes for inexperienced cyclists), education and promotion. While traditional approaches have focused on the infrastructure and road space design, our approach has begun by focussing on community involvement, starting with the steering group and moving to marketing and education as they evolve from the community initiatives. Naturally at least of a degree of safe infrastructure will be needed at an early stage to maximise the effectiveness of the initiatives.

Essential to an effective bicycle strategy is the early identification and engagement with advocates for cycling within Council and the wider community. Stakeholders familiar with the local issues and potential problems have been engaged with during the study wherever possible. An up-front understanding of all the potential constraints and opportunities helps to clarify the existing situation and identify feasible solutions. We believe that bringing the strategy to fruition will require the ongoing engagement and participation of local stakeholders. This is another reason for our approach of engaging and involving stakeholders, to ensure the stakeholder group is empowered to take ownership of the strategy to maximise the chances of the recommendations being implemented.

Our principal focus is on these aspects, namely:

- Providing a series of specific ‘encouragement’ and infrastructure recommendations, along with recommended timeframes for implementation;
- Engaging with Council officers (and potentially Councillors) to identify and encourage advocacy for the strategy; and
- Engaging with the community (both cyclists and non-cyclists) to identify specific issues and barriers to cycling and encouraging ownership of the strategy.

This report is laid out in a format consistent with the required tasks identified in the brief, namely:

- Section 2 describes the study area, including the land uses, travel patterns, transport network and population demographics. (Task 1 and 7)
- Section 3 covers the establishment of the steering group and identification of stakeholders who will be essential to see the strategy through to fruition. (Tasks 2 and 3)
- Section 4 describes the current cycling provision in Hornsby, including a review of the existing regional bicycle plan. (Task 4)
• Section 5 describes current cycling outcomes in the study area, including identification by the steering group of current barriers to cycling. The potential for the Hornsby area to contribute to wider city and state cycling targets is also assessed. (Task 5)

• The action plans are described in Sections 6 to 11 (Task 8, 9 and 10).

• Comment on the applicability of existing guidelines with regard to these actions plans, and particularly on potential updates to the RTA “How to prepare a Bike Plan” guidelines in Section 12. (Task 11)

We also provide a series of appendices providing more in-depth description of specific facets of our action plans, including discussion of the concept of voluntary behaviour change.
2. Description of Study Area

2.1. Study area

The study area is located in the CBD of Hornsby Shire. The Hornsby Shire is the second largest Local Government Area (LGA) in the Sydney region encompassing a total area of 510 square kilometres. It is located in the northern Sydney region and includes a total of 44 suburbs and nine localities.

Figure 2.1 Hornsby Shire Area

The Shire is located at a high ridge and separated into two extensive areas of natural parklands; the Ku-ring-gai Chase National Park situated on the eastern side and Berowra Valley Regional Park on the western side of the Shire. The Shire is bounded by Gosford to the north, the Cities of Ryde and Parramatta to the south, Cowan Creek to the east and The Hills Shire to the west.
The target study area was determined by calculating an in principal cycling catchment of approximately 30 minutes around Hornsby town centre (Figure 2.2). The 30 minute catchment area has been taken from the perimeter of the Hornsby town centre and considers the adjoining topographical and geographical limitations. This means that it extends to Mount Ku-ring-gai in the north, Turramurra in the southeast, Thornleigh in the southwest and includes North Turramurra in the east and Westleigh in the west (see also Figure 2.3). In comparison to the true 5 km catchment around Hornsby, the indicative 30 minute catchment is constrained to the east and west by the topography and limited road network.

These limitations include the expansive National Park reserves (east and west ends of the town centre) and rural section in the northern area which provides negligible contribution to the overall trip generation to the town centre.
2.2. Land uses in the target area

The developable area of Hornsby Shire is divided between predominantly rural and urban land uses, with the southern section of the Shire being largely urban. The main commercial areas include Pennant Hills, Carlingford, Epping and the town of Hornsby which is located at the eastern end of the Shire. The two main industrial areas include Hornsby Town and Thornleigh.
The current total population of the Shire is approximately 157,000 (2008). The suburb of Hornsby has the highest population density within the Shire (representing 13% of the total population) followed closely by Cherrybrook. Australian Bureau of Statistics forecasts suggest that the Shire’s population will grow by around 0.3% p.a. until 2031. The estimated annual growth in Hornsby town will be significantly larger, at around 1.3% p.a. This indicates that Hornsby town centre will continue to hold its place as an administrative centre and an important focal point of the Hornsby Shire and hence will continue to be one of the major trip generators and attractors in the Shire.

The major potential cycle trip attractors, as identified in the project’s first workshop with stakeholders, include:

- Hornsby railway station
- Hornsby bus interchange
- Westfield – staff and shoppers
- Retail outlets
- TAFE
- Schools, including Asquith Boys and Girls High Schools, Hornsby Girls High School and Barker College
- Hornsby and Ku-ring-gai Hospital
- Industrial land uses
- Various recreational facilities
- Recreational cycling routes (primarily to the north)
- Businesses/commercial land uses.

The major trip attractors in the town area as categorised by the land use type are illustrated in Figure 2.3.
The Westfield Shopping Centre is located in close proximity of the railway station and is one of the major trip attractors in the town centre. A number of other retail outlets adjoin the Westfield development along Hunter and Florence Streets, as well as on the Pacific Highway and Station Street to the west of the Railway Station. At the moment, the shopping centre area has little provision for cyclists or bikes. Streets in the town centre do not have cycle lanes and while the mall itself would potentially have space for bike parking, cycling is banned within the pedestrian area of the mall. A limited number of bicycle parking rails (approximately 6) are provided at the edge of the pedestrian mall.
To the west, the Hornsby TAFE is located adjacent to the parklands and the quarry area and in close proximity to the Swimming Pool and Hornsby Railway Station. To the east, the hospital is on relatively flat ground, with flat areas to the north and east, though with relatively difficult access by bike (particularly for inexperienced riders) due to the topography from other directions and on road riding conditions.

The Hornsby Girls’ High School and a key retail centre are situated within the core town centre area. Rail is the key public transport facility to and from the area, with buses serving a predominantly feeder service to the rail and town centre.

The large industrial development to the north east of the town centre (bounded by Sherbrook Road and King Street) is a major employer and is located approximately 1600m from the Railway Station at its closest point. It is located in a valley, and the combination of hill towards the centre of Hornsby and railway station as well as difficulties with traffic conditions limit the accessibility of the industrial estate for cyclists.

Asquith Boys High School and Asquith Girls High School are located to the north of Hornsby Town Centre near Asquith Village shops and Railway Station. These locations have a high potential for the encouraging of cycling, although at the moment the cycling links (in the form of marked paths and way finding) are insufficient for the needs of most target rider groups.

There are residential areas within easy reach of the town centre, with a mix of detached housing and higher density apartments closer to the Railway Station and town centre area. While the Hornsby town centre is the key destination, the availability and encouragement of cycling from residences is as important to the success of cycling initiatives as the focus on the destination.

Hornsby is a cosmopolitan area, requiring an understanding of the languages, ethnicity, and cultural expectations of cycling as a secure and socially acceptable mode of transport. Approximately 53% of Hornsby residents were born in Australia, with just under 40% speaking a language other than English at home.
Figure 2.4: Country of birth (Hornsby Suburb, 2006 ABS census)

- Australia: 53%
- China: 6%
- England: 5%
- India: 4%
- Korea: 3%
- NZ: 2%
- Other: 27%

Figure 2.5: Languages spoken at home (Hornsby suburb, 2006 ABS census)

- English only: 62%
- Mandarin: 6%
- Cantonese: 5%
- Korean: 3%
- Hindi: 2%
- Persian: 2%
- Other: 20%
2.3. Road and public transport networks

The Hornsby town centre is a busy and vibrant local hub with the railway line and the Pacific Highway running through its heart, creating a high volume of through vehicular traffic in the town area.

The main roads providing access to Hornsby are:

- The Pacific Highway providing access from the south east and north,
- George/Jersey Street from the north, and
- Pennant Hills Road from the south west.

All main road accesses are arterial roads under the control of the RTA, with all having multiple lane configurations and carrying high volumes of predominantly through traffic and a high percentage of heavy vehicles (see Figure 2.6: Annual average daily traffic in 2005 (units are average vehicle movements per day in both directions. source: RTA)).

In addition to the arterial access roads, access to Hornsby town centre is also provided on the regional road routes of Edgeworth David Avenue from the east, Malsbury Road/College Crescent from the south west and Sherbrook Road/Royston Parade to the north. Local road access to the town centre is limited due to lack of connectivity between local road networks. However, the route along Alexandria Parade running roughly in line with the North Shore Railway from the south west provides a local road access towards the town centre.
Figure 2.6: Annual average daily traffic in 2005 (units are average vehicle movements per day in both directions. source: RTA)
The Shire is served by two main train services (the Northern and the North Shore lines) which provide the major north-south connection through the area (see Figure 2.7). The station is also a junction for the Intercity and Express lines to the Central Coast, Newcastle and further north. A number of bus services feed into and out of the Hornsby town centre however there is a general lack in the availability and interconnectivity of the bus services to the various town centres in the Shire and the southern Sydney region. The Shire therefore mainly relies on private motor vehicle as a major means for commuting followed by trains.

In the context of a BikePlan, the Hornsby railway station is a place where rail commuters or visitors to the Town Centre store their bikes. There are some storage facilities available at the moment, but a current barrier to their use was reported\(^1\), i.e. that many locals question the safety, security and the amount of storage for this purpose.

\(^1\) Personal communication: Phil Johnston on behalf of riders of Muggaccino’s Bike Group.
2.4. Demographic description

The 2006 ABS census provides a good indication of the demographic profile of Hornsby residents. In the following charts comparison is made between Hornsby suburb (roughly corresponding to the
town centre and immediate residential surroundings), Hornsby Shire (LGA) and the Sydney Statistical District (SD). The most significant differences that are relevant to this study are as follows:

- The Hornsby suburb has more residents in the 25 – 54 year age group than the Shire and Sydney as a whole. This could shape the types of measures used to encourage cyclists in the Hornsby area (Figure 2.8).

- Around 45% of residents aged 15 years and over of Hornsby state suburb are in full-time employment, compared with around 40% across the Shire and city as a whole. Cyclists tend to have different needs when making obligatory trips (e.g. work and school) than for discretionary trips – so this needs to be reflected in the strategy that is developed for the sub-region (Figure 2.8).

- Around half of all dwellings in the Hornsby state suburb are flats, units and apartments. This contrasts with around 15% in the Shire and 25% in Sydney overall. It is likely that the proportion of smaller dwellings in the town centre will reduce the likelihood of owning a bicycle (due to limited storage). Conversely, if most residents of the town centre also have trip attractors within a short walking distance there would be less need for them to cycle. (Figure 2.10)

- Median income in the Hornsby suburb is similar to Sydney as a whole, while across the Shire the median income is significantly higher. This will mean that it is important to focus on initiatives that do not necessarily require a high level of investment from potential cyclists in the short term (Figure 2.11).
Figure 2.8: Age distribution (source: 2006 ABS census)

Figure 2.9: Employment status (source: 2006 ABS census)
Figure 2.10: Dwelling type (source: 2006 ABS census)

Figure 2.11: Median household weekly income (2006) (source: ABS census)
3. **Steering Group**

3.1. **Purpose of steering group**

A steering group was established at the commencement of this study to guide the development of the sub-regional bicycle strategy. The steering group had three workshops over the first four months of 2009. The members of the steering group team, together with SKM, had the following goals:

- Identify current opportunities and limitations for cycling to be an attractive alternative to driving in the town centre of Hornsby.
- Generate ideas, initiatives and programs which can facilitate increases in cycling to the town centre.
- Identify ways forward to ensure the chosen actions can be implemented in a timely manner - focussing on low cost initiatives that can be implemented quickly and have effect. This includes looking at funding options where possible.

A strong emphasis for the steering group has been to ensure the options would be realistic and could be implemented in a timely and cost effective manner. Gaining stakeholder ownership of these actions has been considered an essential part of meeting these objectives. This has led the project team to conclude that the ongoing involvement and commitment of the stakeholders will be essential to the successful implementation of the strategy.

3.2. **Members of the steering group**

At the outset of the project, members of the steering group were identified through a pre-study workshop run by the steering committee led by PCAL/RTA with a selection of various local groups including Hornsby Council. Subsequently, SKM adopted the list of stakeholders generated in the pre-study workshop and expanded the list with the key selection criterion to engage with ‘organisations and individuals who have significant insight into the issues affecting cycling in and around Hornsby and – importantly – who will be key people/groups in ensuring the successful implementation of the strategy’.

The initial members and member organisations of the SKM run workshops were:

- SKM (chair);
- RTA;
- Hornsby Shire Council;
- Ministry of Transport;
- NSW Police (Hornsby branch);
- Hornsby TAFE;
• Muggaccino’s Bicycle User Group (BUG);
• Bike North Bicycle Users’ Group (BUG); and
• Transdev Buses.

Other attendees to the workshops were:

• PCAL
• Hornsby Cycles Bike Shop
• NSW Area Health
• Hornsby Shire Mountain Bike Association.

In addition to the members of the steering group who attended the workshops, SKM contacted several other groups, and where these groups were interested in contributing however could not attend the workshops, SKM conducted phone interviews. These groups included:

• RailCorp;
• Ku-ring-gai Council
• Asquith Boys High School
• Asquith Girls High School
• Barker College
• Hornsby Girls High School
• CARES Bike Training facility

SKM attempted, but was unable to engage with:

• Westfield Shopping Centre
• SAN Hospital; and
• Service clubs (e.g. Rotary/Lions) in the area.

The SKM team has kept in contact with members of the steering group who attended the initial workshops and have had continuing feedback and ideas from them. For example, some have recommended further stakeholders, and others have attended Sydney City Council’s Sustainable Streets presentation where they have been exposed to examples of ways to encourage cycling from places as diverse as New York and the Sydney Morning Herald (as an employer).
4. Current Cycling Provision

4.1. On-route provision

The current official cycling network in Hornsby is shown in Figure 4.1. There is only limited on-road marked dedicated bicycle lane provision, principally along Galston Road in the vicinity of the Pacific Highway. There are wide kerbside parking lanes along Somerville Avenue and sections of on-road bicycle lane and shoulder alongside the Pacific Highway north of Asquith. Short sections of shared paths are provided through a number of parks in Hornsby town centre to provide additional network connectivity.

Wayfinding signage is provided to indicate some back road routes between major trip generators and attractors. Many of these routes do not have additional infrastructure beyond wayfinding signs.
Figure 4.1: Existing cycling infrastructure (Source: SKM)

Our site visits confirmed that cycle facilities provided as on-road shoulders or wide kerbside lanes were often blocked by parked vehicles, creating safety hazards for cyclists as well as reducing their level of service.

4.2. End of trip facilities

Bicycle parking is provided in Hornsby town centre in the shopping areas and at the station. Racks are also provided at Pennant Hills and Thornleigh stations. Importantly, bicycle parking is not
always as conveniently located or available as car parking in the town centre. Furthermore, within Hornsby Town Centre car parking is largely free of charge for short stays.

Figure 4.2 and Figure 4.3 show two locations in the town centre where bike parking is provided for cyclists.

The bike parking facilities provided at the western side of the train station were observed to be fully occupied with demand exceeding supply. As a result a number of cyclists were observed to park their bike against the fence rails next to the bike racks. This bike parking location may be preferred by cyclists to others in the town centre because of the high levels of casual surveillance (perceived security) and accessibility.

Two sets of bike lockers are provided at Hornsby station; one on George Street to the southeast of the station (12 lockers) and another on Jersey Street to the northwest of the station (12 lockers). The lockers are administered by the Ministry of Transport and demand appears to be high – in March 2009 there was only one available locker from the total of 24\(^2\). Charges are $50 for 3 months rising to $180 for 12 months\(^3\). It is noted that these costs are high in relation to bike parking facilities elsewhere in Australia, and when compared to the abundance of commuter car parking nearby acts as a disincentive to cycle compared to drive for the journey to Rail.

- **Figure 4.2 Bike parking at Hornsby Westfield Mall**

\(^2\) We note however that availability may not coincide with usage; we have no indication about how often locker holders actually use the lockers.

\(^3\) By comparison, there is no charge for bike lockers in Melbourne or for the recently introduced ‘Parkiteer’ bike cages (although a key deposit does apply in both cases).
4.3. Promotion, education and training

The encouragement of an increase in cycling needs more than the provision of infrastructure. At present, there are several forms of active encouragement promoted within Hornsby as well as services providing for cyclists needs.

Maps

The main promotional material developed by Council has been the Hornsby Cycling Map, developed by the Council’s Sustainable Action Committee in 2008. As shown in Figure 4.4, the map is focussed on cycling for recreation and health. The imagery is generally consistent with this view; the cover image in particular portraying the perception that the activity is for fit people with dedicated clothing and equipment. Suggested routes are generally intended for recreational purposes, often providing quiet routes to access fire trails. The Pacific Highway north of Hornsby town centre is also identified as a “major road shoulder facility”. For keen training cyclists this road is likely to be considered viable. However, for the majority of the population (who do not currently ride) such a route is unlikely to be attractive in its current form.
Figure 4.4: Extract from Hornsby Cycling Map

The focus on recreation is reinforced by the presence of cycling information on the Council website being located under ‘Recreation’.

Bike Shops

There are at least 2 bike shops in the Hornsby Town Centre (Hornsby Cycles and Ku-ring-gai Cycles) and several in neighbouring suburbs such as Thornleigh.

Training

The NSW Police Service runs bicycle education centres under the Community and Road Education Scheme (CARES) Program. CARES is a road safety education program that has been specifically designed for school children in years 4 to 6, with an emphasis on road rules and using bicycles as a teaching school. There is a CARES facility on Mona Vale Road at St. Ives.

Local groups

Local bicycle groups, where people of all ages and abilities can get tips on bike riding, experience and other services, include Bike North Bicycle Users Group, Muggaccino’s Bicycle Users Group, and the Hornsby Shire Mountain Bike Association.

There are representatives of all of these services on the steering group (see Section 3).
4.4. Review of existing Hornsby Council Bike Plan

The Hornsby Shire Council initially made a commitment to encourage cycling through the development of a bicycle plan in 1988. A series of investigations were undertaken looking at initiatives that aimed at promoting cycling and its benefits as a means of transport, as well as the provision of supporting infrastructure. This framework of investigation and investment has spanned over 20 years with subsequent revised Bike Plans developed in 1998 and 2004 (passed by Council in 2005).

The 1988 Draft Bike Plan was considered ahead of its time in terms of its defined modern urban design principles. It promoted better integration of transportation and land uses and identified alternatives to the general use of private vehicles. The Plan was built on work undertaken for the Council that aimed at the following four issues and initiatives:

- **Safety** – Providing a safe environment for the cyclists
- **Continuity** – influencing choice through factors such as new facilities
- **Flexibility** – providing choices in terms of the types of cycle paths that are available
- **Positive Promotion** – success through commitment, exposure, education and promotion of the underlying pro-cycling principles.

However, the 1988 Draft Bike Plan was not formally adopted by Council.

In 1998 the Council reviewed and updated the 1988 Hornsby Shire Bicycle Transport Study. The result was the 1998 Hornsby Bike Plan which aimed at renewing community involvement, setting up an updated infrastructure implementation plan, presenting the results to the community and adoption of the plan by Council with a commitment to implementation over a 10 year program. The 1998 Bike Plan was formally adopted by the Council in October 1998. Subsequently the 1998 Bike Plan was revised and an updated plan produced in 2004.

These three Bike Plans (1988, 1998 and the 2004/5 version) combined information and issues behind promoting and creating awareness of cycling as an alternative mode of transport. They also provided future year strategies for developing the plan including identifying relevant funding sources and opportunities.

The Bike Plans included data collection that focussed particularly on the major generators of cycle trips - including railway stations, schools and shopping centres. A Bicycle Facilities Working Group was also established to help create awareness and promote cycling in the Hornsby Shire. The Group consisted of members representing the Council, bicycle clubs and the community.
Cycle routes and facilities were developed and implemented as initiatives stemming from the Bike Plans. The cycle routes were divided into four categories: Regional Routes, Trunk Cycle Routes, Recreational Routes and Local Cycle Routes.

The Regional Routes are the major regional links connecting Hornsby with neighbouring regions; these being the on-road shoulder lane along the Pacific Highway north of Hornsby and the proposed route alongside the North Shore Rail line heading southeast from Hornsby. The trunk cycle routes are the principal commuter routes while the local routes are based within the local communities promoting cycling to schools, parks, shops and other local destinations.

The common theme through recent revisions of the Bike Plan is the development of a strategy which focuses on:

- Implementing infrastructure and facilities;
- Involving the RTA;
- Creating local support;
- Promoting safe cycling; and
- Integrating cycling with public transport;

The 2004/5 Bike Plan also identified opportunities for the provision of off road facilities, potentially as a result of an increase in popularity of mountain bike riding in the adjoining Parks areas.

A number of cycleways were proposed as part of the latest Hornsby Shire Bike Plan in the 2005 Review undertaken by the Council. These cycleway routes include shared cycle/parking lanes, cycle shoulder lanes, marked on-road cycle routes, shared cycle and pedestrian paths and crossing facilities. While funding remains an obstacle to implementing these plans the review recognised the role that integrating cycling infrastructure with other asset renewal activities (such as footpath upgrading and remarking arterial roads) can be more cost effective, and open up alternative funding mechanisms.

Provision for a Community and Road Education Scheme (CARES) facility in the Hornsby Shire was also identified by the Bike Plan to supplement the existing facility in neighbouring Kuringai Council. The CARES facility would specifically provide education in road safety and teach cycling skills to children. However, there may be scope to increase the utilisation of any cycle training facility to cover the training needs of other potential cycle groups such as recently arrived to Australia, adults who have not ridden before, those who require refresher training or wish to acquire skills and experience to ride in more difficult road environments. The AustCycle program, a joint venture of the Amy Gillett Foundation, Bicycle Federation of Australia and Cycling
Australia, may be one mechanism through which cycle training could be provided to Hornsby residents.

The end of trip facilities proposed in the 2004/2005 Bike Plan includes bike lockers and parking rails. Forty four sites and specific locations were identified for the placement of new bike parking along with indicative costs for the project spread throughout the Shire. At Hornsby Station an additional four lockers were proposed. Other specific facilities that have been considered for implementation include cycle route/lane pavement logos and signage, kerb ramps and cycle refuges.

Limited funding has been available to implement the previous plan and so the 2004/2005 Bike Plan recognises a number of additional potential funding sources and opportunities that would help the Council implement the plan including:

- development contributions
- general funds
- sponsorship/advertising
- RTA regional bike routes funding
- matching funds from RTA for traffic calming
- Ministry of Transport (funding for bike lockers at station).

Progress on implementing the plan has been limited meaning that current provision of cycle paths is minor (Figure 4.1). Some progress has been made in providing parking at Hornsby station (including lockers) and elsewhere in the town centre. However, much of the network proposals remain unachieved. This reinforces the need to ensure that the current Sub-Regional Strategy focuses on achievable goals that have the support of stakeholders and are funded, or have a likelihood of receiving funds in the foreseeable future.
5. Current Outcomes

This section presents data on the mode share of cyclists in the Hornsby area and also describes the barriers to making short trips by bike. Finally it identifies the way the study can contribute to cycling growth objectives.

5.1. Current cycling levels

There are three main sources of data about cycling in Hornsby: the ABS Journey to Work data that focuses only on the use of bikes to work, the Transport Data Centre’s Household Travel Survey data that gives a broader perspective, and a survey of access to rail stations by City Rail in 1995 and 2004. In addition, minor sources of data include information gathered in previous Hornsby Bike Plans, RTA accident data statistics and information collated in the PB report “Cycling in NSW, what the data tells us” 2009).

Cycling to work

The levels of cycling to work in Hornsby are low in comparison to the rest of urban Sydney. Moreover levels of cycling in Sydney are significantly below those of the other state capitals. Census Journey to Work data (2006) for Hornsby Town and the Hornsby Shire are given in Table 5.1. Cycling makes up a smaller proportion of the journey to work travel task than Sydney as a whole (0.7% for cycling as a sole mode). In absolute terms, on the census day there were 230 journeys to work solely by bicycle by residents in Hornsby Shire, of which 30 were in the suburb of Hornsby.

- **Table 5.1: 2006 Census Journey to Work data (Sole mode, source: ABS, 2006)**

<table>
<thead>
<tr>
<th>Area</th>
<th>Private Vehicle</th>
<th>Train</th>
<th>Bus</th>
<th>Bicycle</th>
<th>Walk</th>
<th>Other</th>
<th>Total Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hornsby Suburb</td>
<td>57.8%</td>
<td>30.0%</td>
<td>0.6%</td>
<td>0.4%</td>
<td>9.2%</td>
<td>2.0%</td>
<td>7,733</td>
</tr>
<tr>
<td>Hornsby Shire</td>
<td>74.9%</td>
<td>15.7%</td>
<td>2.4%</td>
<td>0.4%</td>
<td>3.9%</td>
<td>2.6%</td>
<td>55,511</td>
</tr>
<tr>
<td>Sydney Urban Centre</td>
<td>72.6%</td>
<td>10.8%</td>
<td>6.7%</td>
<td>0.7%</td>
<td>5.5%</td>
<td>3.7%</td>
<td>1,352,357</td>
</tr>
</tbody>
</table>

Cycling is used not just as a sole mode for complete trips, but also to connect with other forms of transport (primarily public transport). Census data from NSW and Australia reported by Parsons Brinkerhoff (2008) identified about 10% of all commuting cycling trips as connecting to other modes. Assuming the same proportion in Hornsby would bring the total journeys to work involving bicycle to around 250 across the Shire of which around 33 would be from the suburb.
**All of day travel**

The Household Travel Survey is a rolling household travel survey conducted by the Transport Data Centre. This dataset suggests that in Sydney around 16% of all trips are for commuting (increasing to around 19% for bike trips). This implies a total of around 1,300 bicycle trips in Hornsby Shire at present and 170 trips in the suburb of Hornsby. While the Household Travel Survey covers all modes and purposes of travel it has too small a sample size for cycling trips in Hornsby to be able to identify cycling trip patterns and purposes.

**Access to Hornsby Rail Station**

Hornsby station is a major hub in the metropolitan rail network. It was the 16\textsuperscript{th} busiest on the CityRail network in 2007 (when measured by station entries and exits) with 11,170 entries and exits on a weekday\textsuperscript{4}. The access modes were surveyed by CityRail in 1995 and 2004 for the off-peak (after 09:30 AM) and AM peak period respectively. As shown in Table 5.2, the majority of travellers access the station by walking or by car, with very few using bicycle (included in the ‘other’ mode).

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Trips</th>
<th>Walk</th>
<th>Bus</th>
<th>Car (park)</th>
<th>Car (lift)</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM peak</td>
<td>2004</td>
<td>184</td>
<td>41%</td>
<td>3%</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>Off-peak\textsuperscript{1}</td>
<td>1995</td>
<td>324</td>
<td>59%</td>
<td>8%</td>
<td>10%</td>
<td>21%</td>
</tr>
</tbody>
</table>

\textsuperscript{1} After 9:30 AM.

**Accident Statistics**

There have been no reported fatalities to cyclists in the five years from 2003 to 2007. Between 2003 and 2006 the number of cyclist casualty accidents remained relatively stable between 17 and 19 per year. In 2007 the number of injury accidents recorded dropped significantly to nine. As a proportion of all road user accidents, Hornsby’s cyclists were involved in 1.8% of all accidents (compared with 4.6% for the Sydney region and 4.7% for NSW as a whole). Given the low mode share of cycling, and typically lower trip distances by bike, cycling accidents appear to be overrepresented in all accidents.

\textsuperscript{4} CityRail (2008), *A Compendium of CityRail Travel Statistics.*

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5.2. Favourable characteristics of cycling in Hornsby

There are a number of characteristics of the Hornsby area that make it attractive to cycling. These aspects will be important to consider as part of a strategy to increase cycling in Hornsby.

The proximity of the National Park and the extensive off-road recreational trails makes Hornsby a popular destination for mountain bikers. Promoting this asset in Hornsby Shire has been a key part of Hornsby’s Bicycle Strategy to date. Although the promotion of off road recreational cycling does not necessarily translate to a conversion of existing vehicular trips to the Hornsby Town Centre to cycling, it does open up a number of options for the conversion of existing recreational cyclists for greater utilitarian cycling trips to the town centre. The potential also exists to create initiatives which attempt to capture and convert the existing number of recreational on road cyclists who utilise routes to the north of Hornsby to use cycling for other utilitarian purposes.

There are some bicycle lockers and racks at Hornsby station and parking at Thornleigh and Pennant Hills railway stations. The lockers provide secure storage for Hornsby residents to conveniently access the station for travel to other areas of Sydney. In principle, storage at the station could also be used for visits to the town centre. In addition, bicycle racks in the malls provide parking for bicycles in the retail precinct. However, as noted in Section 4.2 demand appears to exceed supply at a number of sites, at least during good weather.

The distribution of land uses, and particularly the focus of economic activity on Hornsby town centre and the dwelling density in the immediate surroundings make journey distances relatively short. These short distances make cycling an attractive alternative in terms of travel time and fitness level required.

The level of commitment shown at officer level within Hornsby Shire Council and also the active participation of stakeholders throughout the study process is an important characteristic which is integral to realising the desired cycling outcomes. There are many existing initiatives that could be built on to encourage cycling. These include free bike maintenance courses at one of the bike shops, the increasing encouragement of cycling at TAFE and some schools, the existence of bike rides for beginners, and the bicycle training courses at CARES in St. Ives.

Other community based initiatives such as the focus on sustainability, the Council website and other information dissemination methods which current exist offer the opportunity to facilitate more cycling by piggy backing on existing systems and resources with little increased effort.
5.3. Deficiencies

Deficiencies in the existing cycling network and programs have been identified through discussion with the steering group and stakeholders as well as through onsite inspections by the project team. Surveys undertaken as part of the consultation process with the community for the 1998 Bike Plan provided an indication of the deficiencies of the network. The major findings from the surveys included:

- The major reason for not cycling more frequently was due to concerns related to the high traffic volumes on the roads and personal safety. In particular, this includes:
  - Lack of confidence from infrequent and non-cyclists
  - Traffic volumes
  - Driver aggressiveness
- Facilities that would discourage cycling include lack of segregated cycle lanes and cycle lane markings, as well as a lack of provision of secure bike storage measures;
- Major reasons for children not cycling to school appear to be high traffic volumes of road traffic and lack of secure bike storage;
- Lack of end of trip facilities (bicycle parking, showers, lockers etc.);
- Lack of awareness of quiet local routes (“seeing the road network from a car drivers’ perspective”);
- Car dominated developments in the town centre;
- Topography;
- Connectivity of bike network and minor road network;
- Commuters cycling to Berowra Station raised concerns regarding theft and vandalism of bikes;
- Lack of ongoing maintenance of the existing cycle facilities; and.
- Funding.

All of these issues, aside perhaps from topography5, can be addressed through infrastructure provision and cycling marketing and promotional activities.

Lack of perceived safety is widely cited as a key reason not to cycle by non-cyclists. Concerns about safety also feature prominently in market research conducted elsewhere in Australia and overseas among non-cyclists (e.g. research for the City of Sydney conducted in 2008 by Environmetrics).

5 Even topography can be addressed to some extent by providing alternative, less steep routes and by addressing the often overstated perceptions regarding individual fitness and the difficulty of hills.

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Overcoming this perception about safety will require an integrated approach of ‘hard’ and ‘soft’ measures, incorporating cycling infrastructure (both en route and end-of-trip) and marketing and behaviour change campaigns (to both encourage cycling and reinforce the message that drivers and cyclists should share the road).

5.4. Other identified deficiencies

Other deficiencies that have been identified by SKM have been:

- Lack of bicycle ownership – according to the Household Travel Survey only a little under half of all households have at least one bicycle. It is likely that in many cases this bicycle is not in a serviceable condition. Nonetheless, the levels of cycling remain significantly lower than the cycling ownership levels would suggest;
- End of trip facilities – limited cycle parking in the town centre, particularly in the vicinity of the train station as well as perceptions surrounding bike security and exposure to adverse weather conditions;
- On-road facilities – very limited network of dedicated on-road cycling facilities;
- Off-road facilities – only very limited sections of separated off-road facilities through parks in the vicinity of the town centre (although there are extensive fire trails through the neighbouring national parks);
- Information on cycle routes – Hornsby Shire Council has published a local cycling map. This map is focussed on recreational riding; the imagery used is biased towards experienced cyclists and the suggested routes can involve significant interaction with motor vehicle traffic;
- Apparent lack of co-ordination between adjoining Council and RTA mapping to facilitate whole of journey route planning from a mapping/information perspective; and
- Education / training – limited cyclist training for minorities and school children as well as no structure to address adult riders who require skills and confidence to ride in the more difficult road environments encountered in Hornsby.

Addressing these deficiencies, and highlighting the advantages of Hornsby as a cycling region, will require a cross-sectoral approach including infrastructure, education and promotional activities.

5.5. Potential cycling outcomes

Cycling is currently a minor mode in Hornsby. However, the significant proportion of car trips less than 5 km suggests that trip distances are often short and some of these may reasonably be substituted with bicycle trips. The propensity of conversion of various trip types to cycling is also an important factor in considering potential target market. Not all trips lend themselves as easily to conversion from private car to cycling, as the user requirements and perceptions of utility are
different for each user group. For example, a commuter trip made by a single user to the same regular destination which does not require the user to carry equipment has a high potential for conversion to cycling. At the other end of the scale, a trip made by multiple persons where the objective of the trip is to purchase bulky or heavy goods for immediate consumption or for social purposes does not lend itself to conversion of cycling as easily.

As noted elsewhere in this report, it is our view that a combination of infrastructure investment, promotion and education will produce the most significant mode shift from car to bicycle. How large the potential market is, and how much of that market could be captured, is difficult to determine.

A key problem identified by our team is the lack of base line data for cycling by people in Hornsby at the moment. Without this knowledge it is not possible to ascertain what changes have occurred resulting from initiatives of any type, and it is a key recommendation already at this stage, that a simple measurement takes place before other initiatives are implemented so the effectiveness of the schemes can be evaluated.

Without existing data, it is not really possible to estimate changes expected in Hornsby itself. However, the Transport Data Centre\(^6\) undertook analysis on behalf of the NSW BikePlan Project Team which suggests a potential market for cycling based on car travel to the town centre and within the Shire. The assumptions used were:

- 2.5% of car trips to/from town centre with a distance $\leq 5$ km
- 0.5% of car trips to/from town centre with a distance $5.01 – 10$ km
- 1.5% of car trips with a distance $\leq 5$ km
- 0.5% of car trips with a distance $5.01 – 10$ km.

Using these assumed proportions, a total of 4,568 bicycle trips could occur on an average day in Hornsby (based on 2006 travel patterns and all trip purposes). This compares to 229 trips to work (or 458 total trips, assuming the work to home leg is by the same mode) currently undertaken by bicycle in 2006 (ABS census). The Household Travel Survey suggests that in Sydney around 16% of trips are for commuting (around 19% of bike trips). This implies a total of around 2,410 bicycle trips in Hornsby at present.

The Transport Data Centre projection therefore represents a roughly doubling in cycling from current levels. Given the current low levels of cycling in Hornsby, we do not see this level of

\(^6\) Transport Data Centre (2008), “Base demand for Sydney short to medium-length trips switching from car to bike”.

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growth as unrealistic over the medium term. However, it would require significant community involvement, education and promotion activities as well as at least some infrastructure investment (consistent with the 2005 review of the Hornsby Bike Plan).

In addition to defining a quantified target we recommend a more qualitative target where cycling becomes a **viable alternative** for Hornsby residents making short journeys. This would represent a significant behavioural shift from the current situation, where cycling is not considered as a mode of transport by most households for most journeys. What is required is the infrastructure and accompanying marketing and behaviour change programs to facilitate this shift in thinking.
6. Process used for the planning study

This section summarises the process that was used by SKM to develop a BikePlan strategy for Hornsby.

6.1. Understanding the people and area of Hornsby

The first step of the study has been summarised in Section 1-5. During this phase we gathered information on the area and began getting to know people and characteristics of the Hornsby CBD.

6.2. Working with the Steering Group

At the same time as getting to know the people and character of Hornsby, we were also able to gather a Steering Group of enthusiastic people who had an interest in cycling in Hornsby – for many different reasons. As described in Section 3, the group was made up of people with an interest in transport, health, local governance and cycling.

SKM facilitated 3 separate workshops with the group.

Workshop 1 – Setting the Scene

- Background to the project
- Presentation and discussion of key trip generators
- List of key barriers to cycling in the area: included a wide range including
  - **Physical**: Topography, car orientation of Hornsby
  - **Infrastructure**: Limited cycle routes, Limited space for cycle racks at station, Lack of linkages, lack of parking in units
  - **Planning**: Council planning does not have a bike focus
  - **Perceptions**: Perceptions of safety, a lack of confidence in riding
  - **Information**: Information not easily accessible
- List of positive aspects of Hornsby, including
  - **Physical**: compactness of the town centre
  - **Infrastructure**: The ability to use the rail corridor, or land adjoining the rail corridor, for an attractive cycle track on level grades
  - **Planning**: New housing may bring new opportunities to plan for enhanced cycling focus
  - **Perceptions**: Affluence of residents
  - **Information**: Bike North, Muggaccino’s Bike Groups
**Events/Programs:** The existing Safer Routes to Schools program, The role of the CARES cycle training facility, Hornsby is a hub for recreational cycling on the weekends

**Workshop 2 – Developing Initiatives**

- Short presentation of world’s best practice initiatives
- Facilitation of options developed by workshop team to encourage cycling to the key trip generators. Some examples are:
  - **Industrial area:** analyse how people travel to the industrial area and try to find a way to encourage those people to travel from rail station to industrial area by bike.
  - **Hospital area:** one of the flattest parts of Hornsby area and there is a high potential to increase cycle trips around that area.
  - **Westfield:** biggest employer in the Hornsby area and there is very limited provision of bicycle parking. Potential to focus on shoppers and workers in the centre. Police concern regarding bike conflicts in car parking areas. The group acknowledged the importance of Westfield management as a stakeholder.
  - **Local “village” shops such as Hornsby Heights** - another potential trip generator.
- A discussion was held to generate a list of options that could be implemented in a short timeframe with minimal cost. Examples included:
  - **Great North Walk:** provide change/shower facilities that could also be utilised by cyclists
  - **Bike storage –** provide racks, individual cages (coin operated or other flexible rental method).
  - **Bike shops could provide loan bikes/helmets/locks** (for a fee) which could allow people to trial the idea of cycling without the entry cost
  - **Install warning sign** for all roads approaching Hornsby CBD to tell drivers they are entering the cycling area and need to be aware of cyclist activity. (Example wording: Hornsby – A safe cycle space/please drive safely/watch out, bikes about/Entering a Bike Safe Area etc)
  - **New high rise development:** (i.e. in Asquith) should incorporate secure cycling storage needs from a planning perspective.
  - **Council should agree to incorporate off road cycling into their planning for future development,** particularly the redevelopment of the Quarry.
  - **Could link existing bike routes such as from Hornsby Heights to Hornsby CBD shopping centre.**
  - **The idea of a local ‘ring road’ recreational route using quiet local roads potentially with some aesthetic value, could be developed which linked with smaller trip generators such as local shops/stations etc.** This route could be utilised with confidence by families or infrequent cyclists, to build up experience and confidence of cycling in Hornsby and also double as a commuter route where relevant – e.g. like Centennial Park.
  - **The option of providing a dedicated bike lane from TAFE to Asquith Shopping Centre could be investigated.**
Any ‘festival’ or promotional or marketing type activities would be best triggered by an advancement of infrastructure – as people would otherwise face a difficult riding environment after the promotion which may limit its effectiveness.

Green travel plans may provide an opportunity to leverage up an existing activity. These could be co-ordinated through schools/chamber of commerce/Council etc.

Existing promotion provided by health insurers or insurance funds to encourage active living could be harnessed towards cycling.

Additional options which the group considered to have value and the potential for consideration going forward were:

- Provision of on road cycling facility from Hornsby CBD to the old Pacific Highway Asquith businescentre.
- Provision of cycling facilities in TAFE such as shower facilities/secure parking etc.
- Improve the attractiveness of cycling to the rail stations.
- Hold a festival during Bike Week (could include road closures for a day, a “try it out” theme)
- Provide bike repair service for people who own bikes but do not ride (potential promotion through rates notices).

**Workshop 2 – Workable Actions**

The facilitation of the final workshop asked people to develop definite actions that were low in infrastructure and short in time frame, building on the initiatives they had decided on in the previous workshop.

The actions that emerged from this workshop are those presented in this document in Sections 8 – 12. Each of them meet the needs of the brief, i.e. relatively simple to implement, low investment, and in most cases with a large amount of community involvement. The actions are:

1. Making Hornsby Park a cycle community
2. Having a ‘breaking down barriers’ event
3. Preparing signage at Hornsby Gateways and throughout the city
4. Changing Council Planning regulations
5. Organising a Hospital cycling event.

We have detailed the actions for the first two. Plans 3 and 4 are actions that require Council involvement, meaning that the actions are simpler. Plan 5 was instigated by a member of our stakeholder team who has undertaken to lead this – and may do so in independently of the Hornsby Bike Strategy. We describe each of these actions in following chapters.

As part of the process of identifying these actions, we conducted a wide ranging literature review and summarised our previous bicycle planning work to brainstorm a wide range of potential measures. These are summarised in Appendix D.
7. **Action Plan for Hornsby Park Complex**

7.1. **Description of the Option**

This option is to convert the Hornsby Pool and surrounding area into a setting which welcomes new and tentative bike riders and becomes a hub to:

- spend time
- ask for advice
- share fears – and later ideas
- meet cyclists and non-cyclists, and more.

The plan would be to allow for these activities in the context of doing things people already do or like to do. This context would include a widening range of things such as swimming, having coffee, eating, finding information on community events, child minding and so on.

**The area**

The Hornsby Park area includes the activity around the Hornsby Aquatic Centre, child minding facilities for people attending the pool, change rooms (already available to the public as well as
swimmers), an enthusiastic Country Women’s Association (CWA) group, some empty buildings and some pleasant outdoor space. It is near the Hornsby TAFE and in walking/cycling distance to the Hornsby Railway station and the multiple activities of the CBD including the Westfield Shopping Centre.

7.2. Why the Hornsby Park option?

This is first priority because it is:
1) built on existing infrastructure and interactions in the community;
2) it is close to the Town Centre of Hornsby – also close to other transport hubs, e.g. rail and parking;
3) it focuses on new bike riders, tentative riders but also allows opportunities for experienced bike riders to start longer rides or to interact with more junior riders;
4) it will involve many different people from the community (pool staff, pool visitors, TAFE students, bike shop owners, educationalists, bike riders and potential riders of all ages, people from the CWA etc);
5) it has the potential to link in with Council’s new plans to revitalise the area (e.g. fill the empty space in the complex);
6) it has the potential to link with another option from this strategy – to provide gateway and cycle-friendly signage throughout the area; and
7) it will be a place where non-cyclists might also gather and interact with all types of cyclists (from new to experienced) and possibly find an interest in riding themselves.

7.3. Action Plan

The following steps are recommended because they are most likely to make this happen:
1) Get a sub-group of the stakeholders to commit to be champions and get them to plan step 3 below.
2) Find a coordinator for this group who is enthusiastic, is a good listener, a good delegator, and a good organiser. Consider whether this role is partially funded by the RTA for a short time – e.g. 3-4 months.
3) Plan a ‘charette’ for making this happen. A charette is a process where all people involved in the shaping of an action and the effects of the action are involved from the beginning.
4) There would need to be an initial, facilitated charette meeting. After this, the coordinator (above) can take over because participants (see below) will have all taken their own responsibility. This will mean inviting someone from at least the following to the initial 4-hour charette:
The Hornsby Aquatic Centre
TAFE
Country Women’s Association (CWA)
Bike shop owner
Bike trainer (potential trainer identified by a representative of NSW Area Health, Eastwood – see Section 11.2)
Council
Bicycle Users Group/s
Mountain Bike Association
City Rail
Potential restaurateurs
Anyone else who has an interest in the area.

5) The facilitator could consider using the following as springboards for the charrette process:

- Aim is to involve beginners and tentative cyclists and link with experienced cyclists
- Consider the barriers for this type of cyclist (see Appendix) at all stages of planning
- Could there be bike symbols in numerous places (at entrance, at pool, on CWA, in/on TAFE, on bike racks)
- TAFE students will be using showers (already being organised and publicised by TAFE)
- Encourage current pool contractor to come up with ideas that are win/win for them and this program (e.g. offering showers, bike parking, getting more patrons, etc.)
- Check pool contract to see when contract expires (opportunity for change at this time)⁷.
- Consider bike parking as an option for various uses, e.g. pool, new users
- Find a way to make it easy to have showers without using pool (helpful for TAFE students, anyone commuting to station and wanting a shower before catching train, anyone returning from a ride that started there (e.g. Bike North rides). Could include having a card of some type or using new technologies like SMS to pay.
- Let people in Bike North and other BUGs know that they can shower at the pool. If there were to be bike parking there, let these people know so they can park bikes while going for a coffee.
- Mountain Bike Alliance to think about ways to introduce their members to riding from this location (e.g. a route from there to a fire trail)

⁷ This has already been done by someone from the Stakeholder Group from the Planning Section of Hornsby Council and who was part of the stakeholder’s group. The Hornsby Aquatic Centre is no longer under contract and is being operated by Hornsby Council because of its structural issues. It has been given a lifespan of between 2.5-3 years and Council is still considering options for where to build the new pool – most likely on the existing site. This could make it possible for purpose built cycle storage and multi-functional showers to be included in the rebuild.
Engage CWA in the process – look for ideas that are win/win (e.g. they provide coffee; they are involved in the supervision of bike racks at station. Ask them for imaginative ideas.

Information on bikes etc could be in CWA rooms

Bike maintenance courses could be run in vacant rooms until occupied.

Car parking for any events could be at TAFE

6) At the end of the charette:

- Each person would have an understanding of the overall goals – how they will measure success of their own involvement. This will allow/encourage innovation, but still work to the overall goal.

- Each person would have tasks as individuals, organisations or groups of people - including to link in other projects from the community

- Each person would have an understanding of funding available (sources and amounts), how they might look for more, and how it will be divided between sub-projects in the Hornsby Park complex

- The role of the coordinator will be clearly established as one of coordination first, leadership when necessary

- A target date for a launch of the cycle friendly Hornsby Park complex – possibly beginning with a weekend of activities – leading to a week of TAFE-based activities (likely to need 3-4 months)

- A further meeting of the champions would be arranged as needed.

While most of the actions need little supervision, it would be the role of PCAL/RTA to take the first step, i.e. steps 1) and 2) of the action plan.

7.4. Estimated costs

The following are the anticipated costs for this action plan.

Promotion/awareness

- Short term funding of coordinator – e.g. 6 months @ 40 hrs per month $14,000
- Facilitator for charette – plan and implement $6,000
- Base funding for process (most would be generated by others) $5,000

End of trip facilities

- Bike racks (mostly funded by local organisations) $5,000
7.5. Measuring success

The Hornsby Park plan will be successful when:

- local people and organisations have been involved in setting it up and very little input is needed from external sources, including Council;
- there are beginners or tentative riders renting bikes/helmets/locks for short rides around the Hornsby Complex;
- there are classes/workshops for beginners or tentative riders ranging from ‘is bike riding for me?’ to ‘getting started’ to ‘checking your old bike’, to ‘what to wear’, to ‘maintenance’, to ‘bike rides for beginners, intermediate, experienced’;
- there is a reported significant increase in pool shower use by cyclists;
- the CWA people are actively interacting with cyclists;
- TAFE’s bike policies include use of the Park; and
- there are things happening that no one thought of!

8.1. **Description of the Option**

This option is to create an activity focussing on beginner and tentative riders by leveraging off an existing festival or event. It is designed to support these people and help them to:

- think through what riding would mean to them;
- ask questions about fears/challenges – have discussions, get answers;
- try riding (to see if they can still ride);
- work out what kind of bike/helmet/lock they might need;
- find a buddy for the first trip;
- find a trusted bike shop;
- find out how to learn to ride; and
- think through all the other things identified as initial barriers (see Appendix A).

8.2. **Why the Event option?**

The Breaking Down Barriers Event is a high priority action because it

1) Will build on an existing event and existing networks within the community;
2) Could take place close to the Town Centre of Hornsby – also close to other transport hubs, e.g. rail and car parking;
3) Focuses on new bike riders and tentative riders but also allows opportunities for experienced bike riders;
4) Could involve many different people from the community - employers, bike shop owners, educationalists, TAFE students, bike riders and potential riders of all ages, people from the Hornsby Park program (e.g. CWA etc), older citizens, school age children, and so on;
5) Has the potential to link with another option recommended in this strategy – “to provide gateway and cycle-friendly signage throughout the area”;
6) Could stimulate a new way of distributing a suite of information for new/tentative riders building on existing information; and
7) Will be an occasion where non-cyclists might gather and interact with all types of cyclists (from new to experienced) and possibly find an interest in riding themselves.

8.3. **Action Plan**

The following steps are recommended. They are based on the principles used in preparing this strategy of ‘helping people to help themselves’ (see Appendix C).
1) Appoint someone to get the program started (steps 2-4). This could be any person who understands the goals of the Action (e.g. someone from Hornsby Council/PCAL/RTA/SKM).

2) Phone all stakeholders from the stakeholder workshops;

3) Get a sub-group of the stakeholders to commit to be champions and get them to plan the next step.

4) Find a coordinator for this group who is enthusiastic, is a good listener, a good delegator, and a good organiser. Ideally this person should be a new cyclist. It is recommended that this role is partially funded by the RTA for a short time – e.g. 3-4 months. This could possibly be the same person as for the Hornsby Park Complex Option.

5) Plan an initial, facilitated meeting which could invite anyone from the community who is interested. The aim of this meeting would be to establish a working group to plan the event (may or may not include some/all of the stakeholders in (1) above, to come up with initial ideas for the event, and to get commitment of people and organisations for next steps. This will mean inviting someone from at least the following to the initial meeting – to ensure a representation:
   - All people participating in the Hornsby Park Complex initiative;
   - Employers in the area;
   - Bike maintenance trainers;
   - Cyclist trainers;
   - Local service clubs;
   - Council;
   - RTA;
   - PCAL;
   - CityRail;
   - Hornsby Hospital;
   - Schools; and
   - Local papers.

6) The following notes can be used by the facilitator as springboards for inspiring the community (these ideas have already come from stakeholders’ workshops):

   **What?**
   - A weekend event
   - A mixture of chances to ride, to learn about maintaining bikes, to gain skills, to meet a buddy, to have fun, to find out where to get information
   - An opportunity to rent a bike and go for a short ride around TAFE area/car park or go for a longer ride (see below along Jersey Road route or link with Mountain Bike Alliance on fire track)
   - An opportunity to borrow a bike/helmet etc. for two weeks or more to see if you like it.

   **SINCLAIR KNIGHT MERZ**
An opportunity to find a buddy

Possibly include a bike skills course in Swimming Pool Car Park or in rooms next to CWA (linking with Hornsby Park Complex – refer people to upcoming intensive course offered by Health Service)

Could introduce current bike riders to volunteering with a difference (i.e. helping new and tentative riders)

Could use the idea of incremental-engagement (see Appendix B) – announce the Event to the public well in advance and then provide information over time that gives context so that by the time of the event, people understand what questions to ask and why they and others would want to come.

When?

To fit in with another event - avoid winter (Spring would be ideal), at a time when other opportunities can be announced (e.g. Hornsby Park Complex) or things that have happened (e.g. signage in Option 3).

Could be part of Bike Week in September

Could also link in with other events in Hornsby, e.g. World Environment Day, Multicultural events, Health week, volunteer’s week etc.

Where?

In Hornsby Park complex?

– Could have display/learning/maintenance in TAFE car park area. Opportunity for involvement with TAFE program, TAFE students, display of TAFE bike parking etc.

– Could have food and information in the Pool Precinct. Opportunity to show how showers/parking is available at the pool.

Could incorporate ride starting on Jersey Street (see Figure 1).

– Possibly a ‘moving event’, i.e. no need to close a road, but have VMS signs

– Could be short or go along Pacific Highway to a station on the way (depending on ability e.g. Colah, Brooklyn).

– Could close road (one lane) – might be better for beginners

7) At the end of this meeting there would be:

– A keen, self-selected working group

– 1 or maximum 2 candidate events that the Bike Event could link to

– Tasks for all interested people who attended (e.g. find out about an event, find the name of an organisation, talk to their own group about participating, email ideas to the coordinator, etc., come up with ideas for a competition)
8) After this, the coordinator ([4] above) can take over as liaison person and meetings/gatherings would be arranged as needed.

8.4. Estimated costs

The following are the estimated costs for Action Plan:

Promotion/Awareness

- Start-up of the program (Action 1)
  (includes phone calls to all stakeholders (Action 2)) $6,000
- Coordinator for 4 months @ 50 hours per month $12,000
- Base funding for the Event (most would be generated by others) $7,000

8.5. Measuring success of the ‘Break Down Barriers’ Event

The event will be successful when:

- local people and organisations have been involved in setting it up and very little input is needed from external sources, including Council
- the event is well patronised by beginners and tentative riders as well as experienced riders
- there are short classes/workshops (on the day or leading up to it) for beginners or tentative riders ranging from ‘is bike riding for me?’ to ‘getting started to ‘checking your old bike’, to ‘what to wear’, to ‘maintenance’, to bike rides for beginners, intermediate, experienced’
- there are many people taking part in the ride
- there is a plan for a future event, run by a similar group, but including new cyclists, and
- there are things happening that we haven’t thought of!

9.1. Description of the Option

This option is to create the feeling that Hornsby welcomes cyclists, making them feel confident, and to remind drivers to expect to see and share the roads with them. The idea is that through signage or complementary measures, we can create an environment where motorists give additional consideration to cyclists, and cyclists have a higher perception of on road cycling safety.

This could be done by signage that would give this message, e.g.

- Green paint on roads
- Lines across roads around the perimeter of the area with a bike symbol
- Bike symbols as you enter the area
- Creating the whole or most of the area as a 40kph zone
- Signage to give cyclists confidence and non-cyclists to expect them
  - Bike symbol on bike racks, bike shops, shops that sell bike clothes, places that encourage bikes
  - On a route (e.g. symbol on a road – something easy and legal) around Hornsby
    - Build on the route that one of the stakeholders (not a confident rider) has ridden (see Appendix C)
    - Mark several levels of riding (simple - will not be the whole loop; more complex – could include sections of Pacific Highway). Could include short stretches that are suitable for kids to ride to school or others to ride to work/activity (e.g. if you live in a couple of places you could ride to a specific school)
    - Highlight the parts of the loop that are not ‘easy’ and let Council know so that they can consider reducing speeds on these sections to complete the loop i.e. the loop would be made up of easy roads and those that are speed limited.

Additional wayfinding signage may also be useful if there are local routes which conveniently connect trip generators and attractors. These signs may show directions to certain suburbs or to significant generators (e.g. Westfield, schools, TAFE) and they should include the distance.

This option creates synergies with strategies for pedestrians. In some cases it might be appropriate to combine the bicycle signage with signs showing priorities for pedestrians. In other cases it will be necessary to make the relationship with cyclists clear to pedestrians –when does the cyclist have right of way. Similarly it needs to be clear to cyclists where they may and may not ride (e.g. riding on some parts of the mall is permitted; riding on footpaths is not permitted for adults).
9.2. Why the signage option?

The signage option is an action because it:
1) will build on existing road networks rather than requiring their expansion,
2) could be included in Council’s existing strategies (e.g. to reduce speed limits)
3) allows participation of local bike riders to help with planning
4) focuses on making short stretches of road available for new riders, including children.

9.3. Action Plan

The following steps are recommended. Unlike the previous actions, they are based on the Council taking a lead – with help from a willing community.

1) Council to confirm if/whether there will be a 40kph limit in some or all of the Hornsby Town Centre. If the limit is imposed, this action in itself will make the city more cycle friendly.
2) If yes or no, Council to consider gateway signage of some type that is legal and inexpensive. Examples range from signs on posts, to painting green on roads, to painting a line and symbol across the road. The RTA and Council representatives at the stakeholder workshop felt that there were solutions.
3) Council to have a small symbol of a bike designed and made into signs (possibly both adhesive and metal) that can be attached to things as diverse as bike racks, shop windows, offices, shops, etc.
4) Council to attach these to property that belongs to them and to distribute these to any bicycle friendly group, shop, or organisation to attach to windows, etc. This could be done by inserting a notice in the local paper, Council Newsletter or at a central point such as a Westfield notice board. A simple application form could be designed if Council feels the need to control the distribution of the signs.
5) Council to organise a meeting with 3-4 local users from original stakeholders group (e.g. BUG groups, TAFE representative, school representative). At this meeting 1-2 short legs of a route could be chosen as initial trials of marking safe routes. An example might be as short a distance as 1 km leading to a school.
6) The route could then be marked as decided with Council by the group.
7) The route would then be advertised very simply – e.g. for children at the school living along or adjacent to that km, for all households along the route etc.
8) Further routes might evolve if this is successful. The simplicity of the measure will mean that if the approach needs to be modified neither large amounts of time nor money will have been spent on the project.
### 9.4. Estimated costs

#### Infrastructure
- Gateway signage, prepared and erected by Hornsby Council, designed by an Agency $12,500
- Bike symbols (preparation + manufacture – c60 @ $40) $2,500

#### Promotion/awareness
- Preparation of initial safe route done by Hornsby Council and BUG groups Allowance to oversee process and pay testers $1,000

### 9.5. Measuring success of the signage

The signage will be successful when:
- Local people take up the offer of signs in their shops/offices
- More people are seen and measured riding on the streets
- People are riding on the short stretch of marked route
10. Action Plan – Council Planning Regulations

10.1. Description of the Option

This option builds on the fact that there is a current Council review of planning regulations. It recommends that the review:

- leads to the mandatory provision of cycle facilities (including secure cycle storage) in all new developments – residential, commercial and industrial.
- includes a review of car parking rates – particularly in places where cycles could safely reach a destination.

10.2. Why the planning option?

The planning option is an action because it could be part of an existing process.

10.3. Action Plan

1) It is recommended that this action is taken on by someone from Council, e.g. head of Transport Planning
2) It is recommended that the Council measures the use of the facilities

10.4. Estimated costs

- Costs and responsibility covered by Council

10.5. Measuring success of the Council planning regulations

The regulations will be successful when:

- There is a measurable increase in cycling in Hornsby
- New developments incorporate cyclist friendly infrastructure as standard practice
- There is a measurable uptake of the facilities (e.g. number of bicycles locked to racks).

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8 Based on experience in other municipalities, the most effective strategy will involve council officer contact with developers and their designers at an early stage of the planning application process. Few architects and designers have practical experience in designing for cyclist end of trip facilities, even if well intentioned.

SKM

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11. **Action Plan – Annual Hornsby Hospital Bicycle Ride**

11.1. **Description of the Option**

This option builds on an idea by a local resident who was also part of the stakeholder’s group. He is a leader of Muggaccino’s Bike Group [http://www.muggaccinos.com/](http://www.muggaccinos.com/) and his colleague is a woman who lives in Hornsby and cycles regularly.

It is to create an annual event where

- prospective bicycle ride participants from Hornsby attend a ‘learn about cycling’ workshop and then ride a bike for a short while before
- a more major ride
- that is aimed to raise money for the Hornsby Hospital.

11.2. **Why the Hornsby Hospital bike-ride option?**

The Hornsby Hospital bike ride is an action because it:

1) has a keen advocate/organiser in the community
2) builds on existing programs within the Health Promotion section of Northern Sydney Central Coast Health, Eastwood
3) has additional benefits such as:
   - better cyclists
   - healthier citizens
   - fund-raising for the hospital.

11.3. **Action Plan**

1) Facilitate an initial meeting the two people who developed the idea (see Section 11.1) and Hornsby Hospital – possibly with coordinator of Hornsby Park complex/Event coordinator to make sure that any possible links are maximised. This could be done by someone familiar with the program RTA/PCAL, Council or SKM.

2) Follow through the ideas already put forward by these 2 people, i.e.
   - Hornsby Council aligning with Hornsby Hospital to hold an *Annual Hornsby Hospital Bicycle Ride* with (say) 10 km, 20km and 50km route options on a designated Sunday morning through Hornsby Shire.
   - Someone (Hornsby Council/North Sydney Central Coast Health) conduct a Bicycle Open Day Workshop, say 3 months prior to the scheduled *Annual Hornsby Hospital Bicycle Ride*, where Prospective Bicycle Ride Participants (drawn from Hornsby residents) could attend a “Learn About Cycling Workshop” from say 1pm to 4pm on a Sunday in the...
Hornsby CBD where Prospective Ride Participants could ride a bike for say 10 minutes as an “ice-breaker” which is provided by 1 of 4 Local Bike Shops.

- Bike North BUG may be interested in co-ordinating (with support from Muggaccino’s BUG and also Cyclops ride group) the provision of an aggregate of 20 Volunteer Bicycle Supervisors to attend the Bicycle Open Day Workshop to assist Prospective Bicycle Ride Participants.

- Four Local Bike Shops (2 in Hornsby, 1 in Thornleigh and 1 in Turramurra) could provide say 2 basic second hand bikes each and one Bicycle Shop Representative each to inform Prospective Bicycle Ride Participants of the types of bikes they sell that would be suitable to the Prospective Bicycle Ride Participants’ cycling needs.

- Prospective Bicycle Ride Participants would be asked to donate $5 to Hornsby Hospital (although this suggestion may be left out as it might deter some Prospective Bicycle Ride Participants).

- Bicycle Ride Participants could receive -
  (i) from a Bicycle Shop Representative information on the best type of bike and its cost; and
  (ii) from a Volunteer Bicycle Supervisor
  (a) assistance to mount and commence cycling the right size bicycle, and
  (b) information on the types of rides their BUG or community bicycle group offers.

- Newspaper articles in the three nearby local newspapers could promote the inaugural Annual Hornsby Hospital Bicycle Ride and precursor Bicycle Open Day Workshop.

- If Bike North BUG was not interested in co-ordinating the Volunteer Bicycle Supervisors for the Bicycle Open Day Workshop -
  (a) Muggaccino’s BUG could provide 8 Volunteer Bicycle Supervisors to assist Prospective Ride Participants at the Bicycle Open Day Workshop; and
  (b) Someone from Muggaccino’s would approach Cyclops bicycle group (rides commence from St Ives) to ascertain if Cyclops was interested in participating as suggested above.

11.4. Estimated costs

- Set up of initial meeting $5,000
- Part time coordinator for 3 months (if not possible by Hornsby Park Complex or Event coordinator (Sections 7 or 8) 3 months @ 20 hrs) $3,500
- Bicycle Open Day Workshop allowance $4,000
- Base funding for the Event (most would be generated by others) $7,500
11.5. **Measuring success of the Hornsby Hospital Bicycle Ride**

The Open Day Workshop and Bicycle Ride will be successful when:

- The workshop is well attended and these people take part in the ride
- The ride has large numbers of participants of all stages of cycle ability.
12. Understanding behaviour change – a key to understanding how to increase cycling

Given that PCAL/RTA are interested in introducing non-infrastructural changes, it is important that people who implement the actions described in Sections 7-11 understand the principles behind bringing about lasting change. Carrying out the steps advocated in this document without an understanding of these principles is unlikely to achieve optimal levels of change and is also likely to lead to frustration because coordinators and other leaders will not understand why their seemingly logical actions are not working.

For this reason we have included some detailed background on these principles in Appendix C. However we summarise the tools for change and the relevance for the PCAL NSW Bike Plan in this section.

12.1. What are the tools for change?

Recent experience (e.g. Ampt 2007) suggests that there are two ‘foundation tools’. And a report for the Australian Greenhouse Office (EnergyConsult 2002) gives a convenient list of further tools needed for behavioural change approaches involving reduction of greenhouse gases – including changes to travel behaviour.

The foundation tools are:

**Using word of mouth** – the strongest tool for diffusion and reinforcement. In all our voluntary behaviour change projects to date it has been shown that messages delivered any other way are reinforcing, but much less efficient.

**Telling stories** – There are two reasons for the fundamental tool of story-telling: 1) stories are reinforcing and diffusing, and 2) when there are stories to tell, it means that change has happened.

Other tools include:

**Involving key people early** – not necessarily traditional leaders, but ‘trusted others’ in the community.

**Giving vivid personalised communication** – making any messages dramatically clear and memorable, using images as close as possible to the person with whom we are communicating.

**Giving recognition and reinforcement** - once people have achieved one thing and received praise, recognition and reinforcement means that they are more likely to try another change.

**Presenting choices and options for action** so that people understand there is not just one way to do things – there is a way for everyone.

**Giving feedback** so that people know what they have achieved personally, as well as their household and their community.
Creating visibility in the community – through articles in the paper or inviters, or something else that is part of their community as a constant reminder

Using peer support groups – they can be particularly useful for ongoing problem solving, reinforcement, and celebrating of success.

Visiting an organisation or group - for some people this shows commitment by the program managers, and it gives the opportunity to understand the situation more fully and quickly.

Using media stories – can be a good tool for creating receptivity and credibility to a program, for reminders, to stimulate face-to-face conversations, and to show participation and results.

Using opinion leaders and credible sources – they, or people drawn from the community and trained to do so, can help people overcome barriers to action and give ongoing support beyond their household.

Using the concept of personal rather than financial incentives – e.g. using public transport rewards me with the time to read more.

Obtaining a commitment – ranges from telling the project team that you will do something, to telling your household, to signing a pledge- and means that people are more likely to act on that commitment.

12.2. Relevance for the PCAL NSW BikePlan

In summary, the discussion in Appendix C suggests that there are some key elements that need to be included in preparing a BikePlan or strategy – if it is mainly focussed on infrastructure and particularly – as in this case – if it is mainly focussed on non-infrastructure changes. They are:

- Realising that people are different – they will not all cycle, and they will not all cycle for the same reason
- The most important way of spreading a message is through word of mouth
- Information does not necessarily bring about change
- Financial incentives do not necessarily bring about change
- The most likely reasons for people changing are:
  - Arriving at a point where the negative effects of an existing activity reach a certain level of intolerance.
  - Realising for the first time that it is possible to change.
  - Hearing of someone else who has changed – especially a “trusted other”.
  - Experiencing a change moment e.g. new job, school, house, partner.
  - Feeling that change is fashionable or wanting to keep up with new social norms.
If these points are borne in mind, strategies are most likely to be made in partnership with the community. This will minimise the need for long-term involvement in time and resources at the same time as it will ensure that the increased riding patterns continue.
13. Compatibility with Existing Bicycle Guidelines

The approach used in developing the Hornsby Bike Strategy fits in with existing bicycle guidelines, but also suggests areas where additions to these guidelines might facilitate creating a bicycle strategy that is not focussed only on infrastructure measures.

13.1. Guidelines

First we discuss how the recommended options fit in with existing guidelines.

There are three Bike guidance documents of direct relevance to the proposed cycling strategy:

- Austroads Guide to Traffic Engineering Practice - Part 14 “Bicycles”
- RTA “NSW Bicycle Guidelines”
- RTA “How to Prepare a Bike Plan – An easy 3 stage guide”.

These guidelines are focussed primarily on cycling infrastructure provision. In addition, the NSW Government “Planning Guidelines for Walking and Cycling” provide guidelines focused on land use planning and urban form issues. Given that the five options proposed in this study are primarily non-infrastructure measures there is little guidance in these documents on how such measures should be implemented, and how they should best be integrated with infrastructure measures.

In this section we offer our views on how these guidelines, and particularly the “How to Prepare a Bike Plan” document could be updated to reflect a wider emphasis than on purely infrastructure measures. We note that Part 14 is currently being revised and cycling will not have its own section in the upcoming revisions. For this reason we do not comment on potential revisions to Part 14.

13.1.1. Austroads Part 14

The Austroads guidelines for bicycles is now dated (1999) and has to a significant extent been supplanted by regional guidelines (such as the NSW Bicycle Guidelines) and by engineering practice, which has led to innovative infrastructure treatments in response to the rapid growth that has occurred in cycling in Australia over the past ten years. However, the guidelines do provide information on the appropriate usage of signage and end-of-trip facilities.

The guidelines, in conjunction with Australian Standard 1742.9 (Manual of Traffic Control Devices, Part 9 - Bicycles), provides national standards on approved signs, lane markings and surface treatments for cycling. Option 3 ‘Signage’ in our action plan recommends the introduction of suitable cycling signage. While the guidance sign options are limited in Part 14, and their use generally recommended only for specific points of potential conflict, there is likely to be no regulatory issue with a wider application of appropriate signage as long as signs do not impose a potential safety hazard (either by physically being a hazard in themselves or by impairing visibility...
of regulatory or warning signs). In this regard, careful consideration on a site-by-site basis will need to be given to issues such as sightlines, obscuring of other signs, collision hazard for vehicles and visual clutter.

13.1.2. **NSW Bicycle Guidelines**

The NSW bicycle guidelines provide NSW specific guidance on cycling infrastructure. They do not provide guidelines on non-infrastructure measures.

The guidelines include a number of improvements on Part 14, including more detail on the appropriateness of certain types of treatment. However, in the context of signing they suffer the same limitations as Part 14 with respect to limited options for ‘watch for cyclists’ types of signage. It is likely that non-standard signs will be required to alert motorists to the presence of cyclists consistent with Option 3. However, we understand that there is flexibility from the PCAL/RTA team and Council with respect to signing such that the signage concepts we have proposed should be achievable.

These guidelines note the need for consistency in route finding signage. Given the potential for regional routes to span beyond the Hornsby region it will be important to ensure consistency more broadly with the directional signage recommended in the guidelines. We note that the directional signage guidelines allow for the use of distance indications as well as destination names, which is a very useful addition to directional signage. By providing this type of signage one can address, at least in part, the fact that non-cyclists see the road network from the perspective of the driver and look for signs similar to those they are accustomed to. The most convenient, and often the safest and least stressful route by bicycle will be very different than by car. However, because most journeys are made by car, people tend to perceive the road network from a car driver’s perspective and fail to grasp the convenient alternatives by bicycle. Route signage can help to address this shortcoming.

Stakeholders in Hornsby reinforced, however, that it is important for the signage connects to useful destinations (e.g. Town Centre, shops, schools) and provides an indication of trip distance. It is also critical to ensure that route mapping is easily accessible so non cyclists attempting to identify potential routes can easily determine the most appropriate way to ride.

13.1.3. **RTA “How to prepare a Bike Plan”**

The RTA bike plan guide is largely focussed on the design and provision of infrastructure, and most particularly en route facilities (on- and off-road cycle networks). In this way it mirrors the scope of Part 14 and the NSW Bicycle Guidelines, which focus on the provision of infrastructure. However, step 17 of the bike plan refers to promotional programs and the key promotional
messages. This step is particularly relevant when considering the focus of the recommendations in this report.

The bike plan guide consists of three steps:
1) Research
2) Preparation
3) Follow-up.

These steps apply equally to infrastructure and non-infrastructure measures, and so we see no need to review these fundamental steps. We particularly note the importance of follow-up both to ensure the measures continue over time but also to monitor the effectiveness of the strategies. This will be a critically important part of strategies that are ongoing. These include the Hornsby Park option and ‘Breaking down barriers’ events, where monitoring the effectiveness and updating the strategy over time will be critically important to maximising their effectiveness.

Step 17 refers to promotional activities, a term we consider to be somewhat restrictive when considering the wider range of non-infrastructure measures that are possible. Our approach, and incorporated into our recommended actions, is an approach that is both wider and deeper than simply promotion. We have discussed the way that this could be incorporated into a Bike Plan guide in Section 13.2

13.2. Additions to ‘How to prepare a Bike Plan’

In this section we list some additions to guidelines that this project has led us to suggest.

Page 6: Why plan for bicycles?
- Why plan for cyclists? - to focus on people
  - Needs to be rewritten to focus on people, e.g.
    - Change ‘reasons for integrating bicycle facilities, to for integrating cyclists
    - Add “The reasons for having a Bike Plan include:
      - Improving equity, health and the environment
      - Fosters community participation in events
      - Gets people used to the idea of ‘helping themselves’
      - Etc, as well as the reasons lists

Page 7: Research
- This section should suggest getting together a stakeholder group similar to the one we gathered in Hornsby as one of the steps. Limiting ideas to BUGs can be narrowing. This should also include non-users.
While a Council should review the existing bike strategy, this should not limit the way in which the research phase is conducted.

**Stage 2 – Preparation**

- Management Team (not an ideal name) should include most stakeholders from the Research stage. Should not be limited to the groups mentioned.
- Framework for Bicycles. This section should be reworded to focus on a framework which is not founded on networks. As the Hornsby stakeholders have shown, this is not a necessary condition to bring about change.
- Media liaison: The media should be involved to let people know what is happening, but the voluntary behaviour change approach would suggest that it should tell stories rather than give top-down messages asking people to change or telling them why it is important.
- The large sections on management need to be put in context. Clearly a bike plan (whether infrastructure or not) needs to conform to regulations, but the current structure makes it seem as if this is a major operation and is likely to get people bogged down in this aspect rather than developing an action plan for real change.
- Should include some form of measurement of the existing situation so that the Council can tell if changes have occurred. The section on a Community Survey does not cover the need for some type of representative sample selection to make this data collection valid.
- Ditto the survey of bicycle users. Poor surveys cost as much money as good ones and lead to invalid analyses, thereby invalidating the funds spent on them. The Guide should give references to ways to develop reliable survey methods.
- The section on identifying types of cyclists is written so that infrastructure can be planned. It could be remodelled to say how different people might need different measures that are not necessarily infrastructure.
- The whole preparation phase needs more attention to non-cyclists.
- Planning bike facilities should include understanding if people have facilities at home.
- Setting up Priorities should be expanded beyond the network.
- Promotional programs need to include bottom-up (i.e. people in the community coming up with ideas) rather than simply advertising or brochures.
- Integrated Cycling Initiatives would be more useful if it focussed on ad hoc community groups as well as limiting its emphasis to BUGs. It would be useful to describe a stakeholder engagement process similar to that used in the Hornsby strategy as part of this section.
- Funding the Bike Plan could also include members of the community coming up with ideas on how this could be done or enlisting the help of volunteers – both in traditional groups (e.g. CWA) and in other ways (e.g. bicycle riders helping non-riders).
Stage 3 Follow-Up

- While a mayoral launch might be appropriate in some Councils, it is by no means the only method and the guide should include ways of involving the community in working out the most appropriate ‘launch’. For example in Hornsby, the group decided that an event (which they were keen to assist with) was more appropriate than a launch. A launch also pre-empts a series of initiatives – sometimes promises which it is difficult to keep. It can therefore be better to start a process rather than initiate a Plan.

- Follow-up activities should ideally be self-generating or the Council will spend every year trying to plan things to fulfil the obligations of the Bike Plan (see for example the idea of the Annual Hornsby Hospital bike ride which people from the community are keen to initiate).

13.3. Benefits of an integrated strategy

We believe that all guidelines should emphasise that an integrated strategy, involving both infrastructure and non-infrastructure measures are likely to be the most effective means of encouraging cycling. Indeed, it is likely that in combination the measures will increase cycling more than the measures in isolation. There is likely to be a virtuous circle between infrastructure and non-infrastructure measures:

- The provision of highly visible cycling infrastructure will raise the public visibility of cycling
- Marketing, promotion and voluntary behaviour change programs will be more effective if the ‘product’ is more attractive.

As discussed in Chapter 12, voluntary behaviour change involves identifying the triggers which may result in choosing different modes. Whatever these triggers, and how they differ across the population, it is likely that potential cyclists will be more readily attracted to cycling if the level of infrastructure provision is of high standard.

Conversely, the provision of high quality infrastructure cannot of itself encourage very substantial shifts towards cycling. Where cycling is widely considered as a recreational activity, and rarely a utilitarian activity, then there are significantly cultural restrictions to overcome. Changing the mindset of non-cyclists, by promoting cycling as a viable alternative for some trips, may then lead non-cyclists to consider cycling. This approach needs to be assisted through the provision of information and assistance to break down the barriers of entry to cycling.
Appendix A  Understanding the New/Tentative Rider

Apprehensions of a new/tentative rider are likely to include:

- I won’t still be able to ride my bike
- I am an adult and usually don’t start things I might not be good at
- I’ll have to persevere even if I am not good at it
- I will need expensive clothes
- I won’t know what to do (while riding, what to wear, where to park, how to attach the pannier, how to turn on the light, how to change gears, where you’re allowed attach a locked bike etc.)

Things needed before a new rider can ride:

Have to:

- know how to ride – skills and knowledge
- have a bike, helmet, lock
- have somewhere to ride to
- know how to get there – route, safe route
- have somewhere to store bike at home
- have somewhere to store bike at end of ride
- be healthy and fit
- be confident
- know what to do if bike breaks down
- know what clothes to wear
- know where you will shower? Towels?
- know where you will do your hair? Dryer?
- be very organised for all of above (take clothes, think of clothes in advance etc.).

RTA has an excellent brochure that covers most of these. Make it available in hard copy at various places (e.g. Council, CWA etc) as well as refer to it on website. The document is available from www.ride2work.com.au and is titled “Everything you wanted to know about riding to work… but were afraid to ask”.
Appendix B  Incremental Engagement

For the Action “Breaking down Barriers Event” (Section 8), there will be some type of engagement building up to the event. Using the philosophy of Voluntary Behaviour Change (Appendix C) and an incremental engagement strategy can be useful.

Incremental Engagement prepares people for a change in behaviour by engaging them through information which gives context – usually in an incremental way.

For example, before a cycling event, there would be an initial announcement and some general information to gain interest (e.g. in the paper, via Council newsletter, via posters in bike shops, library and other places where potential riders might be such as workplaces). Once people have expressed interest, targeted information could be provided – possibly in a novel way (e.g. by mail) to address key barriers that present a challenge for new/tentative riders. An example (suggested by a stakeholder in the current project):

- Week 6 – an introduction about all the health benefits of cycling, and some statistics about how safe cycling is (i.e. 17 times safer than playing rugby etc)
- Week 5 – How to resurrect your bike from the shed, ensure it is road worthy, fix minor problems with it or access to further information about who can fix the bike. What to do if you don’t have a bike? (rent, borrow or purchase).
- Week 4 – Where and how to find information regarding route selection. Dispel the notion that the route chosen has to be the same as the participant would drive for a short trip of your choice. Where to find additional route information, e.g. RTA website links, Council website links, local BUG links etc
- Week 3 – The value of a ‘bike buddy’ and where/how to find one. Tips on change rooms, showers, carrying ‘stuff’ while cycling, overcoming helmet hair, riding in the rain, bike security etc.
- Week 2 – Practice ride – road rules – safe riding tips
- Week 1 – General encouragement and information about competitions/rewards on the day

Week 0 – The event

- Week +1 – Follow up congratulations and where to find help if you found the ride too difficult
- Week +3 – Follow up and reminder regarding the assistance and motivation that Bike Buddies can provide.

This could be modified for the Breaking Down Barriers Event – depending on what the event offers. Throughout there should be an opportunity for prospective/tentative riders to contact someone with questions.
Appendix C  Understanding Voluntary Behaviour Change – a key to understanding how to increase cycling

This Appendix describes how the voluntary behaviour change approach can be a valuable tool to encourage changes in the community – in this case to increase cycling.

C.1  Context
Voluntary travel behaviour change is being adopted in Australia and internationally as a method of achieving lasting change in environmentally friendly behaviour in travel and in other areas of environmental sustainability.

Voluntary behaviour change is one of three vital prongs in the trilogy of change tools: supply management, demand management and voluntary behaviour change (AUSTROADS, 2000) and this fits in with steering group’s philosophy of linking all three approaches.

**Supply management:** is providing infrastructure and services as a way of managing the system. This includes providing wider roads to reduce congestion and providing more buses, trains and ferries to reduce car use, and building bike lanes and providing cycle parking infrastructure to encourage cycling.

**Demand management:** is encouraging less use of private cars and more use of bicycles by influencing demand. Measures include regulation (bicycle only lanes, High Occupancy Vehicle lanes, car parking management plans), pricing (e.g. petrol, parking, and congestion charging), education and awareness (communication campaigns), technology measures (e.g. in-vehicle devices to identify shortest routes) and some minor infrastructure works (e.g. widening bike lanes).

**Voluntary behaviour change:** is encouraging people to change without the ‘top-down’ mechanisms of supply and demand management. It is this third prong that often leads to sustained change once the intervention or the infrastructure has been completed or once the demand management measure has been lifted.

Using a voluntary behaviour change approach makes it possible to capitalise on the fact that changing travel behaviour can address many more problems than the key performance variables needed by agencies such as the RTA (in this case increasing cycling). Naturally there are the obvious benefits such as health and the reduction in money spent. However there are many other benefits. For example, for some people, being able to prepare for meetings in advance on a bus, instead of driving and getting frustrated looking for a park, has basically saved their job. And passing difficult subjects has been attributed to “walking to school with Dad and talking about the solutions on the way”.

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Finally, if the approach is applied by individual people and households at the same time that the community is stimulated to make their own changes – with people in the neighbourhood being facilitated to participate in events that support the changes they are making – it has been shown in our projects to increase the liveability of the neighbourhood. For example, as part of the Living Neighbourhood project in Holland Park in Brisbane, community shopkeepers prepared a brochure telling local people about local shops to simultaneously improve their own businesses while encouraging people to travel less distance by car and often walk and cycle.

C.2 Voluntary behaviour change in summary
Using a voluntary behaviour change has been shown to:

- assimilate and enhance other initiatives (e.g. campaigns to increase cycling, campaigns to reduce obesity or get fitter)
- bring about lasting change in the community.

Furthermore, because the approach takes a holistic view to travel, focussing on how it fits into people’s lives, it is able to deal more easily with obstacles or specific challenges that might arise.

The voluntary behaviour change approach is characterised by achieving change through “helping people to help themselves”.

The Figure below is a way of illustrating the processes that are involved in making a sustainable voluntary behaviour change at an individual level.

| The Conditions Surrounding Individual Voluntary Behaviour Change (Source: Ampt 2003) |
In the first instance, an individual decides to make a change so that he or she will improve their personal life in some way. The change may be triggered by any of the following:

- Arriving at a point where the negative effects of an existing activity reach a certain level of intolerance.
- Realising for the first time that it is possible to change.
- Hearing of someone else who has changed – especially a “trusted other”.
- Experiencing a change moment e.g. new job, school, house, or partner.
- Feeling that change is fashionable or wanting to keep up with new social norms.

An example in travel behaviour could occur when someone who has always thought they were ‘spending hours each day at the gym’ met someone at a book club\(^9\) meeting who felt similarly, lived nearby and agreed to ride with them to work to cut out two visits to the gym each week.

It is also important that people feel they have several options to make a change – for some people one option is simply unpalatable for one reason or another, and there is almost always another way to solve a specific problem.

Since voluntary behaviour changes in travel always achieve a personal goal in terms of improvement of lifestyle, or behaviour that is more congruent with values, they are likely to be sustainable.

Behaviour change is then subject to reinforcement activities. These can occur in the form of further benefits that accrue to an individual in terms of their personal values, or in the form of an individual recognising the presence of supportive infrastructure changes.

Finally, because the behaviour change has had a positive benefit to the individual it is likely that they will tell others of the benefits (diffusion). Since we are more likely to practise diffusion in the company of trusted others, the message is more likely to lead to further change.

Above all, the key tenet of this approach to behaviour change is that it is giving people personal responsibility for changing behaviour to improve a small aspect of their life – one that is proving irksome.

**C.3 Understanding motivations for change**

In order to apply a voluntary behaviour change approach it is useful to understand something about individuals. There are at least three reasons for this:

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\(^9\) The association of people who have similar interests or beliefs, such as might occur at a book club is often termed ‘trusted others’, see [http://media.socialchange.net.au/strategy/](http://media.socialchange.net.au/strategy/)
**To motivate people, we need to understand them.**

To know how to motivate people, we need to understand something about them and how they make decisions about their activities, about how they think about and use their cars, and how they consider cycling.

**To target behaviour change that people will actually do, we need to understand them.**

Behaviour change programs that are developed to reduce car use or increase cycling do nothing until people and households consider or use a bike. Some behaviour changes will appeal to people and others will not. It is an uphill task to motivate people to adopt changes for reasons that are not important to them. It is clearly easier to choose behaviours to select if we understand people and households better.

**To develop behaviour changes that will appeal to people, we need to understand them.**

As has just been discussed, not all behaviour changes may appeal to all people. And, unless people adopt those changes, the new concepts or tools will not increase bike use. Despite this, tools are sometimes developed paying little attention to whether people will adopt them (Lutzenhiser 1992). We will be in a better position to develop travel behaviour change tools that appeal if we try to understand individuals.

C.4 People are different

Our intuition about how to motivate people to bring about travel behaviour change can be very wrong. For instance, behaviour change programs often assume that people will change if they receive information about why and how use a bike. This assumption is incorrect. This section cites literature explaining when information can motivate, and what type of information motivates.

Referring to behaviour change in the area of energy, Costanzo et al., 1986 note:

To date, most efforts to “market” conservation have taken the form of large-scale information campaigns. These programs have relied on two vague theories of conservation behavior: the attitude model and the rational-economic model. The attitude model assumes that conservation behavior will follow automatically from favorable attitudes toward conservation. The rational-economic model assumes that people will perform conservation behaviors that are economically advantageous...Although both “theories” are intuitively reasonable, we believe that they underestimate the complexity of human behavior.

Another temptation is to assume that people will make a change to travel behaviour if they receive a financial incentive. It has been shown that money is often a poor motivator and it might even discourage behaviour change in the long run. Stern et al., 1987 give an example from the experience of the US National Research Council’s Committee on the Behavioral and Social Aspects of Energy Consumption showing that when homeowners were offered individualised
energy information at low cost or even for nothing, the response was extremely low because other social and cultural factors were more important.

Shipworth (2000), in an extensive review of motivations to energy actions (including travel reduction), concluded that there are vital lessons here:

- Simply feeding information to home energy users usually has little impact on their actions. The actions of a home energy user are also influenced by their personalities, attitudes, previous actions, their income, the attitudes and actions of their friends and associates, and by the community and culture(s) they belong to.

C.5 The role of money in motivation

As noted earlier, it is common to assume that a financial incentive (or disincentive) will change behaviour. There are several reasons why this is not always the case.

**People do not know how much travel costs**

The transport fraternity often takes for granted that people do not include the operating costs of a vehicle when they make a cost-based decision to drive a car. This is supported by research in other energy areas. Lutzenhiser (1993) found that people overestimated the energy used by visible appliances such as lights but underestimated the energy used by invisible appliances such as hot water services. One reason for this behaviour is the difficulty of measuring the ‘invisible’ costs.

**The role of cultural and social values in ‘economic’ decisions**

During the 1970s in the US, energy prices nearly quadrupled. However, the US Department of Energy estimates that, between 1972 and 1980, average energy use per household decreased only 1.5% per annum (Frieden and Baker, 1983). Furthermore, most of the savings were not due to improvements in the energy efficiency of homes or purchases of energy efficient appliances but to people changing their lifestyles (Frieden and Baker, 1983).

At the time, draught proofing (weatherising) was an extremely ‘economically rational’ home energy action. In addition, it was easy to do without professional help, the ‘technology’ was proven and the result improved comfort by reducing drafts. Despite all this, the vast majority of homeowners did not draught proof their homes (Wilk & Wilhite, 1983). Experienced ethnographers in a Californian study found that householders’ actions were influenced by the way they felt about their home and the way they felt about doing different jobs in the home (Wilk and Wilhite, 1983). They knew that it made economic ‘sense’ to draught proof their homes – but most people did not do it.

The important lesson is that cultural and social values are deeply held and challenging these in voluntary behaviour change programs is unlikely to be useful. The alternative approach means
that program managers need to take these cultural and social values into account when developing a program and actually use them as a basis for bringing about change. While some people will find money an important aspect in their lives (and hence a motivator), others will not. This can also vary by stage in the life cycle. This reinforces the use of the voluntary behaviour change approach where people take personal responsibility.

The likely impact of a financial incentive strategy

Financial incentive strategies are ineffective if many or most of the people claiming the incentive would have changed behaviour even if the incentive were not available. People who claim the financial incentive but would have taken the energy action anyway are ‘free-riders’. Low-income households are less likely to be ‘free riders’ (Shipworth, 2000). Financial incentive strategies can also be ineffective if they result in people feeling they should only change behaviour if they are sufficiently financially remunerated. Such wholesale remuneration is unlikely to be financially viable.

It can be difficult to establish the likely impact of a financial incentive strategy. Surveys give an inaccurate picture of the likely impact of a financial incentive (Stern et al., 1987) because of the hypothetical nature of the question and the tendency for people to report socially desirable behaviours (Foddy, 1993).

Finally, there is considerable research to suggest that financial incentives of the same level produce radically different behaviours – even to the extent of both increasing and decreasing behaviours they are intended to encourage (Stern, 1993).

C.6 The role of information in motivation

It is often argued that giving information is a vital component of bringing about voluntary behaviour change. While it is certainly important, it does not always motivate people to change.

Information strategies develop out of the assumption that people will undertake the necessary actions once they know what they should do, how they should do it and why they should do it (de Young, 1993). This is often not the case.

In the US, information programs were at the forefront of efforts following the first energy crisis of the 1970s. These programs aimed to educate consumers using energy audits and printed materials. Alone, education resulted in negligible energy savings. Even in combination with loan schemes, it was still ineffective (Nadel & Geller 1996). By 1980 already over 90 separate studies had been conducted testing the impact of information programs on consumers home energy use (McDougall et al. 1981). Research also indicates that pamphlets, videos and other information services result in very little savings - possibly in the region of 0-2% (e.g. Collins et al. 1985 in Nadel & Geller 1996, McDougall et al. 1981, Stern et al. 1987).
In the travel behaviour field, Tertoolen et al. (1998) made a similar finding. When people were simply given information on their travel, and had no understanding of a way to change, they changed their attitudes (‘travelling by car is not that bad after all’) rather than their behaviour.

Information about costs is not very likely to motivate people’s actions when the costs are low or not perceived as important by some people. A small South Australian information program provides anecdotal evidence that people may actually use more energy once they are informed about the cost of running certain appliances, such as air conditioners (reported in Shipworth, 2000). That said, the threat of loss motivates people much more than the promise of gain (e.g. Tversky and Kahneman, 1991)

This means that it is the effect of an information program that is important - not merely its existence.

C.7 The role of attitudes in motivation

There is considerable evidence that attitudes are not necessarily associated with behaviour. As Eagly and Kulesa (1997) note:

One of the paradoxes of the psychology of environmentalism is that citizens generally hold pro-preservation attitudes but routinely engage in environmentally unfriendly actions, such as driving to work instead of using public transportation.

Programs that are predicated on the attitude model would assume that attitudes cause behaviour. Unfortunately, scientific research has demonstrated that there is rarely a strong, direct, or consistent relationship between attitudes subsequent action:

…people who cite conservation as the single most important strategy for improving our energy future are no more likely than others to engage in energy-conserving behaviors. (Costanzo et al. 1986)

A person who has an attitude that suggests that it would be consistent for him or her to cycle more cannot change if that person does not know how to change. This is one of the key roles of a voluntary behaviour change program in travel.

C.8 The role of values in motivation

Different people have different values that are important in their lives at a certain time. For example, for some people money is an important motivator because they have little, or get pleasure out of saving. For others, any change that would give them more time to spend on discretionary activities may be an even more important value. Still others value health, environment, independence, family and so on.
Understanding that different people in different households have different values – the priorities of which change throughout their lives - is an important aspect of understanding what motivates people in a voluntary behaviour change program.

The critical need to understand people’s motivations means that travel behaviour programs need the involvement of professionals who understand people, as well as professionals who understand travel behaviour. The one without the other will not succeed.

C.9 Bringing about voluntary behaviour change
Having examined the complexity of the way in which motivations for changing behaviour vary, this section establishes the way in which voluntary behavioural change can actually be brought about.

There are several important principles that ensure that travel behaviour change will occur in a sustainable way for individuals participating in the program. They can be summarised as follows:

- Change is easiest if it suits our lifestyle and fits into our core values
- Change is more likely if there is a wide range of choices
- We are more likely to change if we gain personal benefits
- We are more likely to change if it is perceived to be easy for us
- We are more likely to change if it is easy to see (measure) that we have changed – even a small amount
- We are more likely to sustain change if we get positive recognition for our effort and achievements (from others)
- We are more likely to change if other people are also making changes

C.10 What supports behavioural change?
There are 3 key elements that support behaviour change:

- Giving personal responsibility
- Giving a range of quick results and long-term options, and
- The presence of robust diffusion mechanisms.

Giving personal responsibility

The voluntary behaviour change approach not only gives people the option/s to change, but also an understanding that there is a wide range of choices for change. In addition to mode change (to bike), people need to feel they have a whole palette of choices, both short and long-term. These could include:

- carrying out activities near to home or an existing activity

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• encouraging local shops to stock products which we currently have to travel longer distances to obtain (good for the local economy, good for you, good for the environment)
• choosing a local activity when there is a choice (gym, school, park) and
• arranging events where local participation (stalls, caterers, etc.) is encouraged.

**Giving a range of quick results and long-term options**

Another supportive approach is to ensure that a travel behaviour change program is delivered in a way that allows people to choose options that have quick results.

There are two ways to assist in achieving this. One is that, in giving people a palette of choices (see above), they are likely to choose something that they know will be quick for them (this varies from one person to another, depending on where they live, what they do, what choices they have, and so on). The other is to assist them to measure the behavioural change themselves so that, as in dieting, they can rejoice in the loss of grams (time saved) rather than kilograms (greenhouse gases reduced).

On the other hand, giving people long-term options for change, is also important because some people either cannot or do not want to change in the short term – and it is important to give ‘late adopters’ a chance to do something.

**The presence of robust diffusion mechanisms**

Strategies that allow or encourage people to diffuse the message are likely to be more sustainable than those that do not. The most effective way of diffusing a message is by word of mouth (Stern et al., 1987). When a person tells someone about what they are doing, they are not only reinforcing their own behaviour in the process, but also giving a level of commitment.

Understanding current communication patterns and enhancing communication effectiveness in a community has been found to be a vital ingredient for attaining success in diffusion of the ideas and actions in relation to reduction of the negative impacts of the car (e.g. Ampt 1999).

Incorporating community participation strategies means that diffusion is very likely to take place of its own volition.

**C.11 References**


Appendix D  Generic and Transferable Initiatives

The initiatives proposed in this report may have wider applicability to other areas of Sydney, although there would be a need to tailor the initiatives to the local context. In this appendix we present a series of initiatives which are more generic in nature that could have applicability in locations other than Hornsby. These initiatives are based on our experience working on bicycle programs and a literature review.
### D.1 Generic initiatives

<table>
<thead>
<tr>
<th>Name of Initiative/Description</th>
<th>Category</th>
<th>Target Group</th>
<th>Potential to encourage cycling</th>
<th>Cost</th>
<th>Timing*</th>
<th>Lead Agency/Implementation partners</th>
</tr>
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<td><strong>D.1 Generic initiatives</strong></td>
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</table>

**General initiatives**

- **Proactive placement of bicycle stands** in high-use public spaces.
- **Information sharing** of best practice initiatives.
- **Pilot projects** for new cycling infrastructure.
- **Community engagement** through local groups.
- **Policy development** for cycling routes.
- **Support for community groups** in cycling initiatives.

**Potential initiatives**

- **Schools and community groups** to develop cycling programs.
- **Businesses** to support cycling infrastructure.
- **Government** to fund cycling projects.

**Other initiatives**

- **Public transportation** improvements.
- **Green infrastructure** projects.
- **Transport planning** strategies.

**Support for development**

- **Funding** for cycling projects.
- **Policy development** for cycling initiatives.

**Potential partnerships**

- **Schools and local government**.
- **Businesses and community groups**.
- **Government departments**.

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**SKM**

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D.2 Mapping initiatives to journey purpose

It is likely that particular strategies will be required to encourage cycling for particular purposes. The list below maps strategies to particular cycling purposes.

Cycling to School

- Policies and Programs
  - Promote collaboration between schools and local government
  - Ride2School (NSW) ; Bikeability (UK)
  - Smart measure portfolio – Cycle to school (UK)
- Infrastructure and Facilities
  - Continuous route between the school and residential area
  - Improved route signing
  - Cycle parking, lockers and storage
- Road Safety
  - Cycle train (Cycle bus)
  - Traffic engineering measures
  - Safety training (Involving parents)
  - Monitoring and Report
- Promotion & Marketing
  - Reward
  - Cycling as part of school curriculum (History, Geography etc.)

Cycling to Shops

- Policies and Programs
  - Programs which promote cycling to shops (local shopping centers)
  - Funding for providing secure bicycle storage facility for local shopping centers
- Infrastructure and Facilities
  - Continuous route to shops with good signing
  - Cycle parking at the entrance to stores
- Road Safety
  - Traffic free cycling route for shoppers
  - Traffic engineering measures
  - Safety training
  - Safety monitoring
- Promotion & Marketing
  - Improved home delivery services (free bags, free delivery etc.)
  - Brochure – shop in your local area
  - Campaigns to encourage people to shop local

Cycling to Work
> Policies and Programs
  > Transport and Lane Use Planning (Local planning schemes, Austroads publication series etc.)
  > Strategic research programs (female cycling to work programs etc.)
  > Workplace travel plan
> Infrastructure and Facilities
  > Improved cycle routes
  > Secure and sheltered cycle parking
  > Facilities for showers, changing and storage of personal gear
> Road Safety
  > Traffic free cycling route
  > Traffic engineering measures
  > Safety monitoring
> Promotion & Marketing
  > Cut-price bikes and equipment
  > Female cycle to work program (Gear Up Girl, Bike Buddies)
  > National ride to work day; NSW Bike Week

Recreation and Tourism

> Policies and Programs
  > Local Government tourism cycling program
  > Tourism cycle hire scheme
> Infrastructure and Facilities
  > Leisure cycling area
  > Attractive leisure cycle routes (Picnic and rest sites, artworks etc.)
  > Cycle hire scheme for leisure cycling area (Centennial Park, NSW)
> Road Safety
  > Safety training
  > Wear helmet in leisure cycling area
> Promotion & Marketing
  > Brochure
  > Promotion programs such as Leisure Rides