amr interactive

Research into Barriers to Cycling in NSW

Final Report

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HELPING BUSINESS MAKE SMARTER DECISIONS

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1. Executive summary

Background

A joint project team of the NSW Roads and Traffic Authority (RTA) and Department of the Environment & Climate Change (DECC) is currently developing the new NSW BikePlan (a BikePlan was previously developed and implemented in 1999) for the Premier's Council for Active Living.

The BikePlan group identified that research is necessary to explore the barriers to cycling amongst non-cyclists and infrequent cyclists, in order to most effectively target communications and promotions to this group.

Objectives

The objectives of the research were to:

- identify the barriers that prevent regular cycling;

- identify current perceptions of cycling as a viable transport option;

- identify the triggers that would motivate and assist non-cyclists and infrequent cyclists to commence cycling;

- explore the information needs and sources that would assist individuals to cycle more frequently;

- explore the most effective initiatives to facilitate increased cycling for the target population; and

- estimate the size of the potential growth in cycling within different groups and for different purposes that these initiatives would create.

The research

The research program consisted of qualitative methods to explore the issues in detail:

- 10 focus groups with infrequent or non-cyclists in Sydney and regional centres, and 8 indepth telephone interviews in smaller towns; and

- escorted rides with 8 non-cyclists around Centennial Park and Sydney Olympic Park to give further insight into the perceptions/attitudes when experiencing the behavior.

This was followed by a quantitative telephone survey of 300 NSW respondents aged 18-69 years to provide estimations on potential growth.

The research was conducted during April-May 2009.

Key findings

Barriers that prevent regular cycling

Four dominant barriers were found:

1. The <u>negative image of cyclists</u> and cycling amongst non-cyclists.

2. The <u>perceived danger of cycling</u>, and commuter cycling in particular, due to perceived or actual lack of safe places to cycle, and the fear of being hit by a motorist.

3. The <u>lack of facilities</u> to store or lock up bicycles.

4. Little or no understanding or acknowledgement of the <u>benefits of cycling</u>.

Perceptions of cycling as a viable transport option

Key issues working against cycling as a transport option were:

- inconvenience of cycling, or need to use other forms of transport;

- lack of time;

- lack of facilities;

- perceptions that cycling isn't 'cool'; and

- cost of cycling.

Motivators and effective initiatives

The key barriers present challenges to motivating cycling. There is a need to:

- increase safety through infrastructure, in particular separated cycle paths;

- provide facilities at work places;

- get people to think about the benefits;

- encourage financial rewards.

Information needs and sources

Following on from the key barriers/motivators identified, there is a need for marketing activities to:

- promote cycling, to get it on the public agenda, and get people thinking about the issues;

- promote current 'success' stories (e.g., storage facilities at the Manly ferry);

- promote cycling to start 'chipping away' at the negative image;

- provide people with information about cycling;

- provide information to employers about the benefits of cycling by their employees, appealing to community responsibility, and the types of schemes that can be introduced;

- promote the benefits of cycling; and

- inform people about safer routes for cycling.

Potential growth in cycling

There appears to be significant opportunity to increase commuter cycling, based on the level of interest expressed by workers in the survey. It was estimated that on the order of 10% workers were (1) within 10 km of their place of work or a station, and (2) had considered cycling to commute. In the short term, this should be addressed by focusing on:

• specific areas where infrastructure is currently in place, or can be implemented easily;

• catchment areas where there would be a higher incidence of shorter trips to work (e.g. inner Sydney);

• encouraging local councils and shopping centres to introduce local schemes;

• encouraging larger companies to promote schemes and provide facilities;

• appealing to the current 'green' movement; and

• promoting potential cost-saving during a recession.

Conclusion

Increasing the incidence of cycling, particularly cycling to commute, is likely to require improving the infrastructure that will maximise perception of safety when riding. The incidence is not at a level which 'legitimises' commuter cycling in the public mind, but there is evidence of a reasonable degree of underlying interest which offers an opportunity to convert.

In the short term, a strategy which takes advantage of existing infrastructure and can harness local community and business involvement should provide a cost-effective way to bring about modest increases in cycling.

2. Background and objectives

Background

In August 2008 the NSW Minister for Roads and the NSW Minister for Climate Change and the Environment announced that the NSW Government plans to develop a blue print to promote cycling and improve cycling facilities as part of a balanced transport system for NSW.

A joint project team of the NSW Roads and Traffic Authority (RTA) and Department of the Environment & Climate Change (DECC) is currently developing the new NSW BikePlan (a BikePlan was previously developed and implemented in 1999) for the Premier's Council for Active Living.

The new NSW BikePlan will outline the types of practical, material and promotional support required to increase recreational and commuter cycling in NSW.

Research need

Extensive research is being carried out to inform the development of the new BikePlan.

Cycling in NSW, What the Data Tells Us, a report commissioned by NSW BikePlan, brings together much of the current known data on cycling in NSW and Australia. Within this report, data from the ABS shows that the proportion of Sydneysiders using cycling to commute to work, or for recreation, is significantly lower than that in other cities. For example, only 0.6% in Sydney regularly use a bicycle to commute for at least part of their journey to work, compared with 1.2% in Brisbane, Adelaide and Perth, and 1.1% in Melbourne.

The BikePlan group identified that research is necessary to explore the barriers to cycling amongst non-cyclists and infrequent cyclists, in order to most effectively target communications and promotions to this group.

AMR Interactive was commissioned to carry out the research. This report details the findings from this study.

Research objectives

The objectives of the research were to:

- identify the barriers that prevent regular cycling;

- identify current perceptions of cycling as a viable transport option;

- identify the triggers that would motivate and assist non-cyclists and infrequent cyclists to commence cycling;

- explore the information needs and sources that would assist individuals to cycle more frequently;

- explore the most effective initiatives to facilitate increased cycling for the target population; and

- estimate the size of the potential growth in cycling within different groups and for different purposes that these initiatives would create.

Infrequent cycling was defined as less than 12 times in a year.

3. Overall method

Behaviour change – A context

A useful model relevant to understanding how to influence cycling behaviour is Ajzen's Theory of Planned Behaviour[1]. This model takes into account a range of factors that influence decision-making. It postulates that behavioural intentions are the immediate precursor of behaviour, and that there are three determinants of intention: attitude, subjective norms and perceived behavioural control[2].
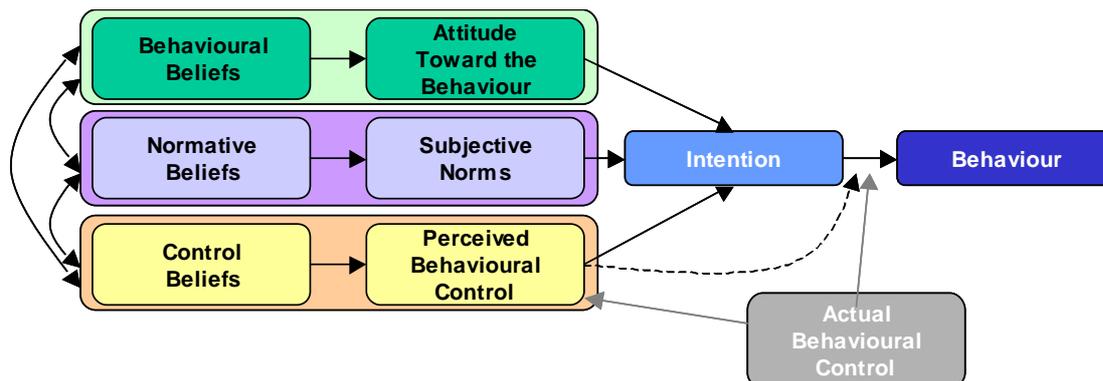
According to the model:

- The *Attitude Towards the Behaviour* is the value of the behaviour (positive or negative) and is related to the expected outcome of the behaviour;

- The *Subjective Norm* is the person's perception of the social pressure to undertake or not undertake this behaviour; and

- *Perceived Behavioural Control* is the personal perception of the ability to carry out the behaviour.

The strengths of the different components contribute to the behavioural intention. Ajzen referred to the broad support for the theory by empirical evidence – that behavioural intention can be predicated with high accuracy from the precursors. These intentions, along with actual behaviour control, account for a substantial amount of variation in observed behaviour.

A major challenge for measures to increase cycling is not only to alter the main elements that influence behaviour, but to also counter the situational variables (attitudes towards cycling and social pressure to cycle or not cycle) that come into play.

Research components

The four research components are presented in Table 1, covering both the qualitative and quantitative stages.

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[1] Ajzen, I. The Theory of Planned Behaviour, Organisational Behaviour and Human Decision Processes, 50, 179-211, 1991.

[2] http://www.people.umass.edu.ajzen/tpb.html

Table 1.   Details of research components

Component	Role	Implementation
10 focus groups	Focus groups were the main method used to explore issues around increasing cycling. Other methods were used to cover specific population groups, enhancing the level of information being obtained, and addressing specific objectives more directly. Groups were conducted in Sydney and larger regional centres.	10 groups with non-cyclists structured by location, age, gender, and level of physical activity. The groups were conducted in both inner and outer Sydney metropolitan areas as well as regional centres (Goulburn and Coffs Harbour).
8 in-depth interviews	In-depth interviewing is particularly useful where it is logistically difficult to gather and conduct discussions with target respondents in one place. In-depth interviews were conducted by telephone to explore issues for non-cyclists in smaller towns.	In-depth interviews with 8 non-cyclists living in Rural areas (towns with populations of 5000 or less).
8 ethnographic-style observations/ interviews	In-situ, 'ethnographic-style' research involved participants being accompanied by a researcher while they go about their everyday tasks. It is a valuable tool for uncovering behaviours and attitudes that people are unable to recall or express when outside that context, such as in a group discussion, or without engaging in the behaviour. Applying this approach to non-cyclists provided valuable information and insight into their perceptions/attitudes around take-up of cycling. It gave a 'hands-on' experience to supplement the group discussions. This approach provided further insight into perceptions/attitudes around the take up of cycling.	Escorted rides with 8 non-cyclists around Centennial Park and Sydney Olympic Park (4 in each location). Two researchers observed the ride and interviewed participants after the trip. This approach provided further information about how new cyclists feel before, during and after such a trip, in particular seeing how perceptions changed after engaging in the behaviour.
Telephone survey	Quantitative survey of residents in NSW to provide better estimates of take up of cycling and response to initiatives.	300 residents aged 18-69 years were surveyed across NSW.

Focus groups and depth interviews

Focus groups

Participants for the qualitative stage were recruited on the basis of a number of variables including:

- age (younger and older);

- gender (meeting the requirement to over-represent females);

- location (metropolitan, regional, rural); and

- level of fitness/physical activity (separating higher and lower, to give a level of homogeneity in each group).

Ten focus groups were conducted each with between 7 and 9 non-cyclists or infrequent cyclists. The main divisions were by location, age, gender, and level of physical activity (Table 2). The groups were conducted in both inner and outer Sydney metropolitan areas as well as regional centres (Goulburn and Coffs Harbour). Each group also included some participants who lived within 10 km of their work, the radius considered by the BikePlan team as being the limit for promoting cycling for commuting. Three of the 10 groups were female-only.

The discussion guide is provided in Appendix A.

Table 2.   Profile of the 10 focus groups

Group	Location		Gender	Physical activity	Age
1	Metropolitan	Sydney City	Mixed	Higher	Younger (18-39)
2			Mixed	Lower	Older (40+)
3			Female	Lower	Younger (18-39)
4		Parramatta	Mixed	Lower	Younger (18-39)
5			Mixed	Higher	Older (40+)
6			Female	Higher	Older (40+)
7	Regional	Coffs Harbour	Mixed	Lower	Older (40+)
8			Female	Higher	Younger (18-39)
9		Goulburn	Mixed	Lower	Older (40+)
10			Mixed	Higher	Younger (18-39)

The profile of the participants in the in-depth interviews and the ethnographic-style observations are shown in Tables 3 and 4. The guide for the ethnographic research is provided in Appendix B.

Table 3.   Profile of participants in the 8 in-depth interviews

Participant	Location	Gender	Physical activity	Age
1	Cowra	Female	Higher	Younger (18-39)
2	Yanco	Female	Higher	Older (40+)
3	Manildera	Female	Lower	Younger (18-39)
4	Clarence	Female	Lower	Older (40+)
5	Wauchope	Female	Higher	Younger (18-39)
6	Cobar	Male	Lower	Older (40+)
7	Mittagong	Male	Higher	Younger (18-39)
8	Moree	Male	Lower	Older (40+)

Table 4.   Profile of participants in the 8 ethnographic-style interviews

Participant	Location	Gender	Age
1	Centennial Park	Male	Older (40+)
2		Male	Younger (18-39)
3		Female	Older (40+)
4		Female	Younger (18-39)
5	Sydney Olympic Park	Male	Younger (18-39)
6		Male	Older (40+)
7		Female	Younger (18-39)
8		Female	Older (40+)

4. Results – Qualitative stage

Barriers to cycling

The barriers to cycling were explored in the qualitative research for recreation, commuting and utilitarian purposes. The barriers were assessed further in the quantitative survey within the broader population.

Negative image of cyclists

Despite positive memories of cycling as children, many non-cyclists have a strongly negative attitude towards cyclists, predominantly affected by their experiences as drivers and pedestrians.

Commuter cycling, in particular, was not perceived as a legitimate or sanctioned form of transport, and commuter cyclists (particularly in metropolitan areas) were maligned as law-breakers who had no place either on roads or footpaths. The social pressure to undertake cycling was therefore low, as most non-cyclists would not want to belong to a group of people they so intensely dislike.

In addition, this overall negative attitude towards cyclists caused non-cyclists to see only the negative side of cycling and to ignore the potential benefits that cycling could bring, both to themselves and to their community.

Childhood memories of cycling

Most people who attended the focus groups had strong and positive memories of cycling as children. Cycling provided them, as children, with freedom, escape, independence from parents and a private, independent form of transport.

> *"Every kid in our street had a pushbike, you would get home from school, strip off your uniform, throw the back pack in the corner, put on the daggy clothes, grab the stack hat and you would be out riding with all your friends around the street, until your Mum and Dad called you in for dinner."* (Coffs Harbour)

> *"I grew up in Bathurst. I would never have asked my mum to drop me here or drop me there. I just used to jump on my bike and ride there."* (Coffs Harbour)

However, around the time they received their driving licences, most said they 'grew out' of bicycles:

> *"There's big excitement as soon as you get to a certain age and can get your licence and everyone wants to do that. That's probably when I rode less - not that I didn't want to ride, it was just convenience - you could drive everywhere, drive to the beach."* (Parramatta)

> *"I think you just grew out of your bike when you were a kid and you never replaced it."* (Parramatta)

Cycling as a child is convenient — but driving as an adult is even more convenient. Therefore to many, it appeared, cycling was associated with childhood, whereas car driving was associated with adulthood. To continue cycling after gaining a licence, particularly in country areas, where the distances involved were greater, was 'not cool':

> *"If you kept your bike when you were old enough to have a licence you were considered a bit weird"* (Parramatta)

There was an underlying feeling among many non-cyclists, that cycling was a childish activity.

Negative attitudes towards commuter cyclists

The negativity towards, and lack of respect for, commuter cyclists, was strong and often quite stridently expressed.

> *"I don't like cyclists. They're an absolute pain in the arse on the road."* (Sydney)

Drivers were annoyed with commuter cyclists riding on the road for several reasons:

1. Commuter cyclists, particularly in the city, were perceived to hold up traffic:

   > *"If you're running late for work there's nothing more frustrating than being stuck behind a cyclist – and you can't overtake them, they're taking up the whole lane."* (Sydney)

   > *"In the city on the street, I find that a negative thing, holding up the traffic, an obstruction. Everyone hates those cyclists in the city…Yes, they drive you insane. You feel like running them over."* (Parramatta)

2. While many motorists (although not all) were aware that cyclists were allowed to ride on roads, they perceived that cyclists on roads did not obey road rules and were frustrated that cyclists were not perceived to be accountable for their actions. In addition, there was a strong perception that, as road users, cyclists were freeloading because they did not pay registration fees:

   > *"They don't obey road rules, they run red lights, they do all sorts of things, they don't wear their helmets, they break so many laws and yet they're not accountable for those actions under any rules. They don't have to pay registration; they don't have to do anything. They can just do whatever they feel like. They're dreadful, absolutely atrocious."* (Sydney)

   > *"The frustrating part of it is they are there and meant to obey the road rules exactly as you do in a car. In the car you pay road taxes, rego and everything else. They (cyclists) can go straight off into the middle of the traffic, and before they even turn green they sometimes go through a red light. If you did that in a car, the cops would nab you straight away, so why not on a bike?"* (Goulburn)

3. Most motorists, even those without strongly negative attitudes towards cyclists, were frightened they might hit a cyclist, due to their perceived erratic behaviour:

   > *Sometimes it's scary when there are cyclists on the side of the road and you are driving. You just don't know what they are going to do. You stay behind and wait until it's really safe to go past, and that really worries me a bit."* (Coffs Harbour)

Speaking as pedestrians, non-cyclists were predominantly frightened of being knocked over by cyclists on the footpath:

> *"They just keep heading towards you on the footpath – really rude and inconsiderate."* (Parramatta)

> *"We have shared paths along Manly front and a lot of the bicycles come up to the back of you and if they had a bell on to tell you they're coming then you know they're coming…but they whip past you".* (Sydney)

> *"Pedestrians don't want them on the footpath."* (Coffs Harbour)

In Sydney, cycle couriers in particular added to the overall negative perception of cyclists among pedestrians:

> "*Messengers on bikes…they're shocking.*" (Sydney)

> "*Do you know what turns me off, it's the couriers in the city. You are crossing the road, and you are half way across and they come and almost knock you over on their bikes… I've seen them fall over off their bikes.*" (Sydney)

Overall, there was a strong perception that commuter cyclists, in particular, do not have a legitimate place to cycle. The road was for drivers and the footpath was for pedestrians.

> "*Yes, they're not considerate, they don't obey the road rules, they get on the footpath when it suits them and back onto the road when it suits them. I think that's why they're such an annoyance.*" (Parramatta)

Current attitudes towards recreational cyclists

In contrast, recreational cycling was considered more socially acceptable than commuter cycling. Many non-cyclists commented that they had enjoyed cycling within the last year.

> "*We did a ride down to the deep sea fishing club. We commented how wonderful it was. It was probably 12 months ago, we said we should do this more often.*" (Coffs Harbour)

Some also said they tried cycling while they were away on holidays, particularly with their children. Most mentioned that they used designated cycle tracks for this activity or, if on holiday, cycled on shared roads or roads with low speed limits.

> "*Last time I cycled was in January…we were camping at a caravan park.*" (Coffs Harbour)

More than one participant laughingly mentioned trying to ride a bicycle at a friend's house. Some said they had not tried this activity since they were children, and were embarrassed at their inability or wobbliness.

> "*I'm scared if I get on a bike, I'll fall off it.*"
> "*I did that about four months ago and I did fall off!*" (Sydney)

This kind of recreational cycling — with the family or on holiday — was not considered as threatening as commuter cycling. There was, however, a certain amount of negativity expressed towards Peleton cyclists which, while not as strong as that towards commuter cyclists, showed again that cyclists were not perceived to belong on roads:

> "*I think a lot of the triathletes do the early morning thing…they're a big pack on the road and they won't move over. They've got the right to be there too I guess, but it's just too dangerous.*" (Coffs Harbour)

> "*One of my biggest problems I've seen with cyclists say you are on a country road, and there is no actual room on the side of the road, and there might be a pack of ten or fifteen of them, instead of all going in single file, they spread out and if you come up over a hill and they are there, and you haven't got time to slow down, you have to go out and around them, and if there's another car coming, you are either going to clean them up or clean the car up.*" (Goulburn)

Recreational cycling was considered socially acceptable, although possibly slightly embarrassing, for those who had not been on a bicycle for a while. However, it was only acceptable to them as long as it did not move onto roads and become 'serious'.

Portrayal of cyclists in the media

Although most discussion of cyclists came from non-cyclists' personal experience, some noted that they could not recall seeing cyclists portrayed on television, either in a negative or a positive light. One observed that cycling was not shown as a sport on the popular television program, *The Biggest Loser.* Although cycling was indeed a sport on *The Biggest Loser*, the fact that people were unable to recall it suggests a lack of importance in the minds of non-cyclists.

Very few had noticed any discussion about cycling in other media, although there was one mention in Goulburn of negative portrayal of cyclists on television:

> *"There was something on TV not long ago about them in Sydney, [the program discussed how] the frustrating part of it is they are there and meant to obey the road rules exactly as you do in a car."* (Goulburn)

Cycling is 'not cool'

In addition to the overall negative image that cyclists bear, it appeared that cycling was not considered a particularly 'cool' activity, either for commuting or for recreation. For some, this was a matter of the helmet:

> *"It would be awkward for a girl to look casual and then have to wear a stack hat"* (City)

> *"And I'd have helmet hair – always a problem!"* (Coffs Harbour)

Others mentioned that children, in particular, while not necessarily averse to wearing helmets, were very conscious that the helmet had to be 'cool':

> *"You have* got *to have a cool helmet."*
> *"Otherwise they don't want to wear them."* (Goulburn)

Many of the non-cyclists, and particularly women, were worried about how they look after cycling:

> *"If you go to the shop and you have to take your helmet off…then you have to fluff up your hair so you look decent. You'll always run into somebody you know!"* (Parramatta)

Some parents who had not been on a bicycle for a while were afraid they would be laughed at by their children. There appeared to be a slight resistance to cycling amongst some younger people (in their early twenties), for whom car-driving was still perceived as much 'cooler'.

Dangers involved with cycling

A number of issues around the danger of cycling were raised in the research.

Cycling on roads considered dangerous

Cycling on roads, and particularly commuter cycling, was perceived as extremely unsafe. Understanding the overall negativity towards cyclists, non-cyclists expressed a very real fear that they would be hit or run over by car-drivers if they cycled on roads, and were acutely aware of the vulnerability of cyclists.

> *"I don't feel safe at the moment, I know a few people, parents or whatever who have been hit by or killed by cars in bike accidents, and it's the mindset of riding a motor bike, or riding a bike, and you are not protected like you are in a car – I don't think Sydney motorists especially take much notice."* (Sydney)

> *"I've heard stories of people being sideswiped by cars. I'd feel vulnerable."* (Sydney)

> *"You see buses too in Sydney where they just pull out. If you're on a pushie they just don't see you."* (Goulburn)

> *"Taxi drivers are the worst."* (Sydney)

This appeared to be particularly the case in Sydney:

> *"I wouldn't feel safe riding around the city."* (Sydney)

> *"In Sydney people are really impatient."* (Parramatta)

> *"When I moved to Balmain I found there's nowhere to ride where I'd feel safe on the road."* (Sydney)

Even in regional areas, however, there was fear of cycling on main roads as cars can go faster and large transport trucks are more prevalent.

> *"I would go for more bike rides if I was allowed to ride on the paths, because it's too scary on the road, and the cars beep at you to scare you on purpose a lot of times."* (Coffs Harbour)

> *"If there were designated cycle tracks, then I think you would find a lot more people would get out there if they knew they could get from A to B without necessarily having to get on the road."* (Coffs Harbour)

Some participants in most of the groups commented that cycling in European cities (such as Amsterdam) was considerably safer, and some mentioned that they had enjoyed cycling in these cities. Some also mentioned that they perceived Melbourne to be a significantly safer city to cycle in than Sydney.

Two factors were mentioned as increasing cycling safety in both Melbourne and Amsterdam: cycle-path infrastructure, and the more positive attitudes of car drivers towards cyclists.

Current cycle routes not connected, and knowledge limited

Fear of cycling on roads was strongly influenced by the apparently very limited knowledge that non-cyclists have of current cycle routes — either on or off road. Most non-cyclists thought as

motorists rather than cyclists — that is, they were imagining themselves driving on main roads rather than on back streets. This heightened the perception that cycling was dangerous.

> "I am petrified to cycle from Enmore into the city because you'd have to go along King Street, which is always a traffic nightmare." (Sydney)

In addition, most non-cyclists were aware that they were not permitted (as adults) to cycle on footpaths, thus limiting the safe places they were able to cycle when faced with heavy traffic. As a result, many non-cyclists felt they would need to be a very confident cyclist before attempting commuting on roads:

> "You're talking about variable weather conditions; you're talking about traffic; if you're going to an environment where you don't know it very well, putting all those things together you need to be confident in terms of the bike itself and know the bike." (Sydney)

Furthermore, some non-cyclists observed that cycle tracks do not link up, or appear to stop in the middle of nowhere:

> "You think you are on a designated cycle path, and then all of a sudden it would be 'this is for pedestrians only' - so you have either got to flout the rules, and cycle through it anyway, or get off and walk through it - or turn around and go back." (Coffs Harbour)

Finally, there was a lack of knowledge about existing recreational cycling tracks. For example, many Sydneysiders were not aware of the extensive tracks at Sydney Olympic Park, and Coffs Harbour residents were surprised when shown a map of cycling routes available to tourists within their town.

> "This is really great. I would never have known about the tracks in Olympic Park if you hadn't brought me here today, and I live in Lidcombe." (Ethnographic research participant, Sydney Olympic Park)

Female cyclists feel more vulnerable

Quite a few women felt that cycling made them more vulnerable to attack:

> "I wouldn't go cycling on my own, you'd have to get a partner to go with you…even in Parramatta Park of an early morning, I used to find it really creepy near the water there." (Parramatta).

Many women considered cars to be safer:

> "I work late and I don't feel safe. In a car you can lock the doors, but on a bike you just have to ride fast." (Sydney)

One woman, however, was happy for her daughter to ride a bike to work on the weekends, and to the local shops, as she felt it was a safer option than walking:

> "She can get followed by cars if she's walking." (Parramatta)

Recreational cycling considered less dangerous

Recreational cycling was, on the whole, considered a safe activity. However, this was only the case on designated cycle tracks (Peleton cycling in packs on the roads is considered particularly dangerous). The drawback of this was that getting to those tracks involved having to take the bicycles in cars, which for many as not worth the trouble:

> *Yes, I found that when I used to live out Korora, we found if we wanted to go for a pushbike ride, we either had to brave the highway, or pack the bikes up into or on the car and drive ten minutes into town, unpack the bikes, lock the car up, and get on the bikes, go for a ride, etc.*" (Coffs Harbour)

In addition, in many regional and rural areas cycle tracks were few and far between:

> *"I'd cycle more often if there was somewhere to do it."*

> *"Yes, in Goulburn I think that would be the key – we just don't have the areas."*

> *"Something like what Canberra has got, I think would encourage you a lot more."* (Goulburn)

One of the rural participants referred to a cycle path around his town, but that it was not maintained well by the council. He referred specifically to cathead weeds which can puncture bicycle tyres.

Even in places where cycle tracks had been built, many were unaware of their existence.

Parents concerned for safety of children

Despite fond memories of cycling as children, many parents were now too scared to let their own children cycle by themselves — either for recreation or to get to school. This appeared to be within a wider context of parents supervising their children more often and being perhaps more concerned for their safety than in the past.

> *"Years ago you'd go out, make sure you're home by dark, you wouldn't say that to your kids now."* (Coffs Harbour)

Many parents expressed reluctance to allow their children to cycle to school (even for short distances of 1-3km) for fear they could be hurt:

> *"Safety. My kids would love to be able to just ride off but I'm more protective, there's less trust now than what it was back then."* (Parramatta)

Some parents bemoaned their children's lack of independence and having to ferry their children from one place to another, but were reluctant to let them ride

> *"I was just thinking I'm always dropping my kids everywhere and why did I never – I just used to jump on my bike and ride there. I would never have thought to ask mum or dad to take me."* (Coffs Harbour)

> *"Our kids don't do a lot, I run my son around a bit, but he wouldn't ride his bike too far – when I was a kid we rode everywhere. These days I think it's too dangerous."* (Goulburn)

Fear of children riding around independently meant that many parents felt they had to take their children and bicycles to dedicated cycle tracks (usually by car) to give their children a safe experience of cycling:

> *"There is nowhere safe for them to ride. You have to go to a point and take your bike with you in the car."* (Coffs Harbour)

Bicycle security

Bike security was an important safety issue amongst all groups, and lack of secure lock-up facilities for bicycles appeared to be an important barrier to cycling. Some mentioned that they

had had bicycles stolen, and that this had set them back and prevented them from further cycling.

> *"I had a bike for about three days and it got stolen."* (Sydney)

There was a strong perception that 'these days' people were less honest and that thievery of anything mobile was more common:

> *"These days, if you don't' lock everything up, and nail it down, it will get picked up and taken away. Even if you have locked it someone will try to steal it anyway."* (Coffs Harbour)

Others spoke of vandalism:

> *It's not so much stealing it as damaging it, scratching it with keys...vandalism from kids, for fun. I saw one that was still chained up but had been completely knocked over with beer bottles smashed over it."* (Parramatta)

Many complained that there appeared to be few facilities (based on their perceptions) to lock up bicycles, either at work, at schools or at places such as local shops or public transport stations.

Work bike storage facilities

The lack of bicycle lock-up facilities at work prevented many, particularly in cities, from considering cycling to work, even if they would like to.

> *"I want to make sure that I can put it somewhere that I don't have to worry about it."* (Parramatta)

> *"If I rode to work it'd be stolen within ten seconds where I work. It's dicey."* (Coffs Harbour)

Some told of colleagues bringing their bicycles into the office to be secured, but this practice was frowned upon or, at best, tolerated.

> *"I don't think I could walk into (my workplace) and just whack it behind my desk, I don't think they'd appreciate that. So yes, you need storage facilities."* (Parramatta)

School bike storage facilities

A number of parents reported bicycles being stolen or vandalised at schools:

> *"We've had problems with them actually being stolen from bike racks, it's really sad - but yes kids come and steal the bikes."* (Coffs Harbour)

It was perceived that many schools do not have secure bike-parking facilities, and some schools appear to actively discourage cycling by refusing to provide it:

> *"Last year a couple of couples had their bikes stolen at the school. There's a bike rack out the front, they were just taken from there."* (Coffs Harbour)

> *"I tried to get my kids to cycle to school, and then we got told off by the principal because there's nowhere to put the bike and they're not going to check that the bike is going to be there."* (Parramatta)

Shopping centre bike storage facilities

Many also observed that there were no places to lock up bikes at shopping centres:

> *"Where is there a place to lock a bike up at your local shops? There's nowhere to lock it up."* (Sydney)

> *"It's another aspect leaving your bike safe (at the shops), and knowing it's going to be there when you come back."* (Coffs Harbour)

Public transport bike storage facilities

This issue was only pertinent Sydney, as the regional areas had little public transport infrastructure. However, within Sydney, most did not spontaneously mention lock-up facilities at stations.

Cycling is considered inconvenient

A range of issues were raised around the inconvenience of cycling.

Competition from the Car

For many, driving the car to work was a way of life, even if the distances involved were very short.

Parents in particular appeared wedded to a routine that involved driving children to school, driving to work, driving back from work and picking children up to take to various sporting activities. While parents did not necessarily like being a 'chauffeur' to their children, they could only see cycling as adding to this hassle rather than detracting from it.

> *"It's your way of life really – it is easier by car driving."*

> *"Especially if you have got kids. It's easier to pack them up and drive, than it is to get them all on a pushbike, and not only that, if you are on a main road, you are looking out, not only for your kids, but yourself and the traffic around you and trying to keep the kids safe at the same time, it can become a nightmare."* (Coffs Harbour)

In regional and rural areas where there was little traffic, parking was abundant and where the drive between home and work was easy and swift, cycling to work was not seen as a functional alternative.

> *"Because we don't have an issue with parking in Goulburn, I think that would be a contributing factor why people would cycle less."* (Goulburn)

Those in smaller towns may be travelling a longer distance to work in a larger town. For such people, the bicycle was also not feasible as a means of commuting.

In addition, there were some who needed to drive the car for work, or who took a 'work-car' home and needed to bring it back to work every day. Cycling was not feasible for these people.

Lack of time

Many said that they simply lacked the time to cycle, either for commuting or recreation and complained that their lives were so busy they felt unable to even contemplate it:

> *"I could think of a hundred reasons not to do it – with everything my kids do and my wife and I being so involved in administration and other sides of the stuff they do, it's really hard to find that time on a weeknight to do that."* (Coffs Harbour)

> *"I'd really enjoy the ride but it's another 45 minutes in the morning and again in the afternoon."* (Coffs Harbour)

> *"During the week we do this on Monday, we do that on Tuesday, Wednesday is couch potato, Thursday you do this, Friday you have to go to drinks somewhere. Even sometimes with work I don't get home till 11pm so what time do I have to exercise? Then the weekend comes and you're exhausted. I think there's too much. It's just the routine that you get into."* (Sydney)

Showering after cycling

Most perceived that cycling to work would require a shower, particularly in jobs where client meetings were regular. If there were no shower facilities, many said they would simply refuse to cycle. A couple of participants who reported that they had regularly cycled to work in the past referred to the shower facilities at their workplaces that enabled them to do this. However, some also felt that having to shower at work, even if facilities were available, was a barrier in itself:

> *"A lot of people who ride to work have a shower when they get there but I just couldn't be bothered to do that - it's more because it's a hassle - you have to have a change of clothing and you have to get out of bed earlier."* (Leeton)

Carrying clothes or work-related material:

Carrying things around on a bicycle was perceived as an extra hassle that most would prefer to do without. Some of the female participants were concerned that they would have to bring clothes into the office for the entire week, thus making last-minute outfit decisions based on a single item of clothing (e.g. boots) impossible. Some felt that they need to 'take stuff home', such as laptops, and that cycling was not conducive to this. Many also felt that having to be organised enough to carry everything around on the bicycle, shower and get dressed into work clothes, was too inconvenient.

> *"I guess the thing that puts me off the most would be the carrying clothes and having either to shower at work or stay sweaty and smelly all day - I guess that's the biggest deterrent. It's just all too much hassle. Maybe it's about being more organised."* (Leeton)

Understanding of cycling costs is limited

While many non-cyclists had a bicycle accessible to them at home, they felt that to commute regularly they would require a 'proper bike':

> *"You've got to buy and maintain a bike, you've got to buy a helmet."* (Parramatta)

This was considered costly, although most were not aware of how much they would have to spend to buy 'a decent bike'.

> *"You wouldn't want to just get one for $100 from K-Mart."* (Parramatta)

Quite a few were uncertain of which bicycles to purchase:

> *"Some people would walk into a shop and buy a mountain bike to just ride, but there are certain bikes to ride – you need knowledge of what you're doing."* (Parramatta)

> *"I wouldn't know the first thing about a bike."* (Sydney)

Cost became a barrier when people thought about spending money on a bicycle and then not using it:

> *"It's more about what if you spend all that money and then don't use the bike? You need to kind of try before you buy."* (Goulburn)

Having to transport bicycles around

Many complained recreational cycling also poses difficulties. They complained that in order to get to a cycle track (on which to cycle safely) they had to carry their bicycles around in a car, requiring cycle racks.

> *"It's such a hassle, having to lug the bicycles on top of the car. And me, I'm a small woman, it's almost impossible."* (Participant in Ethnographic research, Centennial Park)

> *"It becomes difficult – you feel like going for a ride, then you think about how you're going to do it and straightaway then it's oh, forget it."* (Goulburn)

Weather

Some argued that the weather was a major factor in deciding not to cycle regularly. In Goulburn, in particular, non-cyclists complained of the extreme cold in winter and the extreme heat in summer:

> *"The weather has a lot to do with it here. It's very cold in winter, or too hot, 40 degrees in summer."* (Goulburn)

Coffs Harbour participants mentioned that it was often too wet to cycle. However, it must be noted that focus groups were held in Coffs Harbour one week after a recent flooding incident had subsided.

Interestingly, weather was mentioned less often as a barrier in Sydney, possibly because the climate was considered more temperate.

Perceived benefits of cycling

Low spontaneous acknowledgement of benefits

In general, there was a lack of spontaneous consideration of benefits of cycling. When asked about the benefits of regular cycling (either commuter or recreational), most non-cyclists agreed that improvement of health would be a significant benefit.

> *"It strengthens your back and your legs."*
> *"It's cardio, too, isn't it, for your heart? It's actually very good for your blood pressure."* (Sydney)

> *"Definitely fitness. We're becoming obese, aren't we?"* (Sydney)

Quite a few older and less fit non-cyclists mentioned that it was a 'gentler' form of exercise, as it can be less strenuous on the joints, but nonetheless can assist with weight loss:

> *"If you've got health issues and you want to lose weight, it's the best way. When I used to do cycling in the gym, the guy there lost 80kgs on cycling. He had broken his leg and he couldn't do any physical exercise, so the doctor told him to cycle to lose*

weight so he lost 80kgs. I guess there's no strain on the body at all. It's not like you're doing aerobics or jumping up and down." (Parramatta)

During the ethnographic interviews, many participants mentioned simply 'Getting out into the fresh air' as a major benefit to cycling:

"This is great, having the wind on your face, being out in the fresh air. Why don't I do this more often?" (Ethnographic research participant, Centennial Park)

The perception that cycling was bad for the health due to the inhalation of pollution (particularly commuting in cities), however, was very common.

"Actually even if I was inclined to ride, I don't think I'd ride on busy roads, because of health. I remember my boss at work saying the number one illness in the future is going to be lung cancer, and not because of smokers but because of pollution"
"If you rode along Ryde Road or Parramatta Road you'd choke." (Parramatta)

"Back streets are a bit different but main roads really turn you off for sure." (Parramatta)

"The trouble is you're pedalling on the road in the middle of all the cars breathing in all the fumes." (Sydney)

Saving on petrol/public transport costs.

Some noted that, in the present economic climate, cycling could potentially save on the costs of petrol.

"You save on fuel." (Sydney)

"How much money – like if I rode to work every day how much petrol I'd save in a week, things like that. It's crazy that we all drive when we live in walking distance… especially when petrol is more than a dollar a litre." (Goulburn)

Interestingly, however, as soon as cost savings were mentioned, some non-cyclists started discussing the issue of danger. That is, they weighed up the savings with the potential threat of being injured while cycling:

"If you're going to ride a bike you have to start thinking about medical insurance." (Parramatta)

Saving time

Few thought of the bicycle as a means of saving time in travelling to work, although it could save time in getting around for short local trips (instead of walking). Some mentioned that cycling to work could be a means of saving time by combining exercise with travel:

"The thing with time though is you might ride there and back for 45 minutes but you don't have to go for a walk after that, so you're saving time that way – and saving petrol." (Coffs Harbour)

However most felt that cycling to work, in particular, would simply add hours to the day that they did not have to spare.

"When you are working you don't have that time. When you've finished work it's the last thing you feel like doing if it's been a long day and you have to go home, do the washing and ironing and have to cook dinner." (Goulburn)

Few considered that cycling might only be once or twice a week — they appeared focused on the idea of cycling replacing other forms of transport, rather than being an adjunct to it. It is likely that this was a result of little or no consideration of cycling beforehand, such that the research context represented the first serious deliberation about the issues.

Saving on gym costs

Few participants mentioned that cycling could save money, and most appeared to be focused on the costs of buying a bicycle and the gear involved with it.

One or two mentioned that cycling could eliminate the amount of money spent at the gym:

> *"I went to the gym to get my body back in shape after the kids, but now membership is almost up, and I want to cut costs, so riding my bike and swimming, that is my mission Those two things are free, that's what I like about them."* (Coffs Harbour)

Fun / family

Commuter cycling, in particular, was not considered 'fun'. The carefree sense of freedom that bicycles afforded people when they were young was replaced with the worries of being hit by a car, or having one's bicycle stolen.

For many non-cyclists, 'recreational' cycling was not seen as much fun either, especially when people had to consider transporting bicycles to parks. It was 'too much of a hassle' to get bicycles on to the back of cars.

The ethnographic research revealed that the fun of cycling tended to be underestimated by non-cyclists, when not actually on a bicycle. When these non-cyclists engaged in the behaviour (at Centennial and Sydney Olympic Parks), they were surprised, and even delighted, by the experience.

Most said they would 'definitely' try it again, and four of the eight people interviewed said they would buy a bicycle as a result of having taken part in the study. One actually reported doing so[3]:

> *"I just wanted to follow up with you and tell you I purchased myself a bike ☺*
> *If it wasn't for you and your market research I wouldn't have ever tried to go back on a bike. I went for a little ride today just to get used to the bike and tomorrow I will be daring to hit Sydney Olympic Park ☺*
> *Again I would like to thank you very much for giving me the courage to jump on a bike."* (email from ethnographic research participant)

Good for the environment

Many mentioned that cycling was, in theory, much better for the environment than driving a car.

> *"There'd be less pollution, congestion if more people were cycling and there were less cars on the road."* (Sydney)

> *"For the greenies out there, you could say something about the environment."*
> *"Yes, that is important to me. We have got to leave something behind for our kids."* (Goulburn)

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[3] It should be noted that this participant was specifically recruited from one of the focus groups as she expressed interest in cycling but was very concerned that she would be unable to balance properly.

> *"It's more environmentally friendly."* (Parramatta)

However, while this benefit was mentioned by every group, it was not as 'top of mind' as the health benefits and potential cost savings involved in cycling.

Benefits drivers by taking cars off the road

No-one in the research mentioned the benefit of assisting traffic flow by reducing the numbers of cars on the road. Indeed, most non-cyclists believed that cyclists slowed traffic down.

Provides children with an independent means of getting around

While many non-cyclists had used bicycles as an independent means of transport in their childhood, most parents now perceived roads and footpaths to be too dangerous to allow their children to cycle unsupervised.

Motivators to cycle

Several factors that would address these barriers and motivate non-cyclists to commence cycling were discussed. These motivating factors included infrastructure and planning; education and promotion; and other initiatives to make cycling a more legitimate form of transport and recreation, sanction cyclists and increase awareness of cycling.

> *"Create the full infrastructure. It doesn't matter how long it takes. What I mean is everything from lockers to cycleways to the whole kit and caboodle of the infrastructure of cycling."* (Parramatta)

> *"I don't think any campaign I've seen on bike riding is about sharing responsibility as well, not just about cars being responsible. It should be about bike riders being responsible as well. It's courtesy."* (Coffs Harbour)

Infrastructure

Cycle paths

The single most important factor in encouraging cycling in Sydney and the large regional towns was having paths built specifically for cyclists. Cycle paths were seen to reduce or eliminate the danger motorists posed to cyclists, and the danger cyclists posed to pedestrians.

> *"If there were designated cycle tracks, then I think you would find a lot more people would get out there if they knew they could get from A to B without necessarily having to get on the road."* (Coffs Harbour)

> *"If I knew there was a cycle route all the way for me to work off the main road I'd much rather do bike."* (Sydney)

> *"We need more cycle lanes, designated places for bikes to ride safely, but to get out of the way of cars as well."* (Sydney)

'Green' cycling paths in particular were strongly approved of — not only because they provided visibility of cycle paths, but because they sent a strong message that cyclists have their own, sanctioned space. In addition, they were a visual reminder that cycling was environmentally friendly.

Importantly, for commuter cycling, paths have to lead somewhere and be connected.

> *"Ones that get you to a shopping centre or to a park or something, that really connect places, useful ones."* (Goulburn)

> *"One way is to design it well – for example, where I am at Rouse Hill. It's done from the ground up. You don't have to drive your car somewhere, unload your bike, ride your bike around the track, have a family day, then put it all back in your car and take your car back, that's more effort. You've had a great little family day but you've caused so much pollution."* (Parramatta)

For parents, cycle paths that led directly to schools might increase the number of children riding to school:

> *"I think it will get more children going to school on bikes if they've got – and their parents would be much happier about it because knowing they're safe. I wouldn't like to send a child of mine off to the present, the way it is, but if you had a dedicated bicycle track yes you would do that… They've all got bikes, these kids, and they don't have that access at the moment in some areas."* (Parramatta)

Visible cycle paths not only were seen to encourage cycling, but provided the message that cycling was sanctioned and legitimate.

Secure bicycle storage facilities

Bicycle lock-up facilities at public transport hubs were also received positively, and facilities such as Brisbane's King George Square facility were greatly admired.

> *"If we had things like that at the station, I think more people would cycle."* (Sydney)

> *"At Wilsons Car Park, there's a whole walled off section and there's just rows and rows of racks for people to put their bikes there securely. It's a good idea because you've got security officers patrolling all around and it does encourage people to ride to work. If you don't have secure lockup at least you can go there and from there you can walk to your office. I think that's a pretty good idea. That's promoting riding, especially riding to work."* (Sydney)

However, there was a strong preference for locking a bicycle at work. Non-cyclists perceived that employers need to be encouraged to provide bike lock-up facilities for employees.

> *"Storage for bikes at work. If there's storage for bikes people might be more inclined to ride."* (Parramatta)

Even having a simple place to lock a bicycle outside local shops and at shopping centres sends the message that cycling within local areas is permitted and sanctioned.

> *"Having somewhere to leave the bike is a big thing. Being under surveillance would make a big difference."* (Coffs Harbour)

Bicycle lock-up facilities at schools were seen to encourage students to ride. They were seen as a reminder that cycling was a viable and acceptable form of transport.

Showers at workplaces

Encouraging workplaces to ensure shower facilities were available for workers was seen as a positive way to increase cycling. Some suggested this could be provided as a Government grant:

> *"Encourage organisations, or make a government grant, to put showers into organisations for people going to work by bike."* (Parramatta)

Other initiatives

Website

The concept of the Brighton & Hove City Council (UK) website presented to the groups was strongly supported. This route-finding website allows the user to identify the best route for cycling between a start and destination point. In addition to assisting people to ride, it was seen as a signal that cycling was being supported by the local council and hence legitimised.

> *"Yes, (looking at a website) is the first thing I would be doing. I don't want to get there and there's a problem. I want to see first. I want to have in my mind where I'm going to go because I think if you don't know where you're going that's when panic hits on a bike. If you know where you're going, especially if you went to the RTA and it said 'bicycle' then people must have tried this so I'd be more confident going that route than my way."* (Sydney)

Encouraging cycling through rebates and taxation

While the cost of cycling was not a big barrier to cycling, the thought of 'getting things for free' was discussed as a good incentive to get people to do something.

> *"Subsidising bicycles in some way – like the baby bonus, some sort of incentive for people – they've just given all this money away, that would encourage people, so give people $150 or $200 like a cashback or something for the bicycle."* (Sydney)

Suggestions were made along the following lines:

- providing tax breaks – making bicycles and cycling expenses tax-deductible;

- providing rebates on bicycles through health funds (as some currently do with gym membership);

- incentives to big companies to give to their workers, e.g. bike allowances;

- free insurance (possibly bundled with car insurance or house insurance); and

- free helmets for the family if you ride.

Encouraging Children

Many non-cycling parents observed that children appeared to be cycling less these days than when they were children. It was recognized as vital (particularly amongst parents) to train today's children to cycle with confidence.

> *"I think also you have to promote it to kids, they are the next generation, and they are the ones who are going to grow up with it".* (Parramatta)

Some initiatives suggested by parents to encourage more cycling amongst families and children were:

- "family fun days" centred around cycling, to promote and increase awareness of cycle tracks - including teaching parents and children how to ride safely;

- "ride to school buses" (similar in concept to the walking school bus);

- bike camps on the holidays; and

- programs encouraging cycling amongst children in a safe environment.

Outcome of ethnographic interviews

The approach

The approach taken in the ethnographic-style interviews was to have non-cyclists actually engage in the activity to uncover additional issues which they would not necessarily think about when removed from the actual behaviour, especially if they had not ridden for a number of years.

The results supplemented the other qualitative research components, by exploring issues *closer* to the actual behaviour. Engaging in the behaviour helped to:

- act as a trigger to elicit attitudes and feelings towards the experience;

- allow participants to give a more honest account of their attitudes and feelings; and

- provide additional feedback to the researcher about the behaviour.

Overall, the ethnographic research showed the experience of cycling recreationally tended to diminish perceptions of the negative aspects of cycling and enhance the positive aspects. Non-cyclists in this setting did not express the same type of negativity towards cyclists as was expressed in focus groups.

In addition, those who had enjoyed recreational cycling appeared more amenable to considering commuter cycling.

"Cycling is fun"

Amongst almost all non-cyclists who participated in these ethnographic-style interviews, the experience of cycling recreationally was surprisingly positive, and well-received:

"You feel so free. You can have a little think about what's going on, and life and so on, because you're on the move. You're happy; it releases endorphins so you're buzzing. I love the fact that you're breathing in the fresh air. It made me realize I actually do like riding a bike. I was actually quite good at riding when I was a kid, it made me feel like I was 12 again!" (Female, Centennial Park)

"Definitely that was fun. The wind in your hair, the feeling of freedom!" (Female, Centennial Park)

"Today was great, I could've gone around more times. The fresh air and wind in your face. It was great. It's easy and fun." (Male, Centennial Park)

"It wasn't that bad. In fact it was pretty good. It was really relaxing, I was so relaxed, I was just enjoying myself. I enjoyed the views." (Male, Sydney Olympic Park)

"That was fun. I liked it, it's been so long since I've been on the bike – it wasn't hard, it was enjoyable." (Female, Sydney Olympic Park)

"Before I got on the bike I was really afraid of falling, of hitting objects and people. But after the ride I felt great, much more confident. I'm a bit exhausted from the excitement. I was surprised at being able to go down a hill and pass people - that was a big achievement." (Female, Sydney Olympic Park).

Surprisingly, the one person who found the experience the least satisfying was a very fit younger male at Sydney Olympic Park, who felt that cycling was too gentle a form of exercise for him. He said he would have preferred something that was *"Ten times more difficult."*

Encouragement to take-up

Six of the eight participants said they would 'definitely' cycle recreationally (on the same track) in the near future — and of these, four said they would either purchase a bicycle themselves, hire a bicycle again, or fix up a bicycle that had fallen into disrepair.

> *"I want to come back here. I'd bring my nephews and nieces and make a family day out of it. I'd be more likely to come with my boyfriend, though - jump on the train with our bikes."* (Female, Sydney Olympic Park)

> *"I'll definitely do it again. Normally I just drive around this track in my car, but now I'm definitely going to come here again and cycle it. Definitely, with the family, I'd love to do it."* (Male, Centennial Park)

> *"I'm in Lidcombe, and having this park so close by, now I know about it, it makes me think about buying a bike."* (Male, Sydney Olympic Park)

> *"They don't advertise this track enough."* (Male, Sydney Olympic Park)

There was considerable surprise expressed among those who used Olympic Park at the size and accessibility of the facility. Most had not used it before, and were not aware of the extensive cycle tracks that are available there.

> *"I've used Olympic Park for x amount of things, but I've never used it for cycling. Until you've experienced it, you'd never look for yourself. If I didn't come today I wouldn't have thought of it. But now I'm aware of it, and it's in my face, I'm thinking about it more. Unless it's advertised a bit more, people just wouldn't know about it."* (Male, Sydney Olympic Park)

This indicated that even relatively large and well-known cycle facilities need to be better promoted to encourage cycling — a similar finding to that of the focus group research.

Negative aspects of cycling

While most felt very positive about the experience of cycling recreationally, some negative aspects were discussed:

> *"It might be boring to just do by yourself – it'd be better if it was social."* (Male, Centennial Park)

> *"The only thing is you couldn't go very fast (at Sydney Olympic Park) because of the kids and the pedestrians and rollerbladers - unlike Centennial Park, where you can go really fast."* (Female, Sydney Olympic Park)

> *"The seat was a bit uncomfortable, for short distances it's okay, but for long distances you'd need a good seat."* (Centennial Park)

However, these negative aspects were not enough for these relatively novice cyclists to discount the idea of cycling recreationally again. In contrast, focus groups tended to view similar negative aspects of cycling as reasons for not cycling.

Consideration of commuter cycling

Interestingly, four of the non-cyclists in the ethnographic-style interviews said, after the cycling had finished, that they were interested in commuter cycling themselves.

As with the focus group research, safety was the biggest concern, but there was more optimism that safe routes could be found, and less emphasis on the need to cycle on main roads.

"To cycle to work, well the more they can do to get the roads safer, the better. I'd need to have a friend to ride with to work, if there was somewhere to put the bike, if there was a way to get there that was relatively safe. And the benefit of that would be that it would be like a work-out, and I'd prefer that than going to the gym." (Female, Sydney Olympic Park)

"When I get more confident on the bicycle, I'll definitely think about cycling to work. It's three kilometres – about 5 or 6 blocks away – and I think I could easily do it. But not until I've been on the bike a bit longer." (Female, Sydney Olympic Park)

"If there was a bicycle lane all the way to the city and they said 'this is a way you can go, I'd say there would be an 80% chance I would go.' I need a direct and safe route to cycle all the way to work." (Male, Centennial Park)

Overall, the ethnographic-style research demonstrated that putting people on bicycles encourages people to think positively about cycling. It puts them back in touch with the aspects of cycling that they enjoyed as children (including the freedom, the control of the bicycle, the sense of achievement), and causes them to consider how to incorporate more of this fun into their lives. It also encourages them to

An interesting follow-up study would be to re-contact these participants to find out whether the experience has had an ongoing behavioural and attitudinal effect.

5. Method – Telephone survey

Telephone survey

The qualitative research was well-suited to explore most of the objectives of the research. A quantitative survey with a larger sample of people was seen as a more suitable method of estimating take-up of cycling. A short telephone survey of 300 NSW residents was undertaken to address this issue. The research was conducted in-house, using AMR Interactive's CATI fieldroom.

Questionnaire development

The questionnaire covered:

- demographics and some socio-economic measures;

- workforce participation;

- distance from, and modes of travel to/from, place of work, or place of study if not in the workforce;

- frequency of physical exercise;

- experience of riding a bicycle in the last 12 months, and purposes of trips in the last months;

- current availability of a bicycle on the household;

- consideration of take-up of cycling;

- reasons for not having considered/taken up cycling; and

- likelihood of taking up different types of cycling in response to different initiatives.

The full questionnaire for the telephone survey is provided in Appendix C.

Survey procedure

Interviewing procedure

The survey was set up and managed by a computer assisted telephone interview (CATI) system. Pools of telephone numbers were initially generated randomly based on postcodes for the specific locations. Interviews were conducted during weeknights and weekends, during the period 28 April to 5 May 2009.

Sampling

Quotas were set for different population sub groups, by area and gender (Table 5), and by gender and age group (Table 6). For the purposes of the study, Sydney was defined as the ABS's Sydney Urban Centre, effectively the main metropolitan area.

Table 5.   Quotas by gender and location

Area	Male	Female
Sydney	90	90
Rest of NSW	60	60
TOTAL	150	150

Table 6.   Quotas by gender and age

Age group	Male	Female
18-29	25	25
30-39	35	35
40-49	35	35
50-59	30	30
60-69	25	25
Total	**150**	**150**

6. Results – Quantitative stage

Analysis of the results

Weighting of survey results

The respondents in the survey were weighted by age, gender, location and highest level of education using 2006 Census data from the Australian Bureau of Statistics. Weights in specific cells were limited to a band of 0.5 to 3.0.

General analysis

Results have generally been reported as percentages in tables and graphs. It is possible for 'rounding differences' of ±1% to occur when adding individual results that sum to 100%.

The results from the survey are based on a sample of people in the population. This means that the results will not be exactly the same as if the entire population was surveyed. Test of statistical significance were used to judge whether or not differences between survey periods, or between sub-groups, should be considered as real differences. For example, if 30% of males and 45% of females report a particular behaviour, a test of statistical significance will illustrate how confident we are that the results differ between the two groups.

Chi-square tests have been used to assess differences between groups, and statistical significance has been reported at *p<.05*.

Comparisons

The main comparisons of results are between:

- the total sample;
- location (Sydney, Regional NSW);
- gender (male and female); and
- age (18-29, 30-39, 40-49, 50-59, 60-69 years).

Profile

The profile of workforce status is provided in Figure 1. Those people who were not currently working away from home were also asked if they were studying. Two fifths (40%) of people reported working full-time away from home. Males (51%) were more likely than females (31%) to be working full time away from home, and the incidence peaked among those aged 40-49 years (60%). The incidence was similar in Sydney and Regional NSW. About a fifth (19%) reported working part-time away from, giving a total of about three fifths (59%) in total who worked away from home. There was no difference between males and females on the total incidence of working away from home.

Those who were working or studying away from home[4], and the additional respondents studying away from home, were asked about the distance to the place of work/study. Over half (53%) worked/studied more than 10 kms away from home (Figure 2). The overall incidence increased with age. Females in this group were more likely than males to work specifically up to 4 km from home (28% vs 12%).

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[4] Note: the sequence of questioning about work and study gave preference to work. Questions regarding studying away from home were only asked of those who were not currently working away from home.

Figure 1. Work status, by area, gender and age (weighted data)

BASE: All aged 18-69

Legend:
- ☐ Working full time away from home
- ☐ Working part time away from home
- ☐ Studying, if not working
- ☐ Other
- ☐ Retired
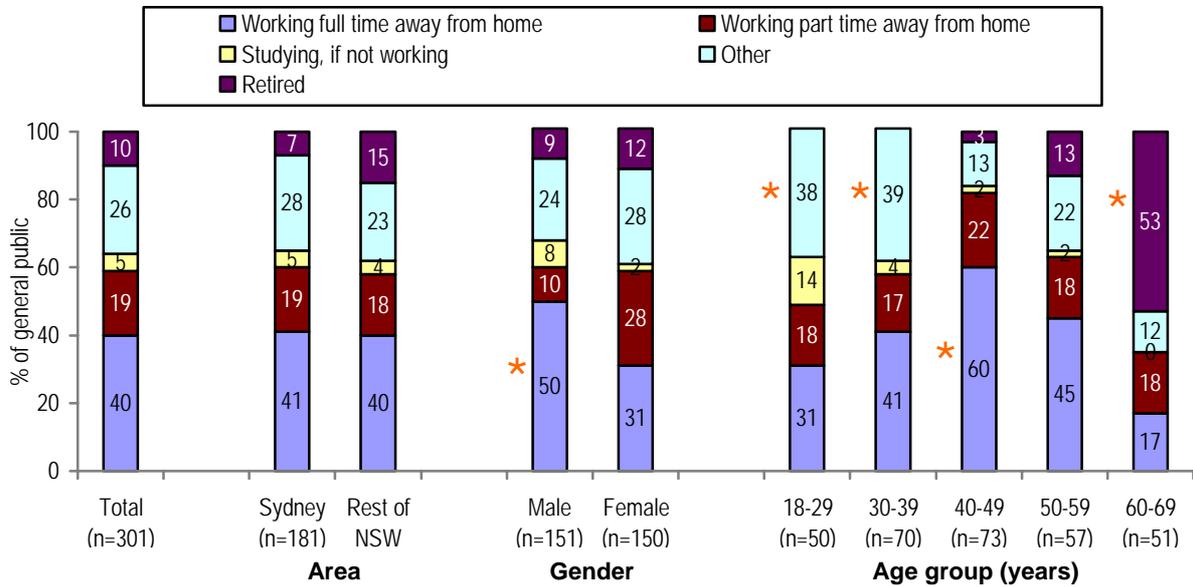
* *Statistically significant difference between groups (p<.05), highlighting higher results*

Figure 2. Distance from work/study, by area, gender and age (weighted data)

BASE: Work or study away from home

Legend:
- ☐ Less than 1 km
- ☐ About 1-4 kms
- ☐ About 5-7 kms
- ☐ About 8 to 10 kms
- ☐ More than 10 kms
- ☐ Unsure
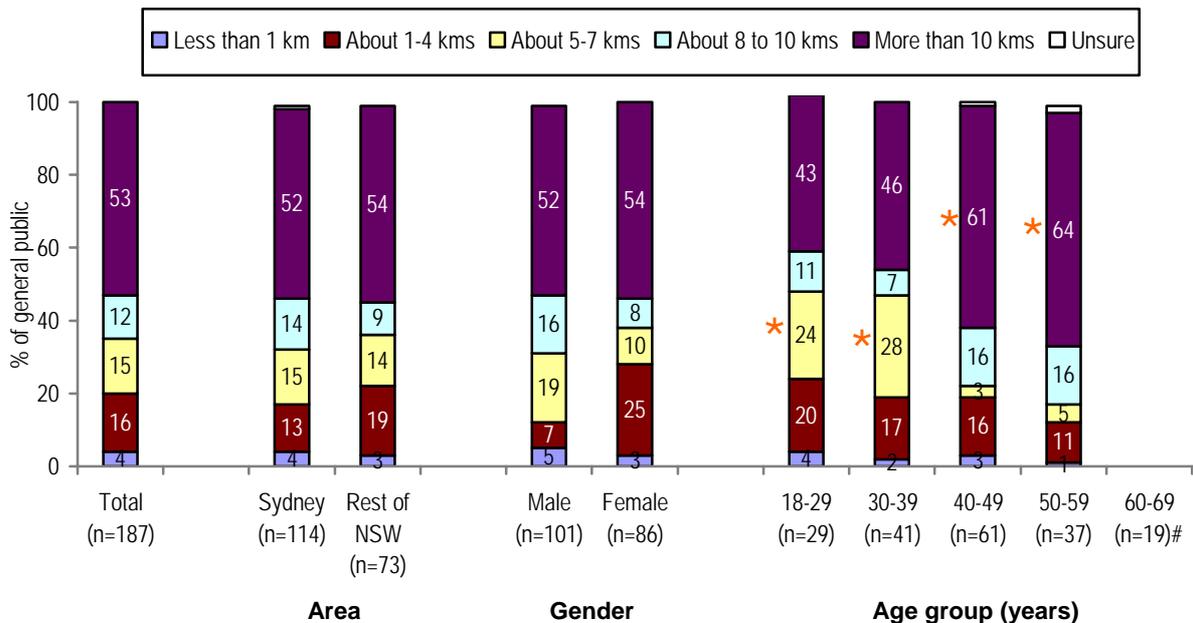
* *Statistically significant difference between groups (p<.05), highlighting higher results*
# *Results not shown for the 60-69 year old group due to very low sample size*

The large majority of those travelling to work/study away from home used a motor vehicle (Table 7). The incidence was higher in Regional NSW (96%) than in Sydney (72%). In contrast, almost no one in Regional NSW (2%) reported using the bus or train. Only about 1% overall reported using a bicycle as a usual means.

Table 7. *Methods usually used to travel to work/study, by area, gender and age (weighted data)*

BASE: Work/study

Method	Total (n=187) %	Area		Gender		Age group (years)				
		Sydney (n=114) %	Regional (n=73) %	Male (n=101) %	Female (n=86) %	18-29 (n=29) %	30-39 (n=41) %	40-49 (n=61) %	50-59 (n=37) %	60-69 (n=19) #
Walk	9	12	6	6	13	10	11	7	7	
Motor vehicle	82	72	96	83	80	74	79	85	90	
By bus	9	16	0	10	9	14	6	14	0	
By train/ferry	15	24	2	12	18	18	13	17	13	
Bicycle	0.9	1.5	0.0	1.6	0.0	0.0	1.3	0.0	2.9	
Other	1	1	2	1	2	1	0	0	4	

Statistically significant difference between groups (p<.05), highlighting ## higher and ## lower results

 # Not reported for 60-69 years age group due to very low sample size

When asked about the *main* mode of travel, 4% reported walking, a similar incidence to that reported from the 2006 Census as the only mode of transport on a given day. The incidence of cycling as a main method was at 0.4% overall (Table 8). Use of a motor vehicle was again higher in Regional areas.

Table 8. *Main method of travel to work/study, by area, gender and age (weighted)*

BASE: Work/study

Method	Total (n=187) %	Area		Gender		Age group (years)				
		Sydney (n=114) %	Regional (n=73) %	Male (n=101) %	Female (n=86) %	18-29 (n=29) %	30-39 (n=41) %	40-49 (n=61) %	50-59 (n=37) %	60-69 (n=19) #
Walk	4	5	2	4	3	1	4	2	4	
Motor vehicle	79	68	96	81	77	72	79	84	82	
By bus	5	9	0	7	3	11	6	4	0	
By train/ferry	10	17	1	6	15	15	11	10	7	
Bicycle	0.4	0.7	0.0	0.0	0.8	0.0	1.8	0.0	0.0	
Other	1	1	2	1	2	1	0	0	4	

Statistically significant difference between groups (p<.05), highlighting ## higher and ## lower results

 # Not reported for 60-69 years age group due to very low sample size
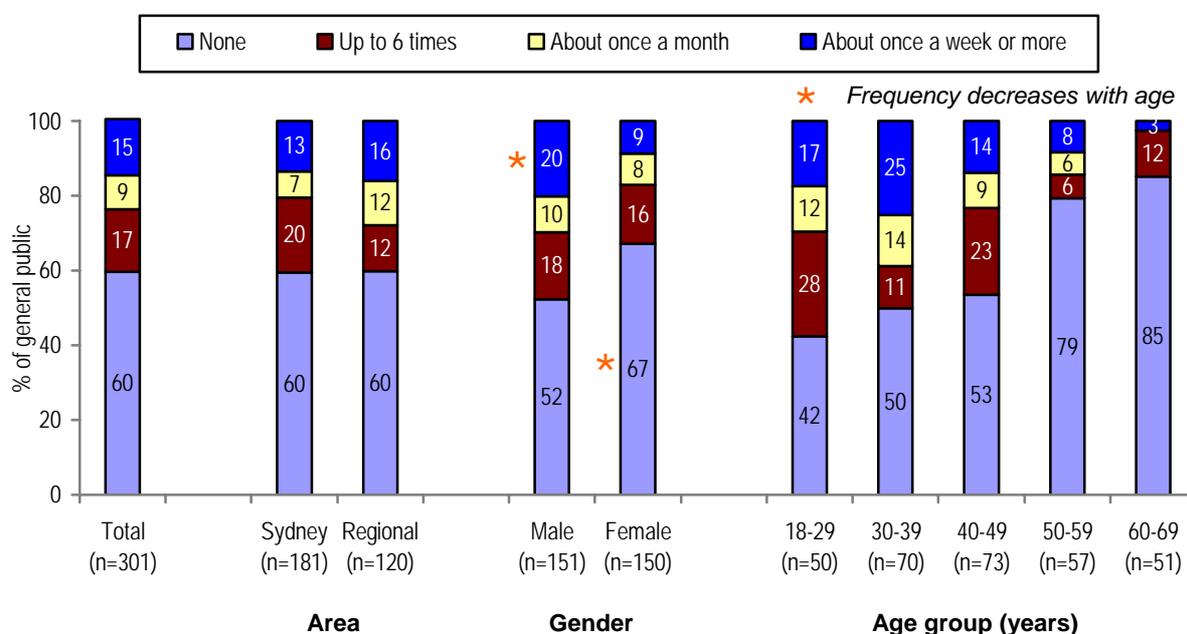
Experience of cycling

Frequency of cycling

Two fifths (40%) of people reported cycling in the last 12 months, and about a sixth (7%) reporting 'about once a month or more'. Males were more likely than females to report this frequency of cycling (31% vs 17%). Reported frequency of any cycling was lowest among older people. The greatest frequency was among people aged 30-39 years (39% at least once a month). Incidence of cycling among people aged 18-29 was similar to those aged 40-49 (30%-32% 'at least once a month'). None of the people aged 60-69 years reported any riding in the last 6 months.

People who had not cycled in the last 12 months, or reported cycling less than 'about once a month', are defined as 'infrequent/non-cyclists'.

Figure 3. *Frequency of riding a bicycle in the last 12 months, by area, gender and age (weighted data)*

BASE: All people aged 18-69

* *Statistically significant difference between groups (p<.05), highlighting higher results*

Bicycle ownership

A further assessment of incidence of cycling was made in the context of ownership of a bicycle. Over half (58%) of people reported having a bicycle in their household that an adult could ride (left hand column in Figure 4). This incidence was higher in Regional areas (65%) than in Sydney (53%), and was higher among people aged 18-49 years (ranging from 64-72% among the three sub-groups measured) than people aged 50 years and older (36-37% for the two sub-groups).

The incidence of cycling at least once a month was compared with the incidence of a bicycle in the household to give a *take-up index* (right hand column in Figure 4). So 24% of adults reporting riding a bicycle at least once a month was equivalent to a take-up index of 41%, as a share of household ownership (24% = 41% of 58%).

Take-up of riding within ownership was greater among males (52%) than females (30%), and broadly higher among people aged 18-59 years (ranging from 26-54%) compared with those aged 60-69 years (7%). The take-up peaked among people aged 30-39 years (54%).

Figure 4. Ownership of adult bicycle in household, and take-up of riding at least monthly <u>within</u> ownership, by area, gender and age (weighted data)
BASE: All people aged 18-69
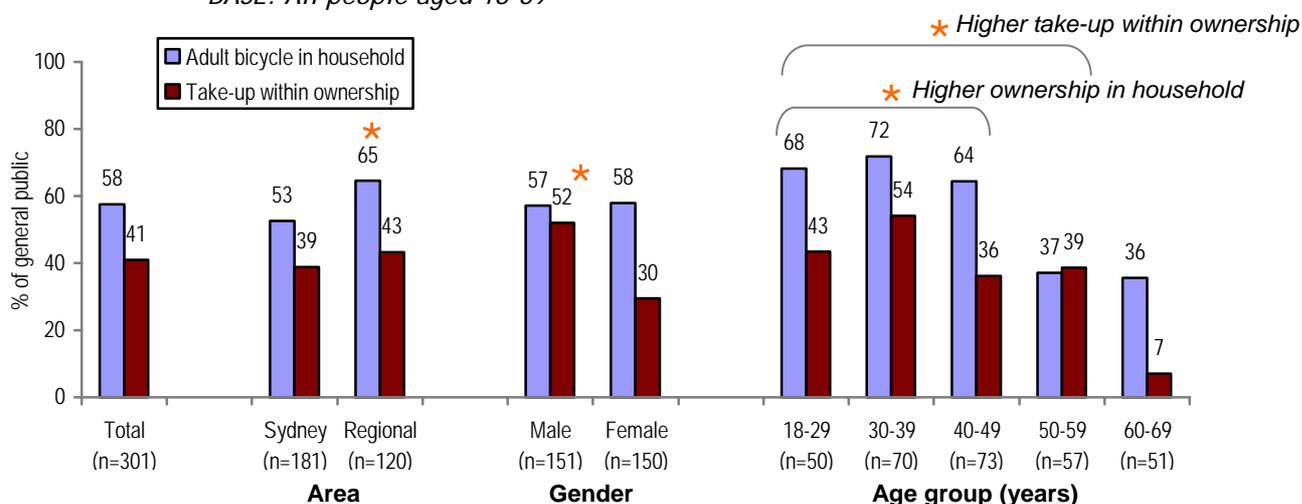
* *Statistically significant difference between groups (p<.05) for the result, highlighting higher results*

Purpose of cycling

People who reported cycling 'at least once a month' were asked about the purpose of the cycling, in categories of 'recreation', 'utilitarian' and 'commuter' (Table 9). Overall, males were more likely to report cycling for all of the purposes. People aged 30-39 years were the most likely to report riding for recreation/exercise (31%), and people aged 18-29 were the most likely to report riding for 'utilitarian' reasons (26%). There was little difference between Sydney and Regional areas.

Among those who worked, 8% reported cycling for commuting in the last 6 months. Workers aged 18-39 were more likely than older workers to report commuting. There was a trend for the incidence to be higher in Regional NSW and among males (Table 9).

Table 9. Incidence of cycling for different purposes in <u>the last 6 months</u>, by area, gender and age (weighted data)
BASE: Reporting riding at least once a month, and results based on all aged 18-69

		Area		Gender		Age group (years)				
Purpose of cycling	Total (n=301) %	Sydney (n=180) %	Regional (n=120) %	Male (n=151) %	Female (n=150) %	18-29 (n=50) %	30-39 (n=70) %	40-49 (n=73) %	50-59 (n=57) %	60-69 (n=51) %
At least once a month	24	20	28	30	17	30	39	23	14	3
Recreation/exercise	18	16	22	24	12	18	31	22	13	0
In a park	14	13	16	18	10	15	25	15	9	0
On the road	16	13	21	22	10	14	26	20	13	0
'Utilitarian'	14	13	16	20	9	26	16	16	8	0
Visit people, or venues	12	11	14	19	6	24	13	12	6	0
For an errand, such as to local shops	11	11	11	16	6	16	14	14	7	0
BASE: Working Commuting	8.4	6.9	10.5	9.9	6.8	15.1	12.8	5.7	5.4	0

Statistically significant difference between groups (p<.05), highlighting ## higher and ## lower results

Of the 13 respondents in the survey who reported cycling to commute at some time in the last 6 months, 5 reported riding at 4 days a week, and 9 in total road at least once a week. The 8 cyclists who rode less than 4 days a week were asked what would encourage them to ride more frequently:

- 4 referred to infrastructure issues (safety, cycle lanes/paths);

- 4 referred to aspects of the weather;

- 2 referred to issues of daylight hours, or later starting time for work;

- 1 referred to competing forms of exercise; and

- 1 referred to showers at work

Consideration of cycling

Those people who did not currently ride, or rode less than once a month, were asked about their consideration of cycling for recreation or exercise. A third (33%) of people overall reported that they had considered cycling for this purpose (Figure 5). The incidence was higher among people in Sydney (42%) than in Regional NSW (21%), and lowest among people aged 50+ years (19-20% vs 39-47% in the younger groups).

Figure 5.   Consideration of cycling for recreation or exercise, by area, gender and age (weighted data)

BASE: Recreation – not a current cyclist (<12 times), but reported based on all
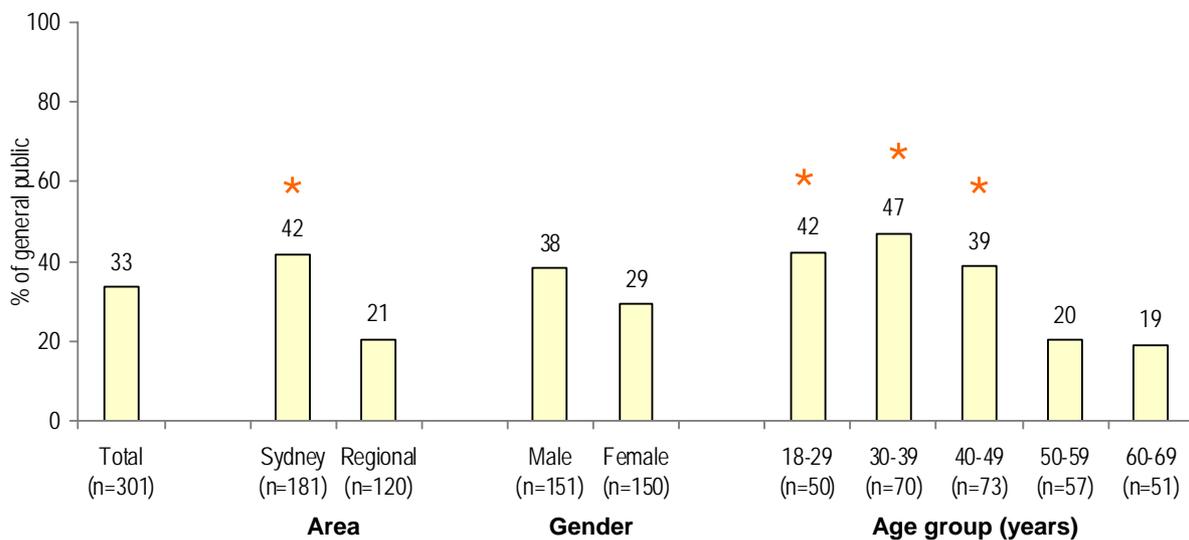
* Statistically significant difference between groups (p<.05), highlighting higher results

A quarter of those workers who lived within 10 km of their work had considered cycling to commute. This equated to 13% of workers overall.

Similarly two fifths of those workers who currently lived more than 10 km away from their work said they would consider cycling if they were closer, which equated to about a quarter (26%) of workers (Figure 6). Basing the incidence on all workers gives a measure of the current pool of potential cyclists, in addition to those who already cycle to commute.

Male workers were more interested in cycling than female workers, and interest peaked among workers aged 31-49 years.

Figure 6.   *Having considered cycling for commuting, or would consider, by area, gender and age (weighted data)*

BASE: All working/studying.
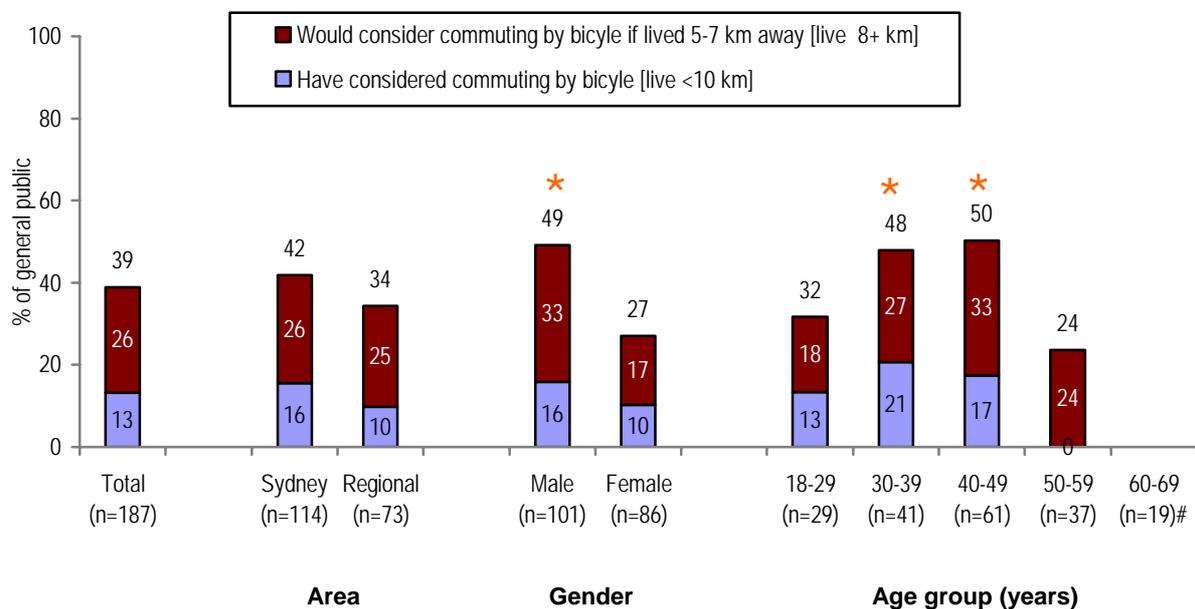
*   *Statistically significant difference between groups (p<.05), highlighting higher results*
    # Not reported for 60-69 years age group due to very small sample size

Reasons for not cycling

Current infrequent/non-cyclists were asked about their reasons for not cycling for recreation or exercise (Table 10). The reasons were put into a number of categories to reveal patterns. The most common responses were around 'safety' (34%) and 'ability to ride' (36%).

The 'safety' category was primarily about danger on the roads, and was more commonly nominated in Sydney and by older people. The 'ability' category included health issues as well as fitness and ability to ride, and was more likely to be nominated by females and older people. Other categories of interest were time issues (22%), more likely to nominated by males; and general interest (20%).

Those working/studying within 10 km of their home were also asked why they had not taken up cycling to commute (Table 11). Safety issues were again common (28%), with greater nomination in Sydney and by older workers. Issues of feasibility/convenience of cycling (32%) were now more important, including comments about unsuitable terrain, weather, and clothing/showers. Logistical issues (19%) were also more common, including the expense of buying a bicycle and parking considerations. These issues were more likely to be raised in Sydney by females and by older workers.

Table 10.   Reasons for not cycling for recreation/exercise, by area, gender and age (weighted data)

BASE: Infrequent/non-cyclists

REASON	Total (n=235) %	Area		Gender		Age group	
		Sydney (n=144) %	Regional (n=91) %	Male (n=108) %	Female (n=127) %	18-39 (n=88) %	40-59 (n=102) %
Safety Reasons/Roads too Dangerous	18	22	12	16	20	13	20
Lack of places to cycle	4	5	2	4	5	5	4
Traffic	3	4	2	2	4	0	6
Drivers not educated in safety for cyclists/ Unaware of cyclists	0	1	0	1	0	0	1
Other safety issues	1	2	0	1	1	1	0
Safety issues	**26**	**34**	**16**	**24**	**30**	**19**	**31**
Medical reasons/Physically unable to ride	18	13	24	17	18	3	21
Prefer/Do alternative fitness activities	6	4	8	7	5	2	8
Too hard/Laziness	3	4	1	3	4	7	2
Never learnt / Cant ride/ Would fall	7	10	2	0	12	4	9
Toxic fumes	1	1	0	0	1	0	0
Other health/activity	1	1	0	0	2	0	2
Health/Ability to ride issues	**36**	**33**	**35**	**27**	**42**	**16**	**42**
Time constraints/Lack of time	19	22	16	25	15	28	17
Hours of work	2	3	1	3	2	2	3
Time issues	**22**	**25**	**17**	**28**	**16**	**30**	**20**
Not interested	11	12	9	12	11	14	10
Family considerations	5	6	5	1	10	11	3
Happy with degree of fitness	2	2	3	4	1	1	3
Other general interest	3	4	2	3	4	3	5
Interest issues	**21**	**24**	**19**	**20**	**26**	**29**	**23**
Geographically unsuited to where I live	9	2	21	4	14	6	10
Clothing issues	0	0	0	1	0	1	0
Weather issues	0	1	0	0	1	1	0
Other inconvenience	2	1	5	2	3	3	2
Feasibility/Convenience	**12**	**3**	**26**	**6**	**17**	**11**	**12**
Too expensive to buy/ Good bike too expensive	7	7	8	9	5	14	2
Parking considerations/ Nowhere to secure bike	1	1	0	1	1	1	0
Other logistics issues	1	2	0	2	1	2	1
Logistics	**9**	**10**	**8**	**12**	**7**	**17**	**3**
Prefer public transport/Driving	1	1	0	1	0	1	0
Vehicle use necessary	1	0	2	2	0	0	1
Other transport preference	1	1	0	0	1	1	1
Transport needs	**3**	**2**	**2**	**3**	**1**	**2**	**2**

Statistically significant difference between groups (p<.05) on the overall categories of reasons (bolded), highlighting ## higher and ## lower results

Table 11. *Reasons for not cycling for commuting among those who live within 10 km of work/train/ferry, by area, gender and age (weighted data)*

BASE: Within 10 km of work/train/ferry (n=99)

REASON	Total (n=99) %	Area Sydney (n=67) %	Regional (n=32) %	Gender Male (n=50) %	Female (n=49) %	Age group 18-39 (n=41) %	40-59 (n=43) %
Safety Reasons/Roads too Dangerous	23	29	10	18	28	16	22
Lack of places to cycle (paths, etc.)	3	5	0	7	0	5	3
Traffic	2	3	0	4	0	1	1
Safety issues	**28**	**37**	**10**	**29**	**28**	**22**	**26**
Geographically unsuited to where I live	14	15	12	9	19	14	14
Weather issues	6	3	11	8	3	10	3
Arrive sweaty/no showers at work	6	9	0	6	7	11	3
Clothing issues	5	3	8	1	8	2	5
Other inconvenience	1	1	0	0	2	2	0
Feasibility/Convenience	**32**	**31**	**31**	**24**	**39**	**39**	**25**
Too expensive to buy/ Good bike too expensive	7	10	0	0	14	2	13
Parking considerations/ Nowhere secure for bike	6	9	0	6	6	2	9
Costs to take bike on train	4	5	0	7	0	0	8
Other logistics issues	2	0	6	0	4	5	0
Logistics	**19**	**24**	**6**	**13**	**24**	**9**	**30**
Medical Reasons/Age/Physically unable to ride	3	4	0	0	6	0	4
Too hard/Laziness	3	2	5	5	2	3	4
Prefer alternative fitness activities	1	0	4	2	0	0	3
Happy with my degree of fitness	1	0	4	2	0	0	3
Never learnt to ride a bike/Can't ride	1	0	4	2	0	0	0
Toxic fumes	1	1	0	0	1	0	0
Other health/activity	6	7	3	7	4	10	2
Health/activity/ability to ride	**16**	**14**	**20**	**18**	**13**	**13**	**16**
Time constraints/Lack of time	5	7	0	7	3	12	0
Hours of work	10	11	8	5	14	6	16
Time	**15**	**18**	**8**	**12**	**17**	**18**	**16**
Prefer Public Transport/Driving	12	6	25	14	10	7	15
Vehicle necessary for work purposes	1	2	0	3	0	0	3
Other transport preference	2	0	8	1	4	5	1
Transport preference	**15**	**8**	**33**	**18**	**14**	**12**	**19**
Not interested	2	3	0	2	2	5	0
Family commitments	1	1	0	1	0	1	0
Other interest issues	3	2	4	5	0	2	4
Interest	**6**	**6**	**4**	**8**	**2**	**8**	**4**

Indicative trends between groups on the overall categories of reasons (bolded), showing higher results

Impact of initiatives on likelihood to take up cycling

A number of initiatives to encourage cycling were presented around the three main types of cycling:

- recreation/exercise;

- 'utilitarian' or task-oriented; and

- commuting.

Recreation/Exercise

About a third of people considered that 'separated cycle paths' (36%) and 'more cycle tracks in parks' (31%) would be very likely to encourage them to consider/increase cycling for recreation or exercise (Figure 7). 'Skills training' was the least nominated (15% 'very likely').

Overall, about half (47%) rated at least one of the initiatives as 'very likely' to influence them, and about two thirds (64%) as at least 'fairly likely' to influence them.

> *Figure 7.* *Impact of initiatives on likelihood to consider/increase cycling for recreation/exercise (weighted data)*
> *BASE: Non-commuter cyclists (n=288)*
> *NOTE: Current recreational cyclists were asked about likelihood to cycle <u>more</u>*
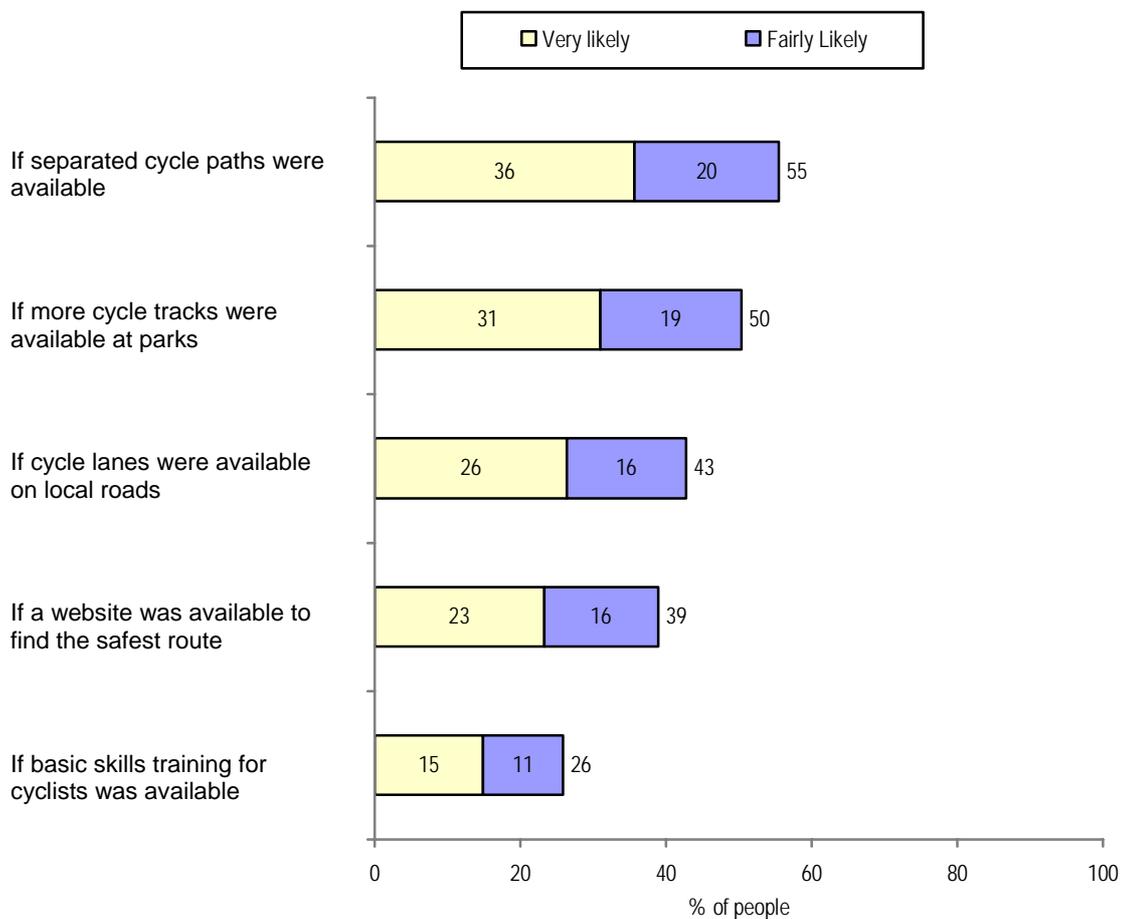
Utilitarian cycling

'Separated cycle paths' was again the most nominated initiative for encouraging people to consider/increase cycling for utilitarian reasons, with over a third rating it as 'very likely' influence (Figure 8). Each of the other initiatives received broadly similar overall response (43-53% rating 'fairly/very likely').

Overall, about half (49%) rated at least one of the initiatives as 'very likely' to influence them, and two thirds (64%) as at least 'fairly likely' to influence them.

> *Figure 8. Impact of initiatives on likelihood of consider/increase cycling for utilitarian trips (weighted data)*
> *BASE: Non-commuting cyclists (n=288)*
> *NOTE: Current utilitarian cyclists were asked about likelihood to cycle more*
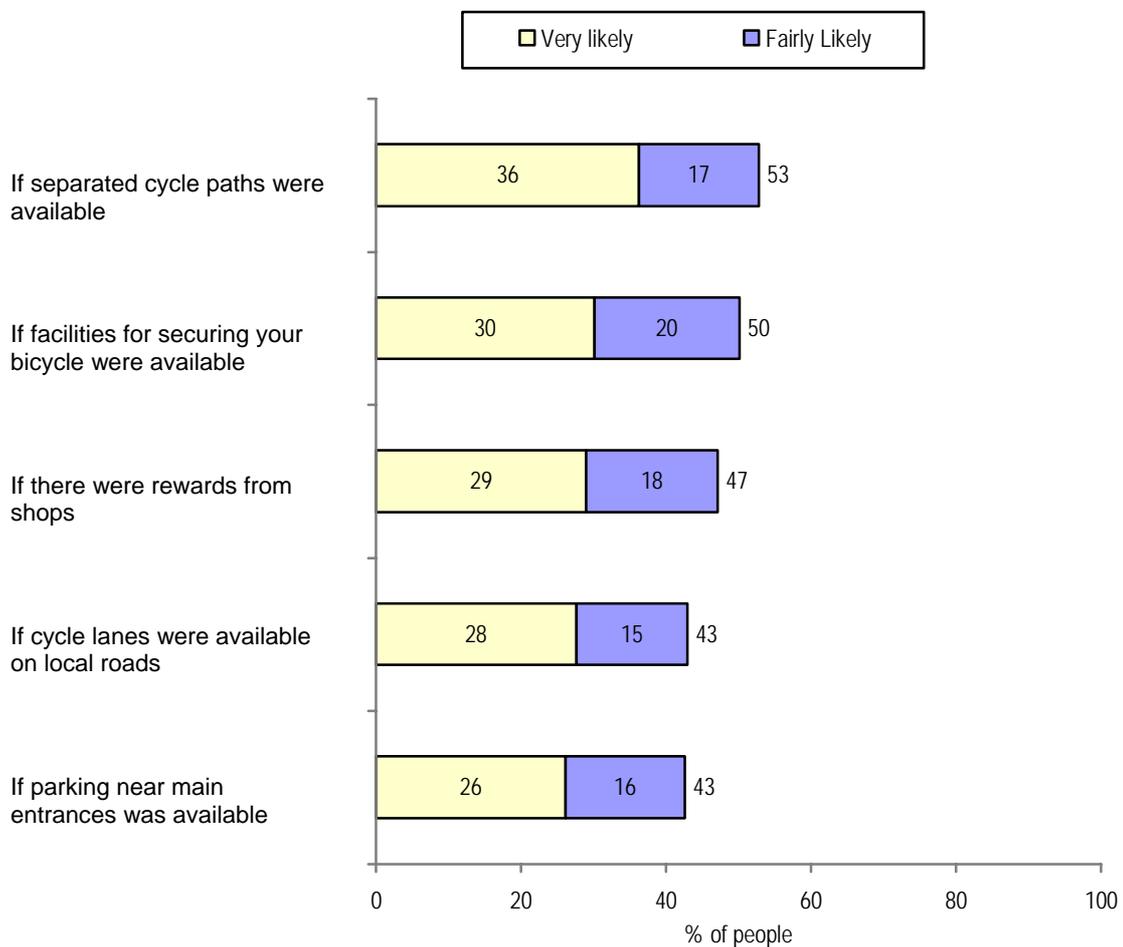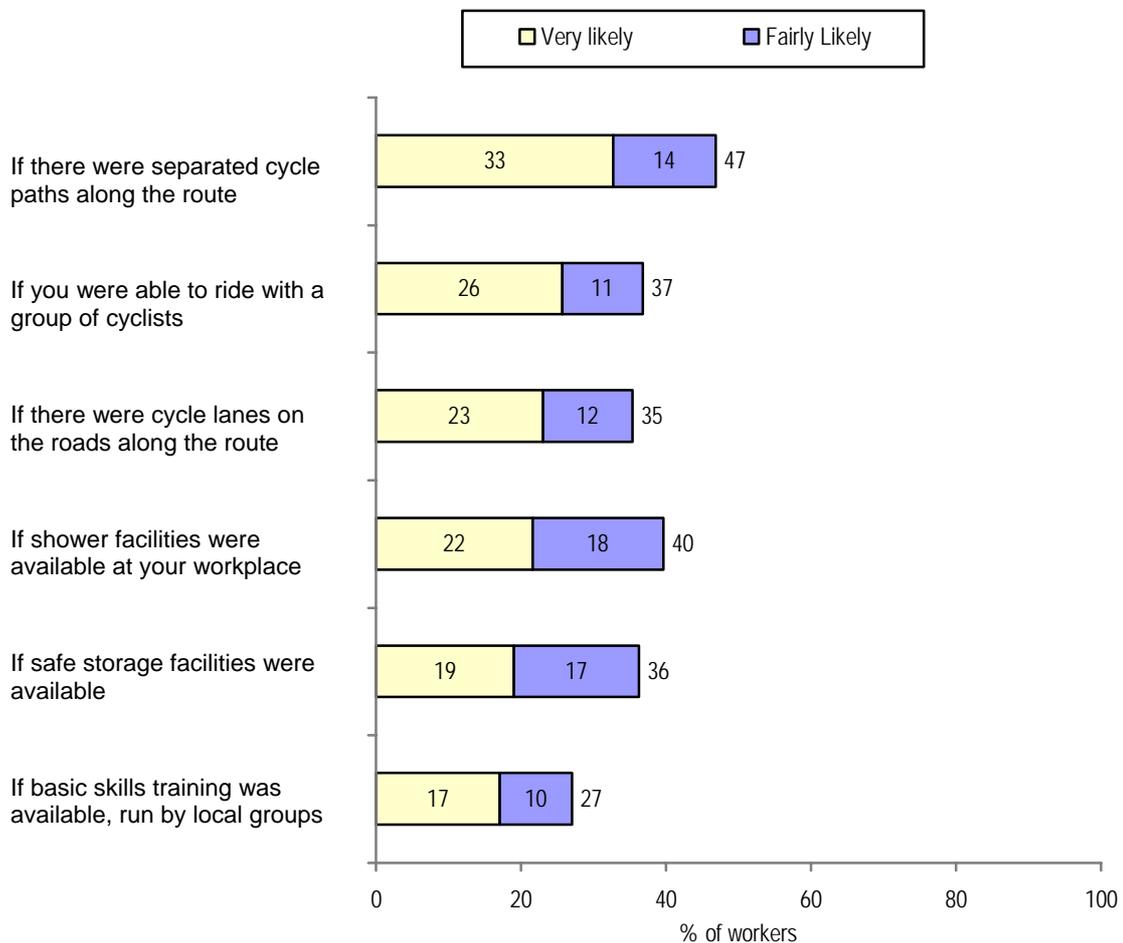
Commuter cycling

None of the initiatives to promote cycling for commuting among those workers who lived within 10 km of either their work or the train/ferry was rated very highly, with all under 50% 'very likely' (Figure 9). As with the response around cycling for recreation/exercise, separated cycle paths was the initiative most nominated as 'very likely' to encourage cycling, and 'basic skills training' was the least nominated.

Overall, two fifths (40%) of this group rated at least one of the initiatives as 'very likely' to influence them, and about half (53%) as at least 'fairly likely' to influence them.

Figure 9.   Impact of initiatives on likelihood of considering commuter cycling, (weighted data)

BASE: Current workers who live within 10 km of work or train/ferry, and are not commuter cyclists (n=99)

Considers of commuter cycling

The impact of the initiatives was also assessed among the small group of workers living within 10 km of their work or train/ferry, and who said that they 'had considered cycling to work'. This group represented 12% of workers in the survey.

About two thirds (63%) of this group considered that separated cycle paths would be 'very likely' to motivate them to cycle. 'Shower facilities' was the next most important initiative, with about half (47%) rating 'very likely'. 'Basic skills training' was again rated lower.

Overall, about a third (32%) of this group rated at least one of the initiatives as 'very likely' to influence them; and about half (47%) at least 'fairly likely' to influence them.

Figure 10.   Impact of initiatives on likelihood of considering commuter cycling (weighted data)

BASE: Current workers who are within 10 km of work or train/ferry and who have considered commuter cycling (n=26)

CAUTION: Low sample size
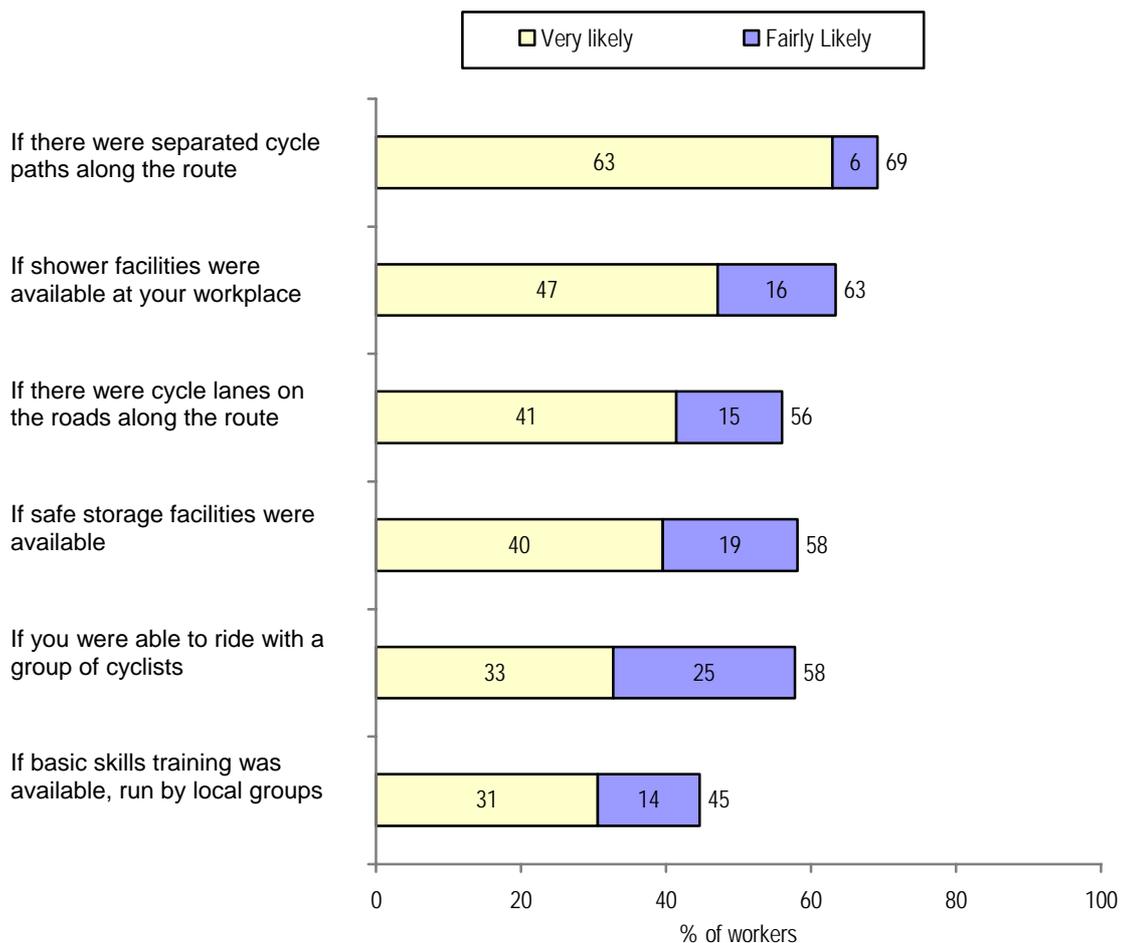
Profile of commuter cycling

Table 12 presents a comparison of the profile of:

- the total population surveyed

- people who reported cycling to commute in the last 6 months;

- workers who live within 10 km of their work/train/ferry and who have considered cycling to commute; and

- workers living greater than 10 km, who would consider cycling to commute if they lived closer.

The small group of commuters who have cycled tended to be younger, male, in Regional NSW and more moderate exercisers. However, this group was low in number and the results are only indicative.

Those considerers who were currently within 10 km of their work/train/ferry tended to be more likely to be in Sydney, male, aged 30-49, and be more physically active. This is a good estimate of the profile of the key target group to encourage commuter cycling.

Table 12.   Profile of commuter cyclists, and workers who have, or would, consider cycling to commute (weighted data)

BASE: Range of groups as described. Indicative trends only

#CAUTION: Low sample size

PROFILE		Total population (n=301) %	Have cycled to commute (n=13)# %	WORKERS CONSIDERING CYCLING TO COMMUTE	
				Currently within 10 km (n=26)# %	If lived closer (n=50) %
Location	Sydney	58	43	70	61
	Regional	42	57	30	39
Gender	Male	50	64	64	69
	Female	50	36	36	31
Age group (years)	18-29	24	40	22	16
	30-39	22	29	33	22
	40-49	22	19	39	38
	50-59	19	12	0	19
	60-69	13	0	6	5
Access to vehicle	Own a vehicle	82	72	77	87
	Have use of another vehicle	50	22	44	48
	Either	88	79	77	93
Exercise	Moderate at least twice weekly	50	72	65	47
	Vigorous about twice weekly	37	24	54	34

Indicative trends between the groups, showing higher results

7. Discussion

Overview

The qualitative research generated a broad range of issues around barriers and motivators to cycling. While some of the participants had cycled at some time as an adult, or who had more recently considered cycling, it was clear that the majority had given little recent thought to cycling. Hence, for most, the discussion about cycling was the first real consideration of the issues they had undertaken.

Main barriers to cycling

Model of behaviour change

In assessing the barriers to cycling, for recreation, commuting and utilitarian purposes, it is useful to see how they fit into each component of the model of behaviour change discussed in Section 3. This can provide a context for judging the relative importance of each component in the development of a strategy to increase cycling. Four dominant barriers were found:

1. The <u>negative image of cyclists</u> and cycling amongst non-cyclists, representing a strong *norm* against cycling among non-cyclists.

2. The <u>perceived danger of cycling</u>, and commuter cycling in particular, due to perceived or actual lack of safe places to cycle, and the fear of being hit by a motorist (low *ability to undertake the behaviour*, as well as poor attitude to the *outcome of the behaviour*).

3. The <u>lack of facilities</u> to store or lock up bicycles (reducing *ability to undertake the behaviour*, as well as poor *attitude to the outcome of the behaviour* if the bicycle was to be stolen).

4. Little or no understanding or acknowledgement of the <u>benefits of cycling</u>, particularly commuter cycling (poor *attitude to the outcome of the behaviour*).

In addition, there were further barriers relating to *ability to undertake the behaviour.* These were:

1. The convenience of using, or needing to use other forms of transport.

2. Lack of time.

3. Lack of shower facilities.

4. The need to organise/prepare.

5. Perceived high costs of cycling.

6. Climate: too hot, too cold, too wet.

Perceived benefits of cycling

The qualitative research showed that while, in theory, non-cyclists were able to recognise some of benefits of cycling, many could not see how cycling could personally benefit them. While cycling was considered a gentle form of exercise that may assist with weight loss, these benefits were outweighed, at least in Sydney, by the perception of the disbenefits of breathing in polluted air.

Cycling is considered inconvenient

While the negative perception of cyclists, lack of safe paths and secure lock-ups for bicycles were the most important barriers standing in the way of cycling, there were additional factors that are perceived to make commuter cycling 'difficult'.

These inconvenience factors are not life-threatening, but they are what could be termed lifestyle threatening. These factors are the ways in which taking on cycling as a regular form of transport, or even for recreation, could interrupt the everyday habits that people have adopted to live their lives. Nonetheless, it is important to note that removing some of the barriers that make cycling difficult may have a very positive impact on those who would consider cycling.

For most, the barriers include having to break out of a routine: competition from the car and lack of time were two factors that made cycling difficult. Interestingly, few considered cycling only once or twice a week — they appeared focused on the idea of cycling replacing other forms of transport, rather than being an adjunct to it. The ease of driving and parking in regional areas, in particular, emerged as a disincentive to ride: it was simply too convenient and easy to drive a car, and the environmental drawbacks of driving a car are less obvious than in Sydney.

The next most often mentioned difficulties were around inconvenience — having to think about showering, carrying additional materials; as well as logistical — the cost of the equipment. Recreational cycling was considered inconvenient for many as it was perceived as involving the need to transport bicycles around by car to a safe cycling track.

Finally, the weather was considered as a factor in preventing regular cycling — cycling would be considered out of the question if the weather was too hot, too cold or too wet. In Goulburn, the weather was considered most unsuitable in both winter and summer, while in Coffs Harbour, it was considered to be often too wet.

Saving on petrol costs was outweighed by the potential physical dangers of cycling. Cycling may save time and money by combining exercise and travel, but many did not see this link, and felt that their lives were too busy to include cycling on a regular basis. Interestingly, many thought about cycling as being done every day — not once or twice a week. In addition, there was almost no awareness of the community benefits of cycling, such as increased traffic flow or less strain on public transport in cities.

Looking at issues among the broader population in the survey showed a lack of interest in cycling by many, and the impact of health and physical conditions.

Dangers Involved with Cycling

Equal to the negative image of cyclists was the perceived danger of cycling, particularly commuter cycling on roads. This emerged as a key issue in the qualitative stage around the *ability to carry out the behaviour*. This was, again, strongly supported in the survey.

The non-cyclists involved in this research were predominantly car drivers who drove on main roads. As car drivers, they often saw lone cyclists on major roads, such as the M2, Victoria Road or Parramatta Road (in Sydney). They perceived this kind of cycling to be daunting and well outside the realms of possibility for them.

They were less aware of safe paths for cyclists, and did not spontaneously consider the possibility of cycling on side-streets or back streets. Therefore, cycling was not perceived as something they would be able to do safely. The perceived lack of safe paths or places to cycle put commuter cycling, in particular, out of the question for most. Recreational cycling was not perceived to have nearly the same dangers.

In addition to the danger of being injured while riding on roads, there was the danger of the bicycle stolen if not properly secured. Many of those who would consider commuter cycling or

'utilitarian' cycling (if it was not dangerous) were worried about the lack of facilities to lock up their bikes.

Motivators to cycle

Addressing the barriers

The qualitative research was able to explore in detail issues beyond 'lack of interest' to drill down into the detail of the underlying barriers to be faced in promoting cycling.

Several initiatives that would address these barriers and motivate non-cyclists to commence cycling were discussed. These initiatives included infrastructure and planning, education and promotion, and other plans to make cycling a more legitimate form of transport and recreation, sanction cyclists and increase awareness of cycling.

Infrastructure

The most critical motivator would be to deal with the perceived dangers of cycling, particularly in the context of commuter cycling. The more separated cyclists are from the road and traffic, the more positive the response. This was borne out in detail in the qualitative research and quantified in the survey. Infrastructure also includes facilities for storage, as well as shower facilities at work places.

Rewards

There is an opportunity to consider how financial incentives could be introduced to encourage new non-cyclists, at least at this early growth phase. Such incentives do not have to high cost of implementation to the Government, but could be promoted through schemes organised by employees, or rewards from shops (an initiative presented in the telephone survey).

Education

It is important to note here that any initiatives that aim to increase awareness of the benefits of cycling and potentially improve the current negative image of cyclists. In addition, however, the 'us vs. them' attitude between cyclists and drivers needs to be addressed. Education campaigns are needed to teach respect between drivers and cyclists.

Education needs to focus on shared responsibility. An example of this can be seen in an advertising campaign currently being conducted by the City of Sydney. This campaign features three advertisements, aimed at cyclists, drivers and pedestrians (Figure 11). These simple advertisements aim to communicate that the roads are shared, and mutual respect.

Education needs to promote the benefits of cycling to the community, in terms of:

- improving traffic flow;

- taking strain off the public transport system; and

- benefiting the environment.

Figure 11.   City of Sydney advertising campaign

Website

Linking in with the initiative to educate the public about existing cycle paths, was the concept of a website showing viable cycle routes for commuters, as well as cycling tracks available throughout NSW. This approach would fit well with improvements to infrastructure in helping to promote and legitimise cycling.

Encouraging adults to try

The ethnographic research demonstrated that getting people into a situation where they can try riding, despite their concerns, can remind them of the fun, freedom and joy in cycling experienced when they were younger.

One suggestion brought up in this context was the idea of a television show, similar to Jamie Oliver's *Ministry of Food.* In this show, five people were taught a recipe. These five were then each given the task of teaching 3 other people this recipe. In the context of a cycling show, people could be taken on a cycle by one (or several) prominent non-professional cyclists (e.g. Adam Spencer (Radio host from 2BL), Sarah Wilson (Host of MasterChef), Geraldine Doogue (ABC Radio and TV personality), then challenged to pass on their skills to others.

In addition, several participants in the groups mentioned that a 'Cycle to Work Day' would be a good idea. This initiative is in fact in place, and the lack of awareness could easily be the result of a lack of interest in cycling, and hence not paying attention to advertising. However, given the push to increase cycling to commute, improving the promotion of 'Cycle to Work Day', to the general public and to employers would be beneficial.

Growth in cycling

To a non-cyclist, recreational cycling is certainly less threatening than commuter cycling, and offers an opportunity to introduce someone to cycling.

The incidence of cycling to commute is very low in NSW, with ABS 2006 Census Journey to Work reporting less than 1% of trips. The level of current consideration of cycling by people working within 10 km of their home or train/ferry, however, appeared to be on the order of 10% of workers overall. This incidence was higher in Sydney than Regional NSW, higher among males, and higher among drivers aged under 50 years. There does appear to be an opportunity to increase cycling, certainly within the modest initial aims of a fraction of a percent of trips, with the opportunity for greater gains with significant increases in infrastructure and facilities over the longer term.

Local programs

While broader policy and infrastructure programs will be administered by the NSW Government, there is scope for more localised programs to be implemented, through organisations such as local councils, shopping centres and other businesses. There are a number of low cost initiatives emerging from the sub-regional studies being conducted by the RTA.

Such programs could involve local councils:

- promoting local recreational cycling tracks and local on-road bicycle lanes;

- promoting the benefit of both recreational and utility cycling for the health and well-being of the community;

- encouraging provision of bicycle parking facilities at shopping centres, recreational facilities, and entertainment venues including special events; and

- promoting venues where such facilities are available.

There is also scope to encourage shopping centres and local shopping strips to introduce customer reward schemes, in addition to bicycle parking, to encourage cycling. Such schemes could be funded by local sponsorship. Other local promotional activities can address general safety tips for cycling and accessories available for particular types of cycling, including accessories for carrying shopping or clothing.

Workplaces could also be encouraged to promote cycling and introduce facilities. There are a number of potential benefits of cycling to employers, including:

- more active, healthier lifestyles for employees; and

- the positive image of the business in helping the environment through reducing demand on motor transport.

Promotional material and guidelines have been developed by local government both in NSW and other areas of Australia, and these could be adapted for use by other councils in Sydney and regional NSW.

8. Conclusions

Barriers that prevent regular cycling

The key barriers to cycling identified in the research, with a focus on cycling to commute, were:

- the negative image of cyclists and cycling amongst non-cyclists;
- the perceived danger of cycling, and commuter cycling in particular;
- the lack of facilities to store or lock up bicycles; and
- the lack of understanding or acknowledgement of the benefits of cycling.

Perceptions of cycling as a viable transport option

Key issues working against cycling as a transport option were:

- inconvenience of cycling or need to use other forms of transport;
- lack of time;
- lack of facilities; and
- cost of cycling.

Motivators and effective initiatives

The key barriers present challenges to motivating cycling. Based on the research there is a need to:

- increase safety through separated cycle paths;
- provide facilities at work places;
- get people to think about the benefits; and
- encourage financial rewards.

Information needs and sources

Following on from the key barriers/motivators identified, there is a need for marketing to:

- promote cycling to get it on the public agenda, and get people thinking about the issues;
- promote current 'success' stories (e.g., storage facilities at the Manly ferry);
- promote cycling to start 'chipping away' at the negative image;
- provide people with information about cycling;
- provide information to employers about the benefits of cycling by their employees, appealing to community responsibility, and the types of schemes that can be introduced;
- promote the benefits of cycling; and
- inform people about safer routes for cycling.

Potential growth in cycling

There appears to be significant opportunity to increase commuter cycling, based on the level of interest expressed by workers in the survey. In the short term, this should be addressed by focusing on:

- specific areas where infrastructure is currently in place, or can be implemented easily;

- catchment areas where there would be a higher incidence of shorter trips to work (e.g. inner Sydney);

- encouraging promotion/implementation of local schemes through organisations such as local councils, shopping centres and other businesses;

- encouraging larger companies to promote schemes and provide facilities;

- appealing to the current 'green' movement; and

- promoting potential cost-saving during a recession.

9. Appendices

Appendix A – Focus group guide

Duration – 110-120 Minute Focus Group

WELCOME AND INTRODUCTIONS   ***10 mins***

WELCOME	Welcome
	Introduction to AMR / moderator
	Topic
	Moderator role
	Ground rules
PARTICIPANT INTRODUCTIONS	First name
	ICEBREAKER
	Tell us about… where you live, what you do for a living and how you get around

DISCUSS PHYSICAL EXERCISE – BARRIERS AND MOTIVATIONS 10 mins

WRITE ON CARDS	• Let's talk a bit about health and physical activity
	• What kinds of things do you do to look after your health?
	• Do you feel like you do enough physical activity?
	• What kinds do you do/would you like to do?
	ALLOW GROUP TO EXPLORE RANGE OF PHYSICAL ACTIVITIES AVAILABLE.
FEELINGS ABOUT PHYSICAL EXERCISE	Explore with the group:
	• Preferences (sort cards)
	• Why is this a preference?
	• How much could you see yourself getting involved in this physical activity?
	• How often, with whom>

CURRENT CYCLING BEHAVIOUR 10 mins

CYCLING	• Now let's talk about cycling (if not mentioned above)
DISCUSS PAST CYCLING EXPERIENCE	• Can you remember when you first learned to ride a bike?
	• Where did you ride when you were a child?
	• How has your attitude to cycling changed over time?
DISCUSS MORE RECENT CYCLING EXPERIENCE	• When was the last time you got on a bike?
	• Have you cycled recently at all?
	• What encouraged you to cycle recently?
	• IF NOT Why haven't you cycled recently?
DISCUSS BICYCLE OWNERSHIP	• Do you have access to a bicycle for adults in your household?
	• Why/why not?
	• Do you use it/who uses it?
	• What's it used for?
	If not, would you consider buying one?

RECREATIONAL CYCLING – EXPLORATION 10 mins

SHOW PICTURES OF RECREATIONAL CYCLISTS – <u>INCLUDING WOMEN, CHILDREN, MEN, MOUNTAIN BIKERS, PEOPLE IN CYCLING GEAR</u>	Ask participants to talk about their immediate feelings when seeing each of the pictures.
DISCUSSION	Discuss cycling as a form of recreation • What are the benefits? • How does cycling compare with other forms of exercise? • Why don't currently cycle for recreation – barriers/fears • Do you think that cycling for recreation is a safe activity? • Also explore: competition from other exercise

RECREATIONAL CYCLING- MOTIVATIONS 10 mins

MOTIVATIONS AND BENEFITS TO CYCLING FOR RECREATION	• Considering all of the benefits, what would it take to get you to consider cycling as an exercise more seriously?

OTHER CYCLING FOR TRANSPORT 10 mins

UTILITARIAN CYCLING: CURRENT BEHAVIOUR	• How do you generally get around for short local trips – to the shops, to local parks, friends' houses etc.? • Can you think of any other short local trips that you could use a bike for? • Do you ever/have you ever got a bicycle out to make a short trip like this? • (IF HAVE CHILDREN) Do any of your children do this?
CONSIDERATION/BARRIERS	• Would you ever consider doing this? Why/Why not? • Do you know anyone else who does this? • How do you feel about it?
MOTIVATIONS TO CYCLE	• What would make you consider using a bicycle for this sort of short trip?

COMMUTER CYCLING - CURRENT WAYS OF GETTING TO WORK AND BARRIERS 10 mins

SHOW PICTURES OF MALE AND FEMALE COMMUTER CYCLISTS	Ask participants to talk about their immediate feelings when seeing each of the pictures.
DISCUSS BARRIERS TO CYCLING	• Discuss cycling as a form of transport • Why don't currently cycle for transport – barriers • Is cycling for transport a safe activity? Why/why not? • Is it a viable transport option for you? Why/why not? • Could include physical, e.g.: hills, lack of bicycle paths, lack of facilities • Could also include emotional/psychological: fear of falling off bike, fear of cars, fear of looking silly, etc. • Could include gaps in knowledge (e.g. Do you know and feel comfortable with cycling road rules? Choosing/purchasing a bike, finding paths, maintenance, skills)

COMMUTER CYCLING – MOTIVATIONS 10 mins

DISCUSS BENEFITS OF COMMUTER CYCLING – WHITEBOARD?	• Are there benefits to commuter cycling? • What might they be? • Probe (if not mentioned): quicker, more pleasant than other means, provides health benefits, benefits the environment, saves on fuel costs, reduces traffic congestion.
EXPLORE TRIGGERS FOR INCREASED CYCLING	• What, if anything, would encourage you to try commuter cycling? • What specific tools would help you to begin cycling and keep cycling? • What sort of forum could help you learn more and gain confidence in cycling (e.g. the internet, community training courses, direct support from other cyclists).

CYCLING – INITIATIVES TO MOTIVATE 10 mins

WHITEBOARDS	If you were in charge, what steps would you put in place to encourage more cycling? - Communications - Infrastructure AREAS FOR DISCUSSION: 1. Promoting existing opportunities to ride a bike • eg. Marketing, skills training, making cycling more affordable, encouraging bicycle user groups, community events 2. Making more places where people can ride a bike 3. Keeping cyclists safe (children and adults) 4. Planning 'cyclable' neighbourhoods
SHOW PICTURES OF SOME INITIATIVES FOR COMMENT	• Bike lanes on road • Shared pedestrian/bike paths • Separate bike paths

EXISTING /PLANNED INITIATIVES 10 mins

UTILISE EXISTING/PLANNED INITIATIVES BY DECC/RTA	There are many initiatives the Government is planning to implement to make cycling more attractive. There are a few that we'd particularly like your comments on. Note that these are just a tiny fraction of the initiatives suggested, but we're particularly interested in what you think of these ones.
PROMOTING SHORT-TRIP COMMUTING	What do you think of: 1)The idea of helping adults to commute by encouraging and supporting bicycle user groups in local areas who can provide local advice and may make things like 'Bike buses' and 'Bike Buddies' happen. (SHOW PICTURES OF BIKE BUSES)
MAKE CYCLING EVEN MORE AFFORDABLE	2) Offering to all NSW Government employees a payroll deduction for work-related bicycle and equipment purchases (explore whether/how this could be applied to non-Government employees)
ENCOURAGE USE OF EXISTING CYCLEWAYS	3) Building and maintaining a NSW bike route-finding website, accessible via the Transport InfoLine, other internet portals and new technologies, including mobile phones and on-bike GPS devices. (SHOW SCREEN-GRABS OF BRIGHTON BIKE-ROUTE FINDING WEBSITE)

PROVIDE SAFE CYCLE ACCESS TO MAJOR AND REGIONAL CENTRES	4) Progressively completing missing links on Sydney Metro Cycle Network, reaching all major centres (NOTE WHICH CENTRES THESE ARE) NB Not relevant to Goulburn and Coffs Harbour
PROVIDE CYCLE FACILITIES AS PART OF ROADWORKS BEING CARRIED OUT BY RTA	5) Providing an advance stop line for cyclists (e.g. a marked green section) so cyclists can legitimately sit apart from the traffic (when other road-upgrades are being carried out)
HELP NEW ADULT CYCLISTS ACCESS TRAINING	6) Offering train-the-trainer assistance to community groups, so people can be accredited to pass on cycling proficiency skills to novice adult riders.
REINFORCE CYCLIST AWARENESS FOR ALL ROAD USERS	7) Conducting targeted safety campaigns, such as at the end of Daylight Saving and in areas of high bicycle use, to encourage cyclists to use lights and conspicuous clothing, and motorists to watch for bikes.
PROMOTE COMBINED TRAVEL BY CYCLING AND PUBLIC TRANSPORT	8) Providing 'full-frame' cycle racks, under cover and with CCTV surveillance where possible, at all rail stations, ferry wharves and major bus interchanges. (SHOW EXAMPLES)
NSW GOVERNMENT TO PROMOTE PROVISION OF END OF TRIP FACILITIES AT MAJOR DESTINATIONS	9) Trialling a bike storage cage with swipe and/or smart car access at public transport interchanges with high levels of bike parking demand
	10) Investigating opportunities for provision of shared public bike parking, locker and shower facilities in one or more regional and major centres, with costs possible met through partnerships of adjacent businesses (SHOW KING GEORGE SQUARE INITIATIVE IN BRISBANE)

VOTING ON INITIATIVES DISCUSSED 5 mins

	Of all the methods we've discussed, which of these methods do you think would have the most influence on people's propensity to cycle?
VOTE ON INITIATIVES USING STICKERS	Vote on both planned initiative and initiatives suggested by participants that would be most effective in terms of encouraging bicycle use. (BLUE = most effective, RED = second most effective, YELLOW = third most effective)

THANK PARTICIPANTS, HAND OUT INCENTIVES, SIGN OFF

Appendix B – Ethnographic research interview

PRIOR TO ACCOMPANIED CYCLE

Welcome, introductions, participant signs disclaimer form

Before we ride today, I'm just going to ask you a few questions about yourself, to provide us with context for the research. Is that okay?

Name:

Age:

Lifestage:

Occupation:

Last time cycled:

Self-assessment of cycling ability:

DISCUSS PHYSICAL EXERCISE – BARRIERS AND MOTIVATIONS

Types of physical activity involved in.

How often take part

- Barriers to physical exercise.
- Reasons for exercising
- Who exercise with
- What motivates to exercise

CURRENT CYCLING BEHAVIOUR

- Tell us a bit about your experience of riding a bike… (when last rode, where last rode, level of confidence in abilities, level of knowledge of bicycle road rules)
- Do you own an adult bicycle? Does anyone else in your family own a bicycle?

- Why did you buy it/them?

- Do you use it, and if so, what for?

DISCUSS CYCLING FOR RECREATION

Discuss cycling as a form of recreation

- Why don't currently cycle for recreation – barriers/fears/competition
- Explore briefly why don't ride for short errands and commuting.

- Do you think that cycling for recreation is a safe activity? Why/why not?
- What about short trips for errands (e.g. to the local shops)
- What about for commuting?

- How do you anticipate you'll feel on today's ride? Any fears, expectations, hopes?

PRIOR TO CYCLING

PRIOR TO CYCLING, THE RESEARCHER WILL SHOW THE MAP OF THE PARK AND EXPLAIN THE ROUTE TO BE TAKEN. RESEARCHER TO EXPLAIN THAT:

1. THE RESEARCHER WILL FOLLOW THE SUBJECT AND OBSERVE.
2. AT 2 POINTS IN THE JOURNEY THEY WILL STOP TO REVIEW HOW THE RIDE IS GOING.
3. AT THESE POINTS, THE RESEARCHER WILL CYCLE BESIDE THE SUBJECT, AND THEY WILL PULL OVER.
4. IF, AT ANY POINT, THE SUBJECT FEELS THAT S/HE WOULD LIKE TO TURN BACK OR FINISH, S/HE IS FREE TO INDICATE THIS AND THE RIDE WILL BE CONCLUDED IMMEDIATELY. IF NECESSARY, WE WILL WALK BACK TO THE START.
5. ON THE OTHER HAND IF THE SUBJECT FEELS THAT S/HE WOULD LIKE TO RIDE UNINTERRUPTED, AFTER THE FIRST STOP, THIS CAN BE ELIMINATED, AND RIDE UNTIL THE FINISH.
6. THE RIDE SHOULD BE AROUND 15 MINUTES DURATION.
7. IF THE SUBJECT WISHES TO RIDE LONGER, THIS CAN BE ALLOWED, UP TO 25 MINUTES.
8.

STOP 1 (AFTER 5 MINUTES)

How are you feeling?

How is the ride compared to what you thought at the beginning?

What so far have you liked about the ride? Why?

And what have you disliked? Why?

Researcher to impart any observations to subject and ask what s/he felt about this. *(e.g. I noticed you really slowed down when we were approaching another cyclist. Did you recall feel scared or worried about that cyclist? Is that something that worries you about cycling?)*

WOULD YOU LIKE TO CONTINUE UNINTERRUPTED UNTIL THE END, KEEP GOING WITH ANOTHER STOP ON THE WAY, OR FINISH AND TURN BACK NOW?

AT STOP 2 (IF CHOSEN, AFTER 10 MINUTES)

How are you feeling now? Any differences to how you were feeling before?

Any other thoughts on today's ride so far?

Researcher to impart any observations and ask about them.

CONTINUE RIDE TO END

AT END OF RIDE: TAKE OFF HELMETS, PUT BICYCLES ASIDE, SIT DOWN, OFFER WATER

How do you feel now? Why do you say that?

What did you like/dislike about today's experience?

Does an experience like today's make you consider riding a bicycle for leisure more often?

IF NOT – What or who would convince you to try cycling more for leisure? Can you see any benefits to cycling for leisure/exercise?

IF YES: How do you think you might go about doing that?

What tools or resources would help you to begin cycling again regularly and keep cycling? (cycling proficiency training, training road safety and rules, infrastructure)

What about riding for short trips, such as going to the local shops for basics?

And how about commuting?

Finally, we're doing this research on behalf of the NSW Government, who are putting in plans to encourage more bicycle riding in NSW. If you were in charge, what steps would you put in place to encourage more cycling?

T**HANK, PROVIDE INCENTIVE AND GET RESPONDENT TO SIGN OFF AGAIN**

Appendix C – Telephone questionnare

- PREAMBLE

- Good morning/afternoon/evening, my name is _____ from AMR Interactive, the survey research company. We are conducting a survey for the NSW Government on transport, health and exercise.

- Could I please speak to a person in the household aged 18-69 years who next has a birthday.

- The survey will take less than 15 minutes to complete.

INITIAL DEMOGRAPHICS

Q1.   What is your age group?

    1 18-29
    2 30-39
    3 40-49
    4 50-59
    5 60-69
    9 DO NOT READ OUT: Refused

Q2.   RECORD GENDER

    1 Male
    2 Female

Q3.   Are you currently… READ OUT
    NOTE: can be paid or unpaid work away from home
    1 Working full time away from home
    2 Working part time away from home
    3 Looking for work
    9 DO NOT READ OUT: None of these

IF Q3=1/3 GO TO Q6

Q4.   Are you retired?

    1 Yes
    2 No

Q5.   Are you currently studying part time or full time away from home?

    1 Part time
    2 Full time
    9 DO NOT READ OUT: Neither of these

CURRENT TRANSPORT

IF Q3=1/2 (WORKING) ASK Q6, OTHERS TO Q9

Q6.   About how far is it from your home to your main place of work?

    PROMPT WITH RANGES IF NECESSARY
    1 Less than 1 km
    2 About 1-4 kms
    3 About 5-7 kms
    4 About 8 to 10 kms

5 More than 10 kms
9 DO NOT READ OUT: Don't know

Q7.   How do you usually travel to work?
RECORD ALL THAT APPLY

1 Walk
2 By car or motorcycle
3 By bus
4 By train
5 By ferry
6 Bicycle
9 Other

IF MORE THAN ONE ANSWERED IN Q7, ASK Q7A

Q7a.   And what would your primary mode of transport be?

1 Walk
2 By car or motorcycle
3 By bus
4 By train
5 By ferry
6 Bicycle
9 Other

IF Q7=4/5 ASK Q8 <u>for each of 4/5</u>

Q8.   About how far is it from your home to the [train station] [ferry wharf]?

PROMPT WITH RANGES IF NECESSARY
1 Less than 1km
2 About 1 to 4 kms
3 About 5 to 7 kms
4 About 8 to 10 kms
5 More than 10 kms
9 DO NOT READ OUT: Don't know

IF Q5=1/2 (STUDENT) ASK Q9, OTHERS TO Q12

Q9.   About how far do you have to travel to your place of study?

PROMPT WITH RANGES IF NECESSARY
1 Less than 1 km
2 About 1 to 4 kms
3 About 5 to 7 kms
4 About 8 to 10 kms
5 More than 10 kms
9 DO NOT READ OUT: Don't know

Q10.   How do you usually travel to your place of study?
RECORD ALL THAT APPLY

1 Walk
2 By car or motorcycle
3 By bus
4 By train
5 By ferry
6 Bicycle
9 Other

IF MORE THAN ONE ANSWERED IN Q10, ASK Q10A

Q10a.   And what would your primary mode of transport be?
1 Walk
2 By car or motorcycle
3 By bus
4 By train
5 By ferry
6 Bicycle
9 Other

IF Q10=4/5, ASK Q11 <u>for each of 4/5</u>

Q11.   About how far is it from your home to the [train station] [ferry wharf]?

PROMPT WITH RANGES IF NECESSARY
1 Less than 1 km
2 About 1-4 kms
3 About 5-7 kms
4 About 8 to 10 kms
5 More than 10 kms
9 DO NOT READ OUT: Don't know

<u>CURRENT EXERCISE</u>

Now I'd like to ask you some questions about the amount of exercise you do. About <u>moderate</u> physical exercise. And about <u>vigorous</u> physical which makes you breathe harder or puff and panting

Q12.   Firstly, how often do you do <u>moderate physical activity</u>, such as swimming, social tennis, golf, a half hour walk, or exercise class?

Would it be… READ OUT FREQUENCY
1 More than twice a week
2 About twice a week
3 About once a week
4 Less than once a week
9 DO NOT READ OUT: Don't know

Q13.   And how often do you do <u>vigorous physical activity</u> which made you breathe harder or puff and pant, such as jogging, cycling, aerobics, competitive tennis, or other sport.

Would it be… READ OUT FREQUENCY

1 More than twice a week
2 About twice a week
3 About once a week
4 Less than once a week
9 DO NOT READ OUT: Don't know

Q14.   Have you ridden a bicycle in the past 12 months for any reason?
NOTE: Not to include exercise bike or motorised bike
1 Yes
2 No
3 DO NOT READ OUT: Can't remember

IF Q14=1 ASK Q15, OTHERS GO TO Q17

Q15. **How often have you ridden a bicycle in the last 12 months? Would it have been…**

READ OUT
1 Once or twice
2 About 3 to 6 times
3 About once a month
4 About once a week
5 More than once a week
9 DO NOT READ OUT: Can't remember
IF Q15=1/2.9 GO TO Q18

Q16. **Thinking about the last 6 months, would you have ridden in any of the following situations? Please answer any that apply.**

READ OUT - MULTIPLE RESPONSE

1 In a park for recreation or exercise
2 On the road for recreation or exercise
3 To commute the full trip to **[**IF Q3=1/2: **work] [**IF Q5=1/2: **place of study]**
4 To commute part of a trip to **[**IF Q3=1/2: **work] [**IF Q5=1/2: **place of study]**
5 Short trips to visit people, or to venues such as libraries or swimming pools
6 Short trips for an errand such as going to the local shops
9 For some other reason (specify)
10   DO NOT READ OUT: None of these

IF Q16=3/4 GO TO <u>Q30A</u> – OTHERS GO TO Q19

Q17 ASKED IF Q14=2/3

Q17. **Have you ridden a bicycle at some time as an adult?**

1 Yes
2 No
3 DO NOT READ OUT: Can't remember

Q18. **Do you have an adult bicycle in your household?**

1 Yes
2 No
3 DO NOT READ OUT: Can't remember

INFREQUENT/NON-CYCLISTS
IF Q14=2/3 **OR** Q15=1/2,9 ASK Q19/Q20

Q19. **Now thinking about cycling for recreation or exercise. Have you considered taking up cycling for recreation or exercise?**

1 Yes
2 No
9 Don't know

Q20. **What would be your main reasons for not [**IF Q19=1: **having taken up] [**IF Q19=2/9: **considering taking up] cycling for recreation or exercise?**

VERBATIM RESPONSE

<u>IF CURRENT COMMUTER, WITHIN 10KM, BUT DON'T CYCLE</u>

IF [Q6=1/4 **OR** any Q8=1/4)]-ASK Q21, OTHERS TO Q22

Now thinking about cycling for purposes of commuting.

Q21. **Have you considered cycling as part of your trip to work?**

      1 Yes
      2 No
      9 Don't know

IF Q9=2/4 **OR** any Q11=1/4 ASK Q22, OTHERS TO Q23

Q22. **Have you considered cycling as part of your trip to your place of study?**

      1 Yes
      2 No
      9 Don't know

Q23. *REASONS FOR NOT CYCLING FOR COMMUTING – within 10km of work, study or train, ferry*

    VERBATIM RESPONSE QUESTIONS

    IF Q6=1/4: **What would be your main reasons for not taking up cycling to your workplace?**

    IF ANY Q8=1/4: **What would be your main reasons for not taking up cycling to the [train station] [ferry wharf] [**IF BOTH SELECTED: **train station or ferry wharf] as part of your trip to work?**

    IF Q9=1/4: **What would be your main reasons for not taking up cycling to your place of study?**

    IF Q11=1/4: **What would be your main reasons for not taking up cycling to the [train station] [ferry wharf] [**IF BOTH SELECTED: **train station or ferry] as part of your trip to your place of study?**

<u>IF PLACE OF WORK OR STUDY>10KM</u>

IF Q6=4/9 (WORK>10KM), ASK Q24

Q24. **Would you consider cycling to work if you worked closer to home, say within 5-7 km?**

      1 Yes
      2 No
      9 Don't know

IF Q24=2/9, ASK Q25

Q25. **What would be your main reasons for not considering cycling to your workplace if you were closer?**

    VERBATIM RESPONSE

IF Q9=4/9 (STUDY>10KM), ASK Q26

Q26. **Would you consider riding to your place of study if it was a shorter trip, say within 5-7 km?**

      1 Yes
      2 No
      9 Don't know

IF Q26=2/9, ASK Q27

Q27. **What would your main reasons for not considering cycling to your place of study if the trip was shorter?**

VERBATIM RESPONSE

<u>INITIATIVES</u>

The NSW Government is keen to encourage more people to ride bicycles. The Government is considering a range of initiatives.

Q28. **Now thinking about cycling for recreation or exercise. I am going to read out a number of initiatives. I want you to tell me how each would influence you to consider cycling [**IF Q16=1 OR 2: **more].**

Whether you… READ OUT
1 Would not consider cycling [more] for recreation or exercise
2 Might consider cycling [more]
3 Fairly likely to consider cycling [more], or
4 Very likely to consider cycling [more]
9 DO NOT READ OUT: Don't know
99 NO INTEREST

READ OUT EACH INITIATIVE - RANDOMISE
NOTE: If during the questioning the respondent expresses that they are not all interested, then key 99 to skip to next section

1 If basic skills training for cyclists was available, run by local groups
2 If more cycle tracks were available at parks
3 If cycle lanes were available on local roads
4 If cycle paths physically separated from the road were available
5 If a website was available which allowed cyclists to find the safest route to a location, showing bike lanes and paths

Q29. **Now thinking about cycling short trips for specific tasks such as shopping, visiting libraries or swimming pools. I am going to read out a number of initiatives. I want you to tell me how each would influence you to consider cycling [**IF Q16=5 or 6: **more].**

Whether you… READ OUT
1 Would not consider cycling [more on] short trips
2 Might consider cycling [more]
3 Fairly likely to consider cycling [more], or
4 Very likely to consider cycling [more]
9 DO NOT READ OUT: Don't know
99 NO INTEREST

READ OUT EACH INITIATIVE - RANDOMISE
NOTE: If during the questioning the respondent expresses that they are not all interested, then key 99 to skip to next section

1 If facilities for securing your bicycle were available
2 If parking near main entrances was available
3 If there were rewards from shops – such as free home delivery, shopping vouchers, or vouchers for bike services or equipment
4 If cycle lanes were available on local roads
5 If cycle paths physically separated from the road were available

IF WORK Q3=1/2

Q30. **Now thinking about cycling for commuting to**

IF Q3=1/2 AND…
IF Q6=1/4: **your workplace**
IF Q8=1/4 for train station: **the train station as part of your trip to work**
IF Q8=1/4 for ferry: **the ferry as part of your trip to work**
OTHERS: **your workplace if the trip was shorter, say within 5-7 km**

I am going to read out a number of initiatives. I want you to tell me how each initiative would influence you to consider cycling

Whether you… READ OUT
1 Would not consider cycling as part of commuting to work
2 Might consider cycling
3 Fairly likely to consider cycling, or
4 Very likely to consider cycling
9 DO NOT READ OUT: Don't know
99 NO INTEREST

READ OUT EACH INITIATIVE - RANDOMISE
1 If basic skills training was available, run by local groups
2 If safe storage facilities were available
3 If shower facilities were available at your workplace
4 If there were cycle lanes on the roads along the route
5 If there were cycle paths along the route which were physically separated, away from the road
6 If you were able to ride with a group of cyclists on the same route

Q30A/B ONLY ASKED IF Q16=3 OR 4

Q30A. **How often do you typically ride to your [**IF Q3=1/2: **workplace] [**IF Q5=1/2: **place of study. Would it be…** READ OUT**

1 At least 4 days a week
2 2-3 days a week
3 About once a week
4 Less than once a week
9 DO NOT READ OUT: Don't know

IF Q30A=2/9 ASK Q30B

Q30B. What would encourage you to ride to work more often?

Verbatim response

FINAL DEMOGRAPHICS

Q31. **Finally, I have a few questions on demographics.**
How would you describe your household?

READ OUT – SINGLE RESPONSE

1 Single person household
2 Living with your parent or parents
3 Single parent
4 Couple with children at home
5 Couple, with no children at home
6 Group household
7 Other (specify)

IF Q31=3,4 ASK Q32, OTHERS GO TO Q33

Q32. **Would you have a child at home aged…**

READ OUT – ACCEPT MULTIPLES
1 0-4 years
2 5-9 years
3 10-16 years
9 DO NOT READ OUT: None of these

Q33. **What is the highest level of education you have completed?**
Would it be… READ OUT

1 University degree
2 Diploma
3 TAFE or Trade Certificate or Course
4 Higher School Certificate or equivalent of Year 12 now
5 School Certificate or equivalent of Year 10 now
6 Left before School Certificate
7 Other (specify)

Q34. **Could you please tell me into which of the following range your annual household income falls before tax? Would it be…**

READ OUT
1 Under $30,000
2 $30,000 – under $75,000
3 $75,000 – under $100,000
4 $100,000 – under $150,000
5 $150,000 - $200,000
6 Over $200,000
7 DO NOT READ OUT: Do not wish to answer

Q35. **Do you own a car yourself or jointly with a spouse or other family member?**

1 Yes
2 No
9 Don't know/refused

Q36. **Do you have the main use of a vehicle owned by a family member or provided by your employer?**

1 Yes
2 No
9 Don't know/refused
PRIVACY STATEMENT
THANK AND END