# TABLE OF CONTENTS

1 INTRODUCTION & OBJECTIVES ................................................................. 1

2 RESEARCH METHODOLOGY ...................................................................... 2

3 EXECUTIVE SUMMARY ............................................................................. 4
   3.1 Summary of Findings ........................................................................... 4
   3.2 Conclusions and Implications ............................................................... 5

4 RESEARCH FINDINGS .................................................................................. 7
   4.1 Images of People Who Actively Commute .............................................. 7
   4.2 Perceptions of Active Transport Modes ............................................... 8
   4.3 Motivating Factors for Choosing Transport Modes ............................... 10
   4.4 Attitudes Towards End of Trip Facilities ............................................ 12
   4.5 Unprompted Suggestions for Encouraging Active Commuting .......... 13
   4.6 Reactions to Possible Interventions .................................................... 16
      4.6.1 Buses ................................................................................... 16
      4.6.2 Promotional ............................................................................ 18
      4.6.3 Bicycle Network and End of Trip Facilities ............................... 19
      4.6.4 Pool Vehicles ........................................................................ 21
      4.6.5 Parking ................................................................................. 21

5 DISCUSSION ................................................................................................. 24
   5.1 Decision Process .................................................................................. 24
   5.2 Target Group Behaviour and Profile .................................................. 25
   5.3 Attitudes of Target Groups ................................................................. 25
   5.4 Target Group Communication and Action Objectives .......................... 27
   5.5 Interventions to Achieve Communication and Action Objectives ........ 27
   5.6 Conclusions and Implications ............................................................. 29

Appendix

A Discussion Guide
1 INTRODUCTION & OBJECTIVES

This study was conducted by the School of Population Health and the School of Human Movement and Exercise Science The University of Western Australia, in conjunction with the UWA Office of Facilities Management (OFM), the Department of Environment and the National Heart Foundation with funding provided by Healthway and the OFM.

This qualitative research project comprising five focus group discussions was undertaken with UWA staff in April 2004 as part of The Active Commuting Project investigating UWA staff and student commuting behaviour and potential for change. Prior to this research a web-based quantitative survey of UWA staff and students was undertaken in May 2003 to gather information on transportation patterns and explore the potential of various strategies designed to increase the use of active modes of transportation to and from UWA.

The overall objective of this qualitative research was to further explore attitudes and behaviours in relation to active commuting identified in the previous quantitative research, with the specific information objectives being to:

- Provide a better understanding of perceptions of people who actively commute;
- Explore attitudes toward different end-of-trip facilities (i.e. car parking, bicycle parking);
- Gather unprompted suggestions from staff for encouraging active commuting; and
- Explore reactions to possible interventions related to buses, promotional activities, facilities and parking.

The findings of this research will be used in conjunction with the quantitative survey to assist in determining the most effective interventions and communication strategy to encourage active commuting to and from UWA.
2 RESEARCH METHODOLOGY

The research methodology for this project consisted of the following stages:

Recruitment of Group Participants

Initially, emails were sent to 89 staff members who had indicated through the on-line survey that they would be interested in the focus groups resulting in 10 participants being recruited. Emails were then sent to all UWA staff inviting them to participate in the focus groups. Many staff responded but were unable to attend the appropriate session.

The target of 8 participants per group (plus reserves) was reached for all sessions except Thursday morning (pre-contemplators <8km), for which only 4 were recruited.

UWA Staff perceptions of transport modes and their ability to adopt active modes are likely to be influenced by their current and intended commuting habits, and by the distance between their home and campus. The focus group discussions were therefore stratified by distance of residence from UWA (within or outside an 8km radius) and by stage of behaviour change as defined in the quantitative study:

Precontemplators Those who were not currently actively commuting and not intending to do so in the next 6 months.

Contemplators Those who were not currently actively commuting to or from UWA but were thinking about starting to do so in the next 6 months;

Those who were sometimes actively commuting to or from UWA but not more than once per week; and

Those who until recently were actively commuting to or from UWA but had stopped doing so.

Action/Maintenance Those who were regularly actively commuting to or from UWA but had only begun to do so in the last 6 months; and

Those who were regularly actively commuting to or from UWA and had been doing so regularly for 6 months.

Incentives offered to participants included breakfast or lunch and the chance to win one of four $75 book vouchers.
Of the 36 staff members recruited, 26 attended the 5 focus group discussions, distributed as follows:

- Action/Maintenance: 6 participants
- Contemplators < 8km: 5 participants
- Contemplators > 8km: 5 participants
- Pre-contemplators: 3 participants
- Pre-contemplators and Contemplators: 7 participants

**Group Discussion Format**

The focus group discussion followed the Discussion Guide shown in Appendix A. Photos showing the different forms of active commuting were used as prompts within the groups.
3 EXECUTIVE SUMMARY

The purpose of this qualitative research was to provide a better understanding of UWA staff behaviour, attitudes and perceptions in relation to active modes of transport, and reactions to possible interventions, in order to assist in the development of an effective strategy for increasing the use of active modes of transport.

3.1 Summary of Findings

In developing such a strategy the focus group discussions highlighted the need to consider the following components:

- **The Decision Process** - It was clear from the group discussions that family commitments and in some instances other study or work commitments play a very important role in the transport decision process for staff.

- **Target Group/s current behaviour, perceptions and attitudes** – The group discussions highlighted the wide range of attitudes held by staff members and the likelihood that interventions will elicit varied reactions dependent on staff members’ current behaviour and beliefs.

  As identified in the quantitative study key target groups are those:
  - In Action/Maintenance stage
  - In Contemplation stage
  - Confident they could use an active mode of transport.

- **Communication and action objectives for target groups** - The group discussions confirmed the same communication and action objectives are relevant to the two target groups not currently in Action/Maintenance and that promotions and interventions targeted to these two groups are also likely to fulfill the objectives for the Action/Maintenance group.

- **Appropriate interventions and promotion strategy to achieve the communication and action objectives** – The group discussions confirmed that interventions providing financial incentives for using active transport and disincentives for parking, provided they are widely advertised and promoted, address a wide range of communication and action objectives. However, some staff are concerned that interventions involving increases in parking fees would be inequitable and therefore any changes to the parking fee structure would need to be handled carefully.
3.2 Conclusions and Implications

Encouraging more staff to use Active Modes of Transport poses a difficult challenge, as one group participant commented:

*It is one of those things that there is no easy answer to and there never will be.*

In order to increase the use of Active Transport Modes by UWA staff a Green Transport Strategy will be most effective if it is designed to address the following action and communication objectives:

- Raise awareness of Active Transport Modes;
- Build and maintain positive attitudes;
- Encourage initial trial;
- Encourage repeat usage; and
- Facilitate usage.

Key target groups include:

- Users in Action/Maintenance stage
- Contemplators
- Those who are confident they could use an active transport mode.

Implications for promotions and interventions:

- Acknowledge that family commitments and multiple work locations are a key component of the decision process for many staff when choosing transport modes.
- Recognise the difficulty of balancing time pressures and transport needs.
- Acknowledge expectations among academic staff that an employer should provide access to parking.
- Promote the fact that if more people who could use active modes did so, there would be more parking available for others.
• Focus on attributes of Active Transport Modes that are highly motivating and superior to single occupant vehicles, through:
  − Interventions with financial incentives;
  − Promoting the cost effectiveness of Active Transport Modes; and
  − Consider promoting benefits of not having to search for a parking space.

• Promote the fitness and stress lowering benefits of active transport modes, possibly through testimonials.

• Provide information to staff about existing subsidization of parking. This may prevent public transport subsidies being perceived as inequitable.

• Emphasise that Active Modes are accepted, reliable, safe and cost effective in order to address perceived key weaknesses.

• Address weaknesses related to cycling, including the cycle network leading to UWA and end-of-trip facilities.

• Consider the need for UWA campus plans to encourage more on-site services such as childcare, banking and shopping, to reduce the need to use a car during the day.

• Improve the information and support services related to active transport modes by reviewing the transport information provided on the University website and considering the establishment of a Transport Planning Booth and Active Transport User Groups. This would assist in addressing key weaknesses related to facilitating and increasing usage of Active Transport Modes.

Contemplators and those in Action/Maintenance are likely to respond to interventions that increase the convenience of active modes and provide rewards for actively commuting such as subsidized bus fares and flexible, cost-effective part-time parking permits. Pre-contemplators may feel disadvantaged by interventions that promote the use of active modes and may need to be educated about the long-term benefits to the University and the broader community as well as outcomes that may benefit them personally, such as the potential for a reduced demand on existing parking facilities.
4 RESEARCH FINDINGS

4.1 Images of People Who Actively Commute

Perceptions of staff who actively commute were generally the same among Active Commuters, Contemplators and Pre-contemplators. Specifically;

- Active commuters who use public transport were perceived to do so either because they do not have access to a car, live close to public transport or want to save money. Group participants did not appear to link using public transport with increased levels of physical activity, but Active commuters perceived public transport users as being less stressed, more organised and more conscious of environmental benefits.

  People who don’t have cars./ Because they don’t have a car.

  It’s a personal choice and you might have environmental concerns.

  I’m sure (for drivers) there is a lot more anger to work out of your system. I don’t know if it has a major effect throughout the whole day but certainly just starting.

  All kinds of people use public transport, professionals, older people and children, teenagers.

- Active commuters who cycle were generally perceived to be healthy, fit individuals who chose this mode of transport for the fitness benefits.

  It is because they are healthier. Most of them look really quite fit.

- Active commuters who walk were generally perceived to live very close to the university and it was only those who actually walk on a regular basis who saw it as a good form of exercise.

- People who travel in a single occupant vehicle (SOV) to and from UWA were seen to do so because they had other commitments (work or family) which precluded their use of public transport, because they could not afford the time required to actively commute or because they did not live close to public transport routes.

  They have kids to drive to childcare./ You have a group that have made that decision because they really don’t have another choice./ People have definite reasons why they might have to drive. They might have another job or be studying somewhere else./ It’s the time factor really.
• Group participants perceived that very few staff members in their school or department actively commute to work.

  One or two people catch the bus, but not many in our case. A couple of people share and car pool and a couple of people actually walk.

4.2 Perceptions of Active Transport Modes

Participants in the focus groups expressed the same perceptions of active transport modes as respondents to the quantitative study.

Compared with traveling by SOV, public transport was generally perceived as:

  More time consuming;

  Less convenient/flexible; and

  Less comfortable.

Some participants also mentioned that public transport is:

  Cheaper;

  Riskier; and

  Better for the environment.

These perceptions were reflected in the reasons given for choosing their current mode of transport.

Time

  It probably took me twice as long to get here. It only takes me about 25 minutes by car and it would take me an hour to get here by bus. / Convenience/flexibility. / I couldn’t carry everything I need for my lectures on a bus. I have a computer then 200 lecture notes for the students, I couldn’t take the bus from one campus to the other. / Often I go to places on the way home or on the way to work, so I will use my car. / If I don’t have anything else to do after work, I can catch the train, but if you’re doing anything after work, I find that the buses later become so irregular that you can become stranded. / It is also bloody hard. Perth is renowned for the worst city in the world with the worst public transport. I mean if you go to Melbourne or even Sydney, the public transport is magic compared to Perth.
Comfort/weather

But what about winter nights and it is pouring with rain, you’d hardly be wanting to walk to a bus stop. / I had a look at the bus while driving up Stirling Highway in my car and I wouldn’t dream of trying to catch it at the moment because it is chocker block and I wouldn’t be comfortable. / At one stage I looked at the bus but it would take me 2 hours and there are no toilets. / I’m living somewhere where there are no bus shelters at the bus stop and in summer you stand in the sun waiting for the bus, that’s not so good.

Cost

It is much cheaper than driving a car everyday.

Safety

You don’t really want to be sitting at the bus stop after dark waiting.

Participants who were using public transport regularly perceived it as being less stressful and providing “time out”.

Even though it took significantly longer, it gave me time for myself and I could read and fall asleep in the afternoon going home. / It is just a non-contactable time. I don’t have a mobile phone so it is actually time that noone can contact you as well. / No I just can’t stand driving into work, it is just a real hassle, I’d much rather be on the bus relaxing or on my bike getting some exercise.

Cycling and walking had the added benefits of increasing fitness, being an enjoyable form of transport and removing the need to find parking.

It’s (cycling) just easier to get here. There are good bike tracks from Shenton Park to Kings Park, there is a beautiful bike path through Kings Park down to the university and when I get here I don’t have problems finding parking.

Staff who currently commute by SOV perceived the barriers to active modes of transport such as the time taken, cost and reliability more negatively and tended to downplay the cost of traveling by car.

I think public transport is quite expensive to be honest.
Group participants, even those using public transport, still perceived the cost of public transport as relatively expensive given the time and inconvenience involved, compared with the cost of traveling by car.

*If you have got a car then you have the overhead costs of having the car anyway. The extra amount coming here is worth it for the convenience. My point is that people look at the cost of public transport as if it is almost negligible compared to driving, but it is not.* / *No, it costs me about, if I don't get a multirider, $5.90 or $6 a day.* / *Well, yeah. Even with a multirider it is $4.80 or $5, it is not cheap.*

### 4.3 Motivating Factors for Choosing Transport Modes

The motivators and barriers associated with choosing the different transport modes discussed in the focus groups reflected those identified in the quantitative study. For SOV users the main reasons for choosing their mode of travel were the time taken, the need to drop off others and the lack of frequent public transport. Public transport users chose this form of transport because they did not have access to a car, to save money and to avoid the need to find parking or drive in traffic. Those who cycled or walked chose to do so because they live close to UWA and for the exercise benefits.

The discussion identified the expectation of some academic staff that the university should provide sufficient staff parking as recognition of their value to the organization and to allow them to do their jobs effectively and not waste time having to look for parking.

*I suppose it depends whether you regard parking as something you have to provide or some kind of bonus. I mean certainly in the city it is a bonus, at uni I don’t think it is….. If you look around the neighbourhood it is certainly cheaper to park elsewhere and secondly if you look at some of the other employers – the big employers, like Hollywood Hospital – they don’t pay anything. No, because it is part of their philosophy to attract good staff. / Staff have to be here, staff who don’t show up leave 200 students waiting for a lecture, it’s not really an option.*

The discussion of the decision process highlighted the importance of family commitments and multiple work locations in staff selection of transport modes.

*I was working for this department and at Sir Charles Gardiner and I had to catch two buses and it took me ages to get to work and ages to get home.* / *I have to drop my daughter off at work. / I have kids to drop at childcare.*
Notably some participants who currently commute by active transport modes had initially been forced by external events to trial public transport and had then found through repeated use that they preferred this mode of transport.

I worked at Murdoch Uni, then my car was stolen from the car park so I had to catch public transport. I continued using public transport after that because I thought even though it took significantly longer, it gave me time for myself…. So when I came to UWA I continued with public transport. / When the car was being repaired my wife needed the other car to take my daughter so it was easiest for me to take public transport…. / Driving seemed easiest at the time, but now I just can’t stand driving.

Another perceived benefit of using an active transport mode was escaping the need to find parking, though it was common for participants to state they still brought cars to work at times, when other factors such as poor weather, public holiday timetables or other commitments made using public transport unacceptable. Few participants mentioned environmental concerns as a reason for choosing public transport, though it was evident that they derived some personal satisfaction from feeling they were contributing to reducing pollution.

I feel it’s better for the environment and I like to leave my car at home so it looks like someone is at home.

Exercise and increasing fitness were mentioned as important motivators by walkers and cyclists while public transport users did not see their transport mode as a means of obtaining exercise, indicating there may be an opportunity to promote this benefit and develop another positive association with public transport.

Cycling takes a little bit more effort, but I wouldn’t go back to driving now. / I guess I get more exercise, because I walk a bit further from the bus stop.

I walk to work, I quite like walking. It’s just sometimes, it’s just that little bit too long, it takes me 40 minutes walking fast and sometimes I don’t have the time.

Precontemplators in the group discussions did not see active transport modes as potential forms of exercise for them as they were far more focused on the need to save time when commuting or fulfill other roles such as work or family commitments.
4.4 Attitudes Towards End of Trip Facilities.

Group participants expressed the view that end of trip facilities could be improved for active modes of transport in order to facilitate usage and encourage repeat use.

Public transport users requested:

- more direct bus routes to UWA from central locations such as the city, Murdoch bus station, off campus parking sites;
- a bus route providing more bus stops around the perimeter of the campus;
- better shelter at bus stops; and
- better public transport services on public holidays.

Specific improvements related to cycling included:

- providing better security and weather protection for bicycles in multiple locations around campus;
- more and upgraded shower facilities specifically for staff;
- lockers for storage; and
- integrated facilities incorporating all of the above facilities.
4.5 Unprompted Suggestions for Encouraging Active Commuting

Unprompted suggestions for encouraging active commuting reflected the possible interventions being considered by the University, including improving end-of-trip facilities as outlined previously, as well as making it easier to use an active mode of transport and providing additional incentives.

The discussions highlighted staff problems finding parking. Participants were inclined to focus on reducing parking problems rather than the benefits of active commuting leading to other suggestions such as encouraging car pooling and building a multi-storey car park. The table overleaf shows the unprompted suggestions noted by group participants prior to discussion which included:

- more frequent trains and buses, more convenient bus routes;
- restructure of parking fees to provide a cost-effective part-time parking permit option;
- improved amenities on campus such as shopping, banking, childcare;
- encouraging car pooling by providing a central register and cost savings on parking for car-poolers;
- financial rewards for people using active transport modes;
- educating people and raising awareness of the cost savings that can be made;
- advertising and promoting other benefits of active commuting such as increased fitness, reduced stress and the benefits to the environment;
- an improved cycle path network; and
- advertising and promotion of the above through promotional leaflets and posters displayed on campus.
4.6 Reactions to Possible Interventions

It was evident in the group discussions that staff hold a wide range of attitudes stemming from their individual situation, experiences and beliefs. Consequently reactions to possible interventions varied considerably.

4.6.1 Buses

4.6.1.1 The U-Pass

Interventions that involved a monetary incentive were generally received positively by those who currently used some form of active transport. Subsidising bus fares through a U-Pass was appealing to public transport users however, they felt it would need to be a substantial subsidy.

_The saving on a multirider is 25% so anything you do has got to be better than 25%. / It would have to be substantial, three quarters of the bus fare. / What about half? Borderline._

Some participants in the Contemplation stage felt a subsidy may encourage them to use public transport more often, though further incentives may be necessary to encourage initial trial as some people are unsure of the mechanics of catching a bus from the university. This indicates that transport planning services including maps of bus stops and details of the steps involved in catching and paying for transport could be useful to encourage trial and facilitate usage.

_How would I know what the 2nd bus stop is when it doesn’t tell me. / It can be very hard, actually finding information and knowing where you actually stand. / You almost need to go and ask someone who actually does that particular route who can say, we’ll get off here and do this, and then you’re right. / You can pick up a timetable downstairs, but then you go out the front and it’s like where do I go now?_

Notably, none of the group participants were able to state how much it cost them on an annual basis to travel to work, either by public transport or car. Therefore in promoting cost savings it may be beneficial to give specific case study examples of the total amount that can be saved on an annual basis.
Parking

A dollar a day. / I thought it was about 3 hundred a year. / I think we pay about $5 a pay. / Oh no! More than that – it would be about $10. / No it is not expensive. / I think it is a rip off compared with the payments for people who work anywhere near the city.

Public transport

I don’t really know the price. / I’d say around $3 to $5 a day.

Caution will need to be exercised in introducing and promoting public transport subsidies as some group participants felt it would be inequitable for the University to subsidise public transport users when other staff members are precluded from using this form of transport due to either insufficient public transport services, work or family commitments.

If you don’t need a parking permit they will give you X amount of dollars with your pay packet. So it is actually a reward incentive. / I don’t know, I think I have got a few problems with that.. it’s like saying you choose to have children (you have to drop off) that is your problem. / It is basic discrimination on where you live.

If everyone actually believed they were being subsidized then that would work out.

Why should it come out of general revenue to subsidise those who are doing the right thing? / For some people it is not practical to catch say 3 buses or to ride and it seems a bit hard on them, you know they have children or family commitments.

Group participants generally did not perceive that the University provided subsidised parking to those who choose to drive, therefore it may be necessary to educate staff on this issue prior to or in conjunction with the introduction of public transport subsidies.

But if you have to bring a car they are already subsidising you to the tune of $2 a day. / That’s your opinion.

To be most effective the introduction of U-Pass subsidies for staff would therefore need to be handled carefully and be part of an education and promotion campaign informing staff of the real costs of parking and public transport. This would assist in enhancing the perceived cost effectiveness of public transport and appears likely to encourage repeat use, if backed by a campaign to increase awareness of cost savings, promote fitness benefits and emphasise the widespread use, reliability and safety of public transport.
There are also likely to be benefits associated with reduced pressure on parking for those who feel it is necessary to drive, for instance it may become easier to find parking. To overcome negative perceptions of the University subsidizing public transport use, these benefits to drivers could be emphasized.

Public transport users who had lived in other cities also felt that there was a lack of acceptance of the problems that are sometimes encountered by public transport users and that the university would need to make allowances for public transport users if it is going to promote this mode of transport.

_There is also the mindset. I've worked in London for a while and if you go to a meeting and only 50% of the people turn up and the others come in 3 hours late, you never ask them what has gone wrong. It is just the traffic hold ups and everyone just accepts that as normal. But here there would be no understanding._

4.6.1.2 New Route for 78

A new route proposed for the 78 bus to stop at Reid Library and outside Currie Hall was viewed positively by current public transport users, provided it ran regularly and included additional stops around the perimeter of the University close to other amenities such as shops and banks.

_You could also ask people why they need to use their car during the day and offer some help with that. Like a shuttle bus to the shopping centre. / It is not only the bus route but it is also the location of the bus stop points. I mean, they started using the bus stop near the Guild at one stage – I don't know if it is still being used._

4.6.2 Promotional

4.6.2.1 Taxi Vouchers

The provision of taxi vouchers for use in emergency situations by users of active transport modes received mixed reactions overall. However, occasional users of active transport modes responded positively to this proposal as it allayed some of their concerns about not having their own transport available at work for family emergencies.

_They would need to give you the taxi vouchers up front. / I think it would have to be CabCharge vouchers that you only get access to if you cycle._
4.6.2.2 Financial Incentives

The possibility of receiving a direct financial incentive for not purchasing a parking permit met with mixed reactions as most group participants, even those who used active transport modes on a regular basis, still purchased a parking permit.

That ($100) would be great. / It would have to be more than $100. / Some form of parking permit like if you actually cycle 3 days a week why should you have to pay for parking for 5 days?

For a direct financial incentive to be appealing it was felt that the parking permit system would need to be adapted to provide cost efficient “part time” or seasonal parking permit options. This issue of parking permit options is addressed in more detail in the Parking section of the report.

I like the incentives (idea) but I like to be able to park 50% of the time. I’d rather buy half the number of parks for half the price and the rest of the time bike ride or whatever to get here. But at the moment if I make the calculation of using ticket parking say 50% of the time, I’m paying exactly the same as a full years parking. That to me is no incentive to not drive a car. / I agree if there is something that is a little bit more flexible, you pay as you go.

This type of subsidy was also perceived by some group participants to be inequitable for the same reasons as the subsidy for public transport users.

I think that there is definitely an argument for people to feel “Oh, it’s alright for you but I can’t do that!” you know, “Why have you got that”, it’s not really fair. I am not saying that I think that, but people will think that you know, resent the fact that others get it.

4.6.3 Bicycle Network and End of Trip Facilities

Possible improvements to the bicycle path network and end of trip facilities were received positively by all group participants, particularly those who currently cycle.

If there were more bike paths around it would be much more user friendly. I find it very uncomfortable riding a bike on any road. On the bike path you feel exhilarated and comfortable. / There needs to be better support from local councils for bike routes to campus. Nedlands has done a good job of putting marked bike paths either side of Princess Road and then you get to City of Subiaco area and it is a bombshell.
Staff who cycle to work have developed a number of strategies to address current perceived weaknesses with end of trip facilities, but stated, improved end of trip facilities would encourage them to cycle more and felt it would encourage others to do the same.

One of my colleagues cycles and she gets her boyfriend to drop her off on the weekend and she hangs up all her clothes for the week and then cycles to work. / My bike just goes in my office, so I can only ride on days that I don’t have meetings in my office.

In particular, having convenient access to integrated bicycle facilities which provide security and cover for bikes was viewed positively, as was provision of convenient, clean, well planned showering and locker facilities specifically for staff.

I take my bike into my office, I actually lift it up the stairs because previously other staff had their bikes stolen. There is no bike storage near me. / I think there is a cage in the car park underneath, but it is just not as convenient. It is a fair distance to walk, then you have to get over to a shower. / You should have an integrated end of trip facility not too far from the bike park and hopefully not too far from your office there would be a good locker room with showers and stuff. I need a locker where I can keep my towel and washing things. / They should have bike lockers like they have at the stations.

Group participants who cycle acknowledged that cycling to and from work required greater forethought and organisation than traveling by car, but felt that the benefits of exercise, stress reduction and the enjoyment derived from this mode of transport, outweighed the barriers.

Cycling takes a little bit more of an effort. / I have found also time at the end to have a shower and changed then again to change at the end of the day – it takes a bit of time. / To start with it can be quite stressful. When I started, I had to think do I have the shampoo, the brush, my socks… but now its become routine it’s ok.

Some participants also felt that more promotion and events targeted at cyclists would help increase the number of staff using this mode of transport.

If you had a designated bike room store like at QE11 with information on up and coming events, clubs and things like that, it would be good.
4.6.4 Pool Vehicles

Reactions to the provision of pool vehicles as a possible intervention, were mixed. Some participants had suggested unprompted, that having access to pool vehicles would alleviate some of the mobility problems encountered during working hours by staff using active transport modes. However, other group participants had access to pool vehicles, but were reluctant to use them if they felt their use created problems for others in their department who they perceived had greater need of them, if the vehicles were poorly maintained or if they had to absorb the cost.

Some days I could use a pool vehicle but mostly in my particular situation if I am going out, I am going to be where I am going for a while, so I would be tying the car up. / I get sick and tired of taking University vehicles because the windows are always dirty and the tires need to be blown up and so on. / We have quite a lot pool vehicles. But they are also for post graduate students. I don't like taking one in case a post graduate student has no car and he needs it. / The university van comes off my research grant if I use it, so it has never been an option.

For participants who did not feel able to actively commute, pool vehicles were not seen as an option that would help them to take up an active mode as they would not assist in reducing the time required to travel to and from work.

It is a time factor for me. I've got kids and I have to shoot off and pick them up and drop them off and come back to work.

4.6.5 Parking

Interventions related to increasing the cost of parking met with varied reactions, though some participants had suggested unprompted, increasing parking fees.

When I joined the university, parking was free for many years. / If parking permits were a lot more expensive it would just make people more annoyed. / If you force everybody to pay more you are going to inconvenience them and get the backs up of those people who have no ability to be able to change over. You might be disadvantaging them by putting in these incentives to try and encourage other people if they can use other forms of transport. / That would just make people angry it won't change their behaviour.

I think it would be very difficult to introduce a substantial increase when it used to be free for academics. When fees were introduced the academic staff didn't like it.
The suggestion of increasing parking fees led to participants suggesting other parking options such as encouraging car pooling, providing short term parking and having flexible parking permits which would allow access to parking spots for some days, though there was general recognition that the latter would be difficult to manage and police.

*For me it would be good to have short term parking, perhaps an hour and a half or two hours, for when you have to be here for one lecture.*

*Part time permits would have to be flexible, I mean you couldn’t say I am only parking Monday, Tuesday, Wednesday. / You might have 2 weeks in a row because of something happening when you need to bring a car, but then the next week you might cycle or bus it. / I don’t see how it would work actually.*

Only some group participants were aware of the availability of parking voucher books, but those who had investigated this option felt the current system was not cost effective.

*When I explored options some years ago you could buy these books of ten tickets, but it is just not convenient. You have to go and make a special arrangement to get it. Then you have extra time filling in the card to put on the dashboard and cost wise you may as well get the parking permit.*

Precontemplators were particularly negative towards increased parking permit fees and adamant that more parking was required.

*I would be really devastated if parking increased because I don’t have any choice. / If it keeps going up and up, it gets to the point where you think “Well I want a guaranteed space!”*  

*They should build a multi storey car park. / Yes, I think that would be an excellent idea. / You could be undercover, and you are obviously going to have some easy way of getting from your car into your place of work. / I was thinking the same thing. No, we can’t give up our cars.*

During the group discussions it was evident that some academic staff feel the University should provide sufficient staff parking and in some instances, an allocated parking spot. Moreover there was a feeling that the University should not be trying to encourage them to use active transport modes as it would be detrimental to their work performance.

*I think it is very wasteful of my time if you’re paying me to teach and do research and I spend 15 minutes of that time parking each time I give a lecture. It is not an efficient way to use people.*
Some participants felt that the only way to offset increased parking fees would be to provide staff with an increase in salary in the first year.

You could give everybody a $1000 increase in salary for the first year.
5 DISCUSSION

The purpose of this qualitative research was to provide a better understanding of UWA staff behaviour, attitudes and perceptions in relation to active modes of transport, and reactions to possible interventions, in order to assist in the development of an effective strategy for increasing the use of active modes of transport.

In developing such a strategy the focus group discussions highlighted the need to consider the following components:

   The Decision Process;

   Target Group/s current behaviour, perceptions and attitudes;

   Communication and action objectives for target group/s; and

   Appropriate interventions and promotion strategy to achieve the communication and action objectives.

5.1 Decision Process

It was clear from the group discussions that family commitments play a very important role in the transport decision process for staff and in some instances other study or work commitments. The model below shows each major stage of the decision process, the possible decision roles, the people (identified from the research) who currently fill these roles, and opportunities for UWA to contribute (shown in italics).

<table>
<thead>
<tr>
<th>Major stages</th>
<th>Transport Decision Roles</th>
<th>Person/s responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recognition of transport need</td>
<td>Initiator – proposes transport mode</td>
<td>Staff member, family or UWA</td>
</tr>
<tr>
<td>2. Information search &amp; evaluation</td>
<td>Influencer – recommends. Decider – chooses</td>
<td>Family, colleagues, media advertising, Transperth, UWA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff member, family</td>
</tr>
<tr>
<td>3. Purchase decision</td>
<td>Decider – chooses Purchaser – pays</td>
<td>Staff member, family or both</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff member or UWA contributes</td>
</tr>
<tr>
<td>4. Usage</td>
<td>User – uses</td>
<td>Staff member</td>
</tr>
</tbody>
</table>
5.2 Target Group Behaviour and Profile

As identified in the quantitative study key target groups are those:

- In Action/Maintenance stage
- In Contemplation stage
- Confident they could use an active mode of transport

The table below shows an analysis of the target groups current behaviour and profile from the quantitative study.

Profile of Target Groups

<table>
<thead>
<tr>
<th>Staff distribution</th>
<th>Zone 2 22.8%</th>
<th>Zone 3 67.8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1 9.4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Action/Maintenance Stage

- 21.5% of staff use an active mode as main mode
- 35% actively commute on at least one day per week:
  - 18.5% are in Zone 3
  - 9.7% are in Zone 2
  - 6.4% are in Zone 1
- In the week surveyed:
  - 8.8% used public transport
  - 5.1% walked
  - 7.6% cycled
- *8.7% of public transport users considering switching to SOV

Demographically:
- 17.3% under 30 years
- 57.8% 31 to 50 years
- 24.9% 51 years and above
- 40.2% female/ 59.8% male

Contemplation Stage

- 27% of staff are in the contemplation stage
  - 19% are in Zone 3
  - 6% are in Zone 2
  - 2% in Zone 1
- 76.2% use SOV
  - 6.7% car pool

Demographically:
- 20.6% under 30 years
- 55.6% 31 to 50 years
- 23.8% 51 years and above
- 60.3% female/ 39.7% male

Confident could use Active mode

- 13.4% confident could walk
- 23.5% confident could cycle
- 27.7% confident could use public transport

- 17.7% of Zone 3 staff and 25% of Zone 2 staff were confident they could use Public Transport, but don’t

- 24.4% of Zone 2 staff were confident they could cycle, but don’t
- 30% of Zone 1 staff were confident they could walk but don’t

5.3 Attitudes of Target Groups

From both the quantitative study and the focus groups the main motivations and barriers related to choosing a transport mode were identified.

The model below presents an analysis of the information from both the quantitative study and focus groups showing simultaneously:
The motivating power of attributes associated with transport modes

The perceived competitive advantage of active transport modes on these same attributes.

This model provides information that has several implications for positioning communications and interventions as part of an Active Transport Strategy:

- Key or Immediate communication and intervention strategies are defined by those attributes which are motivating and unique to Active Transport Modes

- Key Weaknesses to be addressed are defined by those attributes which are motivating and where Active Transport Modes are perceived as inferior

- Potential Opportunities come in two ways:
  - Attributes which are motivating, but no transport modes are satisfying
  - Attributes unique to Active Modes of Transport, but not motivating (as yet) to staff.

This analysis provides a broad “Blueprint for Action”.

### Attributes of Active Modes of Transport vs Single Occupant Vehicles

<table>
<thead>
<tr>
<th>MOTIVATING POWER</th>
<th>ACTIVE MODES SUPERIOR</th>
<th>NEITHER SUPERIOR</th>
<th>ACTIVE MODES INFERIOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td><strong>Immediate Positioning Opportunity - Enhance</strong>&lt;br&gt;Cost savings&lt;br&gt;Avoid need to find parking</td>
<td><strong>Potential Opportunity for New Service/Promotions</strong>&lt;br&gt;Drop off/park close to lectures</td>
<td><strong>Key weakness – Fix if possible</strong>&lt;br&gt;Time taken&lt;br&gt;Flexibility to pick up others&lt;br&gt;Weather/physical comfort&lt;br&gt;Lack of services&lt;br&gt;Forward planning&lt;br&gt;Storage facilities&lt;br&gt;Personal safety&lt;br&gt;Lack of knowledge</td>
</tr>
<tr>
<td>LOW</td>
<td><strong>Potential Positioning Opportunity – Increase perceived importance?</strong>&lt;br&gt;*Increase fitness/health benefits&lt;br&gt;Less stress&lt;br&gt;Good for environment</td>
<td><strong>No Action</strong>&lt;br&gt;<strong>Social approval</strong></td>
<td><strong>No Action</strong>&lt;br&gt;*Poor shower/changing facilities&lt;br&gt;*Lack of secure bike facilities</td>
</tr>
</tbody>
</table>

* While these attributes rated low overall, among cyclists they had a higher motivating power.
5.4 Target Group Communication and Action Objectives

Having identified the main motivations and perceptions related to the different modes of transport and the key target groups, the communication and action objectives for each target group are identified. The model below shows an analysis of the target groups with suggested Communication/Action objectives.

<table>
<thead>
<tr>
<th>Action/Maintenance Stage</th>
<th>Contemplation Stage</th>
<th>Confident could use Active Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Increase awareness of Active Transport Modes Available</td>
</tr>
<tr>
<td>Maintain positive attitudes</td>
<td>Build positive attitudes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Encourage initial trial</td>
<td></td>
</tr>
<tr>
<td>Increase usage</td>
<td>Encourage repeat usage</td>
<td></td>
</tr>
<tr>
<td>Facilitate Usage</td>
<td>Facilitate Usage</td>
<td></td>
</tr>
</tbody>
</table>

From this analysis it is clear that the same communication and action objectives are relevant to the two target groups not currently in Action/Maintenance and that promotions and interventions targeted to these two groups are also likely to fulfill the objectives for the Action/Maintenance group.

5.5 Interventions to Achieve Communication and Action Objectives.

In assessing possible interventions and promotions it is useful to place them into the “Blueprint for Action” model developed on the basis of the perceived attributes of Active Modes of Transport and their motivating power and link them to the communication and action objectives.

From this analysis it is evident that interventions providing financial incentives for using active transport and disincentives for parking, provided they are widely advertised and promoted address a wide range of communication and action objectives.
### Active Modes Superior

**Immediate Positioning Opportunity - Enhance**

- # + Promote cost savings
- + Financial incentives:
  - # + ^ > U-Pass
  - # + ^ Rebate for not taking parking permit
- # + ^ Promote lack of parking hassles
- = ^ Disincentives: Reduce subsidy on parking.

### Neither Superior

### Active Modes Inferior

**Key weakness – Fix if possible**

- # + Advertise & promote:
  - Actual time taken
  - Time to read/relax
  - High usage
  - Reliability and safety
  - > Taxi vouchers

- > Bus shelters to offer more weather protection

- Information on public transport and cycle routes:
  - # = > Transport Booth
  - # = > Maps of bus stops and related bus numbers
  - # + = ^ Public transport users and walkers groups to provide information & support
  - > Provide lockers for storage for active transport users

#### Potential Positioning Opportunity – Increase perceived importance?

- # + Promote:
  - Fitness/health benefits
  - Good for environment
  - Less stress
- = ^ Reduce parking accessibility:
  - Reduce subsidy on parking

### No Action

**Potential Opportunity for New Service/Promotions**

- + > New bus route for 78

### No Action

*While these attributes rated low overall, among cyclists they had a higher motivating power.*

<table>
<thead>
<tr>
<th>Awareness</th>
<th>+ Positive attitudes</th>
<th>= Encourage Initial trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>^ Increase usage</td>
<td>&gt; Facilitate usage</td>
<td></td>
</tr>
</tbody>
</table>

### Motivating Power

- **High**
  - Immediate Positioning Opportunity - Enhance
  - Potential Positioning Opportunity – Increase perceived importance?

- **Low**
  - No Action

---

* # Awareness  + Positive attitudes  = Encourage Initial trial
  ^ Increase usage  > Facilitate usage
5.6 Conclusions and Implications

Encouraging more staff to use Active Modes of Transport poses a difficult challenge, as one group participant commented:

It is one of those things that there is no easy answer to and there never will be.

In order to increase the use of Active Transport Modes by UWA staff a Green Transport Strategy will be most effective if it is designed to address the following action and communication objectives:

Raise awareness of Active Transport Modes;

Build and maintain positive attitudes;

Encourage initial trial;

Encourage repeat usage; and

Facilitate usage.

Key target groups include:

- Users in Action/Maintenance stage
- Contemplators
- Those who are confident they could use an active transport mode.

Implications for promotions and interventions:

- Acknowledge that family commitments and multiple work locations are a key component of the decision process for many staff when choosing transport modes.

- Recognise the difficulty of balancing time pressures and transport needs.

- Acknowledge expectations among academic staff that an employer should provide access to parking.

- Promote the fact that if more people who could use active modes did so, there would be more parking available for others.
- Focus on attributes of Active Transport Modes that are highly motivating and superior to single occupant vehicles, through:
  - Interventions with financial incentives;
  - Promoting the cost effectiveness of Active Transport Modes; and
  - Consider promoting benefits of not having to search for a parking space.

- Promote the fitness and stress lowering benefits of active transport modes, possibly through testimonials.

- Provide information to staff about existing subsidization of parking. This may prevent public transport subsidies being perceived as inequitable.

- Emphasise that Active Modes are accepted, reliable, safe and cost effective in order to address perceived key weaknesses.

- Address weaknesses related to cycling, including the cycle network leading to UWA and end-of-trip facilities.

- Consider the need for UWA campus plans to encourage more on-site services such as childcare, banking and shopping, to reduce the need to use a car during the day.

- Address other key weaknesses related to facilitating and increasing usage of Active Transport Modes.