

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

# **Transport access and mobility needs and impediments in New Zealand**

A thesis presented in partial fulfilment of the requirements of the degree of  
Master of Public Policy at Massey University, Albany Campus, New Zealand.

Anatole Michael Sergejew

February 2005

## **Abstract**

New Zealand's Land Transport Management Act 2003 places a statutory requirement on transport agencies to improve access and mobility. However, the access and mobility needs of New Zealanders, and existing impediments to access and mobility, are not well understood.

This thesis focuses on groups of people that international research suggests are at risk of social exclusion. It investigates their transport needs and impediments related to access and mobility, by reviewing the international literature and by conducting face-to-face interviews with eight people selected from these potentially at-risk groups.

The understanding gained from this present research of mobility needs and impediments, and the effects of these impediments, are discussed. This thesis suggests that mobility impediments are resulting in social exclusion in New Zealand, and that while current consideration of the transport-disadvantaged in New Zealand is largely focussed on the elderly and the disabled, other groups identified internationally, such as young people and new settlers, are also at risk of social exclusion because of impediments to their mobility. This thesis has examined what people perceive as their mobility needs, and suggests that as needs are variable, it is not possible or appropriate to identify basic mobility needs that should apply to everyone. Also, mobility impediments, rather than being a matter of can or cannot, are a matter of degree.

The ways in which identified mobility impediments might be addressed are described. It is suggested that because of the difficulties in establishing and providing for access and mobility needs, it may be more appropriate to focus on providing access and mobility opportunities instead. The usefulness and limitations of this present research are discussed, together with the prospects of subsequently applying the research method on a wider scale in order to develop a fuller understanding of the range of access and mobility needs and impediments of New Zealanders.

## **Acknowledgments**

This thesis would not have been possible without the support and encouragement of a number of people. In no particular order, I would like to acknowledge you.

I would like to thank the Ministry of Transport for granting me study leave to complete this thesis, and especially those Ministry staff who carried an extra workload for six months to make this possible.

I would like to thank the agency staff who recruited the interviewees for me, and I would like to thank the interviewees who agreed to participate in this research, and who were prepared to take time out and open up to me on their personal access and mobility needs and frustrations. I hope this thesis does justice to your difficulties.

I would like to thank the staff of the School of Social and Cultural Studies of Massey University Albany Campus, particularly my thesis supervisors Marilyn Waring and Grant Duncan, for their teaching, guidance, support and perseverance over the last seven years.

I would like to acknowledge the very timely suggestions I received in writing this thesis from my brother, Alex, who at two very critical stages was able to help me see a way forward.

Finally, but by no means least, I would like to thank my wife, Astrid, for encouraging me to start this degree in the first place, for supporting my study over the years, for the sacrifices this meant, and for making editing suggestions for the penultimate draft.

I hope that the effort and support I have received from you all will prove to be worthwhile, in as far as this research helps contribute to the future development of a more fully inclusive transport system.

## Table of contents

Abstract .....	i
Acknowledgments .....	ii
Table of contents .....	iii
List of tables .....	v
Glossary .....	vi
Chapter One : Introduction .....	1
1.1 Land transport policy and legislation .....	1
1.2 Objectives of this research .....	3
1.3 Chapter outline .....	4
Chapter Two : Key concepts and questions .....	6
2.1 Defining access and mobility in the transport field .....	6
2.2 Defining need in the transport field .....	8
2.3 Defining impediments in the transport field .....	15
2.4 Why improve access and mobility? .....	17
2.5 Rights to access and mobility .....	20
2.6 What level of access and mobility should be available? .....	24
2.7 Who should access and mobility be improved for? .....	28
2.8 Other studies of mobility impediments .....	31
2.8.1 Mobility for the elderly .....	33
2.8.2 Mobility for the disabled .....	35
2.8.3 Mobility for women .....	36
2.8.4 Mobility and public transport .....	37
2.9 Summary and key questions .....	38
Chapter Three : Research method .....	40
3.1 Choice of research method .....	40
3.2 Selection and recruitment of interviewees .....	41
3.3 Ethical considerations .....	43
3.4 Interview schedule .....	46
3.5 Approach to interview analysis .....	47

Chapter Four : Results .....	49
4.1 Liu.....	49
4.2 Mandy.....	49
4.3 Reena.....	51
4.4 Joy.....	55
4.5 May.....	56
4.6 Becky.....	58
4.7 Nick.....	60
4.8 Val .....	61
4.9 Sarah.....	64
4.10 David .....	67
4.11 Kath.....	70
4.12 Frequency of travel.....	72
4.13 Ranking of importance of travel purposes .....	74
Chapter Five : Discussion.....	76
5.1 Frequency of travel.....	76
5.2 Access without mobility?.....	77
5.3 Ranking of importance of travel purposes .....	78
5.4 Types of mobility impediment .....	82
5.5 Modal mobility impediments and travel choices.....	83
5.6 Effects of mobility impediments .....	91
5.7 Addressing mobility impediments .....	92
Chapter Six : Conclusions .....	98
6.1 Research questions and context .....	98
6.2 Understandings of access and mobility needs and impediments gained through this research.....	99
6.3 Usefulness and limitations of research tools and suggestions for future research .....	102
6.4 Conclusions.....	105
Appendix .....	107
MUHEC Application forms.....	107
References .....	108

## List of tables

Table One: Comparison of needs .....	13
Table Two: comparison of mobility needs .....	26
Table Three: Weekly travel frequency by purpose reported by interviewees ..	73
Table Four: Importance of travel purposes as ranked by interviewees .....	75
Table Five: Comparison of importance of travel purposes .....	80
Table Six: Summary of mobility impediments .....	85
Table Seven: Mobility impediments and effects by mode .....	89

## Glossary

**Access.** The right or opportunity to reach activities using the transport system, and so participate in society.

**Accessibility.** The ease with which activities can be reached using the transport system.

**DETR.** Department of Environment, Transport and the Regions. The government department which was responsible for transport policy in the UK.

**Impediment.** A hindrance or obstruction, e.g. "mobility impediment".

**Mobility.** The ability and ease of individuals to move in the greater community using the transport system for the purpose of accessing activities to participate in society.

**Need.** A want or requirement.

**Rideline.** A telephone and Internet-based service that provides information on public transport services, e.g. information on services that could be taken for a particular journey, timetables, fares, location of stops, etc.

**Social exclusion.** The collective processes that work to deprive people of access to opportunities and means, material or otherwise, to achieve well-being and security in the terms that are important to them.

**Total Mobility.** A scheme co-funded by central government and by regional councils, that funds a fifty percent discount on taxi fares for people who are unable to use public transport because of a disability.

**Virtual mobility.** A shorthand term for the process of accessing activities that traditionally require physical mobility, but which can now be undertaken without

recourse to physical travel by the individual undertaking the activity, for example shopping or banking by telephone or over the Internet.

# Chapter One

## Introduction

This chapter discusses recent developments in government land transport policy, legislation and funding that have brought transport access and mobility to the fore. It then discusses the objectives of this present research. The chapter concludes with an overview of the thesis structure using chapter outlines.

### ***1.1 Land transport policy and legislation***

In 1998 the National/New Zealand First Coalition Government produced *The National Transport Statement*, a statement of the government's overarching transport policy objectives and the results it expected to achieve towards those objectives. One such objective, entitled "accessibility", was to "ensure that the transport system meets the need of all New Zealanders". However, the outcome the government expected to see in delivering this objective was simply that "all New Zealanders are able to use the transport system at a reasonable cost. A cost is a reasonable cost where the value of the cost to the nation is exceeded by the value of the resulting benefit to the nation" (Williamson, 1998, p.3). It was not clear how transport needs would be defined, nor how the outcome of transport benefits exceeding transport costs related to the objective of ensuring that the transport system met the need of all New Zealanders.

In land transport legislation, the focus of central government land transport agencies, as specified in the Transit New Zealand Act 1989, was to promote policies and allocate resources to achieve a safe and efficient land transport system that maximised national economic and social benefits. There was also a specific requirement for agencies to consider the needs of the transport-disadvantaged. Consideration of the transport-disadvantaged manifested itself through the funding of public transport generally, particularly in off-peak periods, through the provision of concessionary fares for students and pensioners, and

through the provision of a "Total Mobility" scheme for those unable to use public transport.

The degree to which the needs of the transport-disadvantaged had to be considered was never clearly defined, and there were funding difficulties with both public transport and the Total Mobility scheme. When a dedicated government land transport fund was established in 1989, it was funded from taxes on motorists and was expected to benefit motorists. When introducing the legislation to establish the fund, the Minister of Transport stated:

*In partnership with territorial authorities, the fund will pay for local roading and road safety works, as well as for State highways. When public transport has a clear role in reducing roading congestion or future roading investment those costs will be met by the fund in partnership with local authorities. When public transport has social functions those will be met directly by Government contributions to the fund that come from general taxation and not from road users. ... Road users will get back from the land transport fund exactly what they pay into it. (Jefferies, cited by House of Representatives, 1989, p. 10368).*

But in practice the funding of social functions from general taxation never occurred. Government funding of land transport activities other than roading, for example public transport and Total Mobility, were also made from the land transport fund, to the consternation of road-user groups such as the Road Transport Federation and the Automobile Association.

Recent developments in government policy, legislation and funding have put a specific emphasis on transport access and mobility. In December 2002 the Labour Government published the *New Zealand Transport Strategy* as "the government's vision for the future of transport in New Zealand." The strategy outlined the government's objectives for transport, including the objective of "improving access and mobility". The strategy stated that "the government will improve access to appropriate transport for all, including for vulnerable users,

for the transport-impaired and their caregivers, in order to enhance participation and independence and reduce social exclusion" (Swain, 2002, p. 26).

The Land Transport Management Act 2003 placed a statutory requirement on transport agencies to contribute to the objectives of the *New Zealand Transport Strategy*, including the objective of improving access and mobility. Access and mobility are not defined in the legislation. The definitions of these terms are discussed in chapter two of this thesis.

While government funding for land transport was still predominantly sourced from taxes on motorists, the purpose of the fund was broadened. Before adopting its annual funding programme, the government land transport funding agency, Transfund, must by law be satisfied that the programme contributed to the objectives of the *New Zealand Transport Strategy*, including the objective of improving access and mobility.

## **1.2 Objectives of this research**

While recent developments in government policy, legislation and funding refer to transport access and mobility, the access and mobility needs of New Zealanders, as well as existing impediments to access and mobility, are not well understood.

The objective of this present research is to further the understanding of transport access and mobility needs and impediments. It is hoped that this will assist various land transport agencies to meet their statutory requirements to improve access and mobility. To this end, this present research identifies some groups for which access and mobility might be improved, and potential ways that their access and mobility might be improved.

As the land transport agencies covered by the current legislative requirement are primarily concerned with the planning and funding of land transport

infrastructure and services, this research will focus on the land transport aspects of access and mobility.

The understanding gained in this research is not expected to be comprehensive. For example, for feasibility reasons the scope of this research is constrained to urban transport in Auckland.

Another objective of this research is to develop and pilot research tools for understanding what people perceive to be their transport access and mobility needs, and impediments to these needs.

### **1.3 Chapter outline**

This thesis is made up of six chapters. Chapter One: *Introduction*, outlines recent developments in government policy, legislation and funding that have brought transport access and mobility to the fore, and formulates the objectives of the research in this thesis.

Chapter Two: *Key concepts and questions*, discusses the meanings of the key concepts of this research such as transport access, mobility, need and impediment. This is followed by consideration of why access and mobility should be improved, and for whom they should be improved.

Chapter Three: *Research method*, discusses why a qualitative approach, using semi-structured interviews, was chosen for this research. The chapter discusses how interviewees were selected and recruited, and the ethical issues considered in the research design. It concludes with an outline of the interview schedule and the approach taken to interview analysis.

Chapter Four: *Results*, describes the results of the interviews. The purposes of travel, travel frequencies and the priorities of travel purposes are outlined, together with the interviewees' choice of travel modes. The travel impediments

faced by interviewees and the effects of these impediments are described, using direct quotations when appropriate.

Chapter Five: *Discussion*, discusses the frequency of travel and ranking of importance of travel purposes. The views of interviewees on the ability to access opportunities without travel are reported. This chapter analyses the types of mobility impediments identified in the interviews by travel mode and the effects of these mobility impediments on interviewees. Finally, the prospects to improve access and mobility by addressing the impediments identified are discussed.

Chapter Six: *Conclusions*, summarises the questions this research was intended to address. The results of the research are discussed in terms of how they answer these research questions. The usefulness and limitations of the research are discussed, and suggestions for future research are described.

## Chapter Two

### Key concepts and questions

The objective of this present research is to add to the understanding of transport access and mobility needs and impediments, in the hope that this will assist transport agencies to improve access and mobility. Through reference to relevant literature, this chapter defines and discusses the meanings of the key concepts of transport access, mobility, need and impediment. It then goes on to consider why access and mobility should be improved, and for whom they should be improved.

#### **2.1 *Defining access and mobility in the transport field***

The *Concise Oxford Dictionary* defines "access" as "the right or opportunity to reach or use or visit", and it defines "accessibility" as the condition of being readily reached, entered or used (Thompson, 1998, p. 8). These definitions of access and accessibility are quite broad, potentially referring to the opportunity to reach anything, anywhere, anytime for any purpose (or even for no purpose at all). However, the context of the use of these words would limit their applicability.

Within the transport field, O'Fallon defined accessibility as "the ability and ease of all members of society to access the services and community resources required for a reasonable quality of life" (2001, p. 5). In contrast to the dictionary definitions, this definition associates access with purpose and with concepts of social participation.

While the accessibility of services and resources is the result of a potentially wide range of factors, including their availability and cost, and the accessibility of the buildings they might be located in, this thesis is primarily concerned with the contribution land transport agencies can make to accessibility, consistent with the focus of the relevant legislation. Similar considerations led Gray to

narrow down the definition of accessibility to "the ease with which an economic or social activity can be reached using the transport system" (2002, p. 5).

Thus in this thesis I shall define "access" as the right or opportunity to reach activities using the transport system and so participate in society, and "accessibility" as the ease with which activities can be reached using the transport system.

The *Concise Oxford Dictionary* defines "mobility" as the freedom or ability to move or flow freely (Thompson, 1998, p. 874). O'Fallon gave mobility a similar definition: "the ability and ease of individuals to move or travel in the greater community" (2001, p. 5). Again, this is a broad definition, potentially referring to the ability to move anyone, anywhere, anytime for any purpose (or even for no purpose at all).

In the land transport field, mobility is often associated with access and with need. For example, Wiggins suggested that "what underlies the demand for mobility is indeed a need, perhaps a basic need. But this basic need is something less specific. It is the need for access or for the mutual accessibility of dwellings, work places and everyday facilities" (cited by Banister, 1980, p. 133).

Similarly, Kenyon, Rafferty & Lyons suggested that "the primary function of mobility is to give access to educational and employment opportunities; health and social services; family and friends; healthy, fresh, reasonably priced produce and other goods; etc. Thus, where mobility is inadequate, access can be denied and exclusion can occur. In this sense, lack of mobility is a causal factor, lack of access the consequence" (2003, p. 321). Thus mobility is often seen as a means of achieving access to enable participation in society.

For transport systems to assist access and mobility, those systems must themselves be accessible. Problems with the accessibility of transport will be discussed later in the context of impediments to access and mobility.

As Kenyon et al. pointed out, physical mobility by use of the transport system is not the only way to achieve access. For example it is possible to access various activities, such as maintaining existing social networks and creating new ones, shopping and working, over the Internet or by telephone. Kenyon et al. went on to define virtual mobility as "a shorthand term for the process of accessing activities that traditionally require physical mobility, but which can now be undertaken without recourse to physical travel by the individual undertaking the activity" (ibid., p. 321). The options for people to access activities without travelling will be considered later in this thesis, in the analysis of interviews.

For the purposes of this thesis I shall consider mobility as an integral component of accessibility. I shall define "mobility" as the ability and ease of individuals to move in the greater community using the transport system for the purpose of accessing opportunities to participate in society.

## ***2.2 Defining need in the transport field***

As stated previously, mobility is often seen as a means of achieving access to enable participation in society. From that perspective, the need for mobility would logically be linked to the need for the activity it provides access to. The *Concise Oxford Dictionary* defines "need" as "a want or requirement" (Thompson, 1998, p. 911). Consequently "transport need" could then be defined as the want or requirement for transport generated by the want or requirement that transport would help fulfil. It should be noted, however, that there are wide differences between a want and a requirement, i.e. between the travel we want (for example, a trip to the beach) and the travel we must have (for example, a trip to hospital), and both could potentially be considered a transport need.

Gasper suggested that we can usefully distinguish between three modes of use of the term "need":

*In mode A, "need" is a term used in evaluatively neutral description or explanation: a want or a drive or a potential.*

*In mode B, a "need" is a requisite for doing or achieving an objective. Thus the requisite's normative necessity depends on the status of the objective, and on how essential it is for reaching that objective.*

*In mode C, a "need" establishes a strong normative claim since the objective is a normative priority, and the requisite is indeed essential.*

*In all modes there is an ambiguity inasmuch as "need" is sometimes applied to the requisite and sometimes to the objective. Further, whereas in mode A "need" typically figures as a noun, a presence, in mode B it can often appear as a verb, a lack. (2004, p. 7).*

Gasper described how differing elements of these three modes of use are used when defining need in sociology, psychology, politics and philosophy (ibid, p. 9).

A number of potential approaches to establishing transport need have been conceptualised by Bradshaw: the "normative" approach seeks to establish a standard below which nobody should fall, the "comparative" approach uses standards pertaining to another group as a design target, and the "subjective" approach rests on an individual's own judgements and expectations (cited by Benwell, 1979, p. 223).

There are differing views as to whether needs are best based on an individual's own judgements and expectations, or on other objective criteria. The phenomenological perspective, which has strongly influenced sociology, suggests that "there is no separate (or objective) reality for people. There is only what they know their experience is and means" (Patton, 1990, p. 69).

But Doyal and Gough argued that "subjective feeling is not a reliable determination of human need, a point reinforced by the fact that we can strongly

desire things which are seriously harmful and, in our ignorance, not desire things which we require to avoid such harm" (1991, p.49).

Similarly, Sen argued that:

*The defeated and the down-trodden come to lack the courage to desire things that others more favourably treated by society desire with easy confidence. The absence of desire for things beyond one's means may not reflect any deficiency of valuing, but only an absence of hope, and a fear of inevitable disappointment. The underdog comes to terms with social inequalities by bringing desires in line with feasibilities* (1985, pp. 10-11).

Vintila came to a similar conclusion when considering the travel desires of people with disabilities:

*While they may desire less travel than their able-bodied counterparts, simply asking them will not necessarily yield worthwhile or valid answers because people with disabilities may not know themselves. Long histories of deprivation and exclusion may have resulted in a culture of low expectations* (cited by Lawrence, 1995, p. 14).

Some proponents of a more objective determination of need suggest that there are universal needs that can and should apply to all. For example, Gough suggested that "needs" should refer to a particular category of goals which are believed to be universalisable, as distinct from "wants" which derive from an individual's particular preferences and cultural environment. Gough explained that "the universality of need rests upon the belief that if needs are not satisfied then serious harm of some objective kind will result" (2002, p. 7). Through such a conceptualisation, Doyal and Gough thus restricted their definition of needs to what they regarded as "basic needs", which they defined as things necessary to all to avoid serious, objective harm. They suggested these basic needs are

survival, physical health, cognitive and emotional capacity, cultural understanding, opportunities to participate and critical autonomy (cited by Gough, 2002, p. 12). They also distinguished from need the objects, activities and relationships required to satisfy these needs, which they termed "satisfiers" (Doyal and Gough, 1991, p.155).

Such theories of universal basic needs are not without critics. For example Stern suggested that:

*The basic needs ideas have real problems. What needs are basic and more worryingly what levels are held to be essential minima? What if these levels are infeasible...? Who decides which needs are basic and the appropriate level? In what sense are they basic if people who can afford to attain them do not choose to do so? ... Is the targeting and attempted delivery of basic needs a productive way of organising limited government resources...? [The questions] are not easy to answer in a satisfactory way and one is left with a certain scepticism about the approach (cited by Gasper, 2004, p. 3).*

Fraser argued that the search for objective, universal needs often results in the neglect of the particular needs of minority cultures (1996, p. 424). A focus on universal needs may also risk overlooking valid individual needs.

In the field of psychology, Maslow defined basic needs as the fundamental motivators that underlie human behaviour. Maslow suggested that there is a hierarchy of five basic needs as follows: physiological (biological) needs, the need for safety and security, the need for belongingness and love, the need for self-esteem and the esteem of others, and the need for self-actualisation. Maslow suggested that the higher in this hierarchy a basic need is, the less imperative it is for sheer survival. Maslow did not see this hierarchy as applying to all people or to all cultures, but rather that "most of the people with whom we have worked have seemed to have these basic needs in about the order that

has been indicated. However, there have been a number of exceptions" (1970, p. 51).

Sen suggested that instead of needs, the focus should be on basic capabilities, a person being able to do certain basic things, and that rather than considering needed things the focus should be on what these things do to human beings. Sen suggested that basic capabilities might include the ability to move about, the ability to meet one's nutritional requirements, the wherewithal to be clothed and sheltered, the power to participate in the social life of the community (1982, p. 367). While Sen never made a comprehensive list of basic capabilities, Nussbaum developed a list of ten central human functional capabilities, namely life, bodily health, bodily integrity, senses, imagination and thought, emotions, practical reason, affiliation, other species, play and control over one's environment (cited by Gough, 2002, p. 5-6).

Table one summarises the basic needs suggested by Doyal and Gough and by Maslow, and the central human functional capabilities proposed by Nussbaum, and suggests how they might be grouped into common themes:

Some difference between these lists of basic needs and capabilities should not be unexpected, as they reflect different perspectives. For example, Maslow concentrated on needs as motivators, and thus excluded some personal and physical capability needs. Gasper suggested that:

*We should accept that there are various criteria possible in needs discourse, each of which may be appropriate for different purposes. For pursuing a consensual priority for minimum requirements for decency, a narrower picture of needs is more appropriate than when trying to ... prescribe for "human flourishing" or "the good life" (cited by Gough, 2002, p. 17).*

**Table One: Comparison of needs**

<b>Doyal &amp; Gough's Basic Needs</b>	<b>Nussbaum's Central Human Functional Capabilities</b>	<b>Maslow's Basic Needs</b>
survival physical health	life bodily health bodily integrity	physiological need safety need
cognitive & emotional capacity cultural understanding	senses imagination & thought emotions practical reason	
opportunities to participate	play affiliation	social need esteem
critical autonomy	control over one's environment	self-actualisation
	other species	

In New Zealand, the major social, cultural and economic determinants of health have been identified as income, employment, education, housing, culture and ethnicity, population-based services and facilities, and social cohesion (National Advisory Committee on Health and Disability, 1998). In this context "social cohesion" refers to "the degree to which individuals are integrated with, and participate in, a secure social environment" (ibid., p. 34). More recently, the government identified desired social outcomes by which the social wellbeing of New Zealanders could be measured. These desired outcomes included health, knowledge and skills, paid work, economic standard of living, civil and political rights, cultural identity, physical environment, safety and social connectedness (Ministry of Social Development, 2003). Here, "social connectedness" refers to "people enjoying constructive relationships with others in their families, whānau, communities and workplaces. They are able to participate in society through sports, arts, and other recreational activities. Contributions to social connectedness through unpaid work and caring are valued" (ibid., p. 14). From this, it would appear that need in New Zealand is not considered in terms of the

requirements for basic survival, but rather a more holistic view is taken of requirements for "human flourishing" or "the good life".

In the transportation planning field it is more common to refer to transport demand rather than to transport needs. Observed travel behaviour has often been used as a proxy for transport demand. For example, the UK Department of the Environment, Transport and the Regions (DETR) used data from National Travel Survey statistics to illustrate that there is a vast range of travel undertaken between people in different situations. They quoted figures ranging from 880 miles per year travelled on average for a person over eighty with some mobility difficulty in a household with no car, to 4,079 miles per year on average for an able-bodied person in the same age group in a car-owning household (DETR, 2000). Such figures indicate wide differences in observed travel behaviour, with the standard of one group (people over eighty with some mobility difficulty in a household with no car) falling well short of the standards pertaining to another group (able-bodied people over eighty in a car-owning household).

But observed travel behaviour is potentially quite separate from need, as "behaviour is manifest, desire often is not" (Wiggins, cited by Banister, 1980, p. 132). Thus, while this thesis later discusses potential transport need by considering actual travel behaviour, this must be undertaken with caution.

The research in this thesis focuses on people's own judgements of their transport needs and impediments, but in doing so it will be important to bear in mind the criticisms of the subjective determination of need, as discussed above.

Another potential difficulty is that subjective transport need is not necessarily static. The UK DETR has noted that in measuring transport needs:

*The more mobility there is, the greater becomes the expectation of mobility. For example, now that buses can be boarded by some wheelchair users, the users of bigger wheelchairs (which cannot board them) start to complain. Similarly, once low floor*

*buses have appeared in a particular locality, there is an expectation that they should be provided on all routes. One operator commented that while he was pleased to be able to transport more people more easily, he wondered what the limit would be to what public transport was expected to do. The demand for transport is probably insatiable and the opening up of one possibility may lead to a new set of demands. (2000, chapter 3, para. 6).*

These difficulties will be considered when interpreting the results of this research.

### **2.3 Defining impediments in the transport field**

The *Concise Oxford Dictionary* defines "impediment" as "a hindrance or obstruction" (Thompson, 1998, p. 680). Accordingly, "mobility impediments" can be defined as hindrances or obstructions to individuals who wish to use the transport system in order to move in the greater community for the purpose of accessing opportunities to participate in society.

However, the transport literature more commonly refers to "barriers", rather than "impediments". For example, the *New Zealand Transport Strategy* says that "barriers to mobility will need to reduce" (Swain, 2002, p. 7). The *Concise Oxford Dictionary* defines "barrier" as "a fence or other obstacle that bars advance or access", "an obstacle or circumstance that keeps people or things apart", or as "anything that prevents progress or success" (Thompson, 1998, p. 104). Thus barriers are more absolute than impediments. Barriers prevent while impediments can prevent or they can just hinder.

But mobility, rather than being a matter of can or cannot, is arguably a matter of degree. The UK DETR has observed that:

*It is – theoretically – possible for most people to reach most destinations using a combination of walking and public transport.*

*But this may be at the price of human dignity; it can take an hour and a half for a public transport user, standing in the cold, hanging around waiting for connections, to make a journey that a car user could do in ten or fifteen minutes. What users, or potential users, in many cases cannot do is to travel in what they consider reasonable time and comfort and at a reasonable price, to destinations that they need or want to reach in order to support themselves and to participate in normal social activities.* (2000, chapter 2, section 2, para. 3).

If mobility is a matter of degree, then impediments to mobility are also a matter of degree. When considering mobility impediments the research described in this thesis will therefore use this term as accommodating a range of degrees of impediment. This range will extend from impediments that cause some hindrance but still allow mobility to occur, and impediments that reduce mobility, to impediments that act as barriers, prevent mobility altogether and thereby prevent access.

McKenna and Lavery (1993) commented that many barriers may potentially constrain the mobility of people, and that the barriers can be assigned into particular categories, e.g. personal, environmental and trip-related. Personal mobility barriers could be health-related, and could include frailty because of age or medical condition, limited endurance, energy, lack of knowledge of destinations, fear, low expectations, or limited money. Environmental barriers could include weather conditions, broken or uneven pavements, hilly topography, lack of rest facilities or street lighting. Trip-related barriers could include the length and time of the trip, a hostile element in the path of arriving at a destination, difficulties in accessing a travel mode, staff attitudes, poor service, lack of understanding of how services work or limited quality of information on services. This list of barriers could result in a range of degrees of impediment.

The New Zealand Human Rights Commission observed that for a person to get from their home to a destination and then home again requires a number of

linked steps. The Commission listed the requirements of an "accessible journey" as comprising information about transport services, booking the service, getting to the service pick-up point, getting on board, arriving at the destination, paying for the service, training of service providers and safety issues. The Commission noted that "if one link is broken or inadequate, the whole journey becomes impractical" (2004, p. 23). This suggests a "can or cannot" approach to mobility, rather than seeing mobility as a matter of degree.

Impediments will be discussed further in the interview analysis later in this thesis.

## **2.4 Why improve access and mobility?**

As previously discussed in section 2.1, mobility is often considered as a means to an end, namely to access opportunities to participate in society. In the present context, improving access and mobility would also be a means to an end.

In the UK, Lucas observed that:

*a lack of transport means that individuals can become cut off from employment and education and training opportunities, perpetuating their low skills base and inability to secure a living wage. Poor access to healthy affordable food, primary and secondary health care and social services exacerbates the health inequalities that are already evident amongst low income groups, further reducing their life chances. People can become housebound, isolated and cut off from friends, family and other social networks. This can seriously undermine their quality of life and, in extreme circumstances, may lead to social alienation, disengagement and, thus, undermine social cohesion (2003, p. 19).*

The New Zealand *Royal Commission on Social Policy* suggested that "the assumption has been that public authorities have a responsibility to provide [transport] facilities (or assist others to provide them) not as ends in themselves but as a means of assisting people to participate in personal, social and economic activities" (Good, 1988, p. 399). This appears to be the motivation of the recent New Zealand requirement for land transport agencies to improve access and mobility.

In 2000, the Social Services and Employment Minister stated that "the key focus of the New Zealand government's social policy is to address social exclusion". The Minister indicated that "central to social progress was a thriving and sustainable economy in which all New Zealanders had the opportunity to participate" and that "active social policies to lift the capability of people to take up those opportunities are being pursued, to ensure that all areas of the country benefit and that ultimately, all feel that they belong to, and can actively participate in, society" ((Maharey, 2000, paras. 6 and 8).

A number of subsequent government strategies were produced with a view to boosting social participation. *The New Zealand Disability Strategy* was released in 2001 with the stated aim of promoting a more inclusive society by eliminating the barriers that prevent disabled people from reaching their potential or participating fully in the community (Dalziel, 2001a). To achieve this, the strategy calls for a variety of actions, including the following actions targeted at the removal or reduction of mobility barriers:

- Require all new scheduled public transport to be accessible in order to phase out inaccessible public transport
- Encourage the development of accessible routes to connect buildings, public spaces and transport systems
- Develop nationally consistent access to passenger services where there is no accessible public transport.

*The New Zealand Positive Ageing Strategy* was also released in 2001. This strategy had the stated aim of improving opportunities for older people to

participate in the community in the ways that they choose. The strategy included a vision for positive ageing in New Zealand that will be a reality when, among other things, "accessible transport supports community participation" (Dalziel, 2001b, p. 14).

As previously mentioned in section 1.1, the *New Zealand Transport Strategy* was released in December 2002 as "the government's vision for the future of transport in New Zealand". The strategy outlined the government's objectives for transport, including the objective of "improving access and mobility". In discussing this objective, the strategy suggested that "lack of access can reduce individual or community ability to participate in activities" and that "the government will improve access to appropriate transport for all, including for vulnerable users, for the transport-impaired and their caregivers, in order to enhance participation and independence and reduce social exclusion" (Swain, 2002, p.26).

The Commission of the European Communities defined social exclusion as "the multiple and changing factors resulting in people being excluded from the normal exchanges, practices, and rights of modern society" (cited by Percy-Smith, 2000, p.3).

Peace discussed the history of the term "social exclusion", the various meanings of the term and its application to New Zealand. While the term was originally concerned with the unemployed, Peace described the wider meanings of the term and suggested that it "could be imported into New Zealand as one concept among many. It could sit alongside the more familiar concepts of 'poverty', 'being underprivileged', 'experiencing hardship', and seeking to attain a 'good quality of life'" and that "social exclusion (and social inclusion) become further 'ways of naming' the collective processes that work to deprive people of access to opportunities and means, material or otherwise, to achieve well-being and security in the terms that are important to them" (2001, pp. 33-34). This wide definition of social exclusion is adopted for this thesis.

## **2.5 Rights to access and mobility**

Another perspective on increasing access and mobility is the view that there are, or should be, human rights of access and mobility.

Houseman has observed that “mobility is so highly prized that its limitation is the principal sanction in all systems of criminal punishment” and that the right of mobility is recognised as a basic right in all post-feudal societies (1979, p. ix). Blackstone's *Commentary on the Laws of England*, first published in 1765, recorded that “the personal liberty consists in the power of locomotion, of changing situation, or moving one's person to whatsoever place one's own inclination may direct, without imprisonment or restraint, unless by due process of law” (cited by Houseman, 1979, p. 25).

The moral basis of the right of mobility has been argued as follows: “People are born almost equally mobile. Their natural mobility speaks for the personal liberty of each to go where he or she wants. Equity demands the protection of this right against any abridgement. For the sake of this protection it is irrelevant to ask by which means a person's mobility is threatened” (Illich, cited by Houseman, 1979, p. 11).

Focusing on New Zealand, the *Royal Commission on Social Policy* stated that it had “considered whether people do have a right to access necessary services and facilities and concluded that in general, they do. If their circumstances (income, age, disability) make it difficult for them to provide for their own needs and/or utilise existing services (if there are any) then there is a duty on public authorities to assist” (Good, 1988, p. 401). The Royal Commission found that “people expected the right to have a base level of access (service) throughout the country even if this involved subsidies from other communities” (ibid., p. 387).

The United Nations has formulated and proclaimed a *Universal Declaration of Human Rights*, which New Zealand adopted in 1948. The United Nations has

also produced a number of Covenants or Conventions on human rights which New Zealand has also ratified, meaning that the New Zealand state "has formally accepted or confirmed obligations under the instrument. Once a state has ratified an instrument it is bound to bring national law and practice into line with the provisions of the instrument" (Human Rights Commission, 1998, p. 13).

*The Universal Declaration of Human Rights* and the *International Covenant on Economic, Social and Cultural Rights* appear particularly relevant to access and mobility, as they declare that all people have, among other things, the right of self-determination, the right to freely pursue their economic, social and cultural development, the right to work, the right to an adequate standard of living, the continuous improvement of living conditions, the right to education, and the right to take part in cultural life. It is here argued that mobility and access are relevant in as far as they are essential to the realisation of these rights.

A common theme of these international human rights instruments is "dignity". Article 22 of the *Universal Declaration of Human Rights* states that "everyone, as a member of society, has the right to social security and is entitled to realisation ... in accordance with the organisation and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality." The preamble to the *International Covenant on Civil and Political Rights* indicates that the states party to this Covenant recognise that "these rights derive from the inherent dignity of the human person".

Canadian case law has established that:

*Human dignity means that an individual or group feels self-respect and self-worth. It is concerned with physical and psychological integrity and empowerment. Human dignity is harmed by unfair treatment premised upon personal traits or circumstances which do not relate to individual needs, capacities, or merits. It is enhanced by laws which are sensitive to the needs, capacities, and merits of different individuals,*

*taking into account the context underlying their differences. Human dignity is harmed when individuals and groups are marginalised, ignored, or devalued, and is enhanced when laws recognise the full place of all individuals and groups within Canadian society. (Law v. Canada (Minister of Employment and Immigration), [1999] 1 S.C.R. 497 at 530).*

This definition of dignity emphasises the subjective view, i.e. how an individual or group feels in terms of their self-respect and self-worth.

The New Zealand Bill of Rights Act 1990 and Human Rights Act 1993 legislate for the protection of some human rights in New Zealand. The preamble to the Human Rights Act 1993 indicates a purpose of the Act is "to provide better protection of human rights in New Zealand in general accordance with United Nations Covenants or Conventions on Human Rights." The preamble to the New Zealand Bill of Rights Act 1990 indicates a purpose of the Act is "to affirm New Zealand's commitment to the International Covenant on Civil and Political Rights."

The Human Rights Act 1993 provides protection from discrimination in employment, by professional bodies, in access to places, vehicles and facilities, in the provision of goods and services, in accommodation and housing and in access to educational establishments. It prohibits such discrimination on the grounds of gender, marital status, religious belief, ethnic belief, colour, race, ethnic or national origins, disability, age, political opinion, employment status, family status or sexual orientation. It also establishes a Human Rights Commission with the functions of, among other things, advocating and promoting human rights, publishing human rights guidelines, inquiring into human rights matters and reporting to the Prime Minister on human rights matters. The provisions relating to access to places, vehicles and facilities are contained in section 42 of the Act. This section makes it unlawful to refuse any person access to any public place or to any vehicle which the public are allowed to use on the basis of any of the prohibited grounds of discrimination.

Discrimination is not confined to unequal treatment based on the prohibited grounds. Under section 65 of the Act equal treatment that has an unequal effect is also prohibited, unless there is "good reason" for this to occur. Section 73 makes the exception of allowing unequal treatment that is specifically intended to assist one of the groups for which discrimination is unlawful, where it is believed to be needed in order for those persons to achieve an equal place with other members of the community.

New Zealand case law has established that "any analysis of policy which may directly or indirectly discriminate must be done in the light of the international principles and experiences as stated in the relevant conventions and covenants and also from overseas cases" (*Northern Regional Health Authority v. Human Rights Commission* [1998] 2 NZLR 218; (1997) 4 HRNZ 37).

The New Zealand Bill of Rights Act 1990 affirms some basic rights of New Zealanders. The rights affirmed are the right not to be deprived of life, not to be treated cruelly, not to be subject to medical or scientific experimentation, democratic and civil rights, non-discrimination and minority rights and rights not to be arbitrarily searched, arrested or detained. Section 5 of the Act stipulates that the only limits to these rights are any reasonable limits that are prescribed by law, and only if they meet certain criteria to qualify as being "demonstrably justified in a free and democratic society." The only right obviously related to access and mobility is the right to "freedom of movement" specified in the Act, but this only pertains to the right to freely enter and leave New Zealand.

The New Zealand legislation thus protects some groups, such as the disabled, from discrimination in access to transport, and through case law appears to have the potential to bring in the subjective view of human dignity in terms of how an individual or group feels in terms of self-respect and self-worth. But it does not appear to establish any general human right to access or mobility in New Zealand.

Even if it could be argued that some degree of access and mobility is a basic human right, the degree of access and mobility that can be expected as of right

has not been defined in international human rights or in legislation. In the case of the United States of America, Cameron observed that "although the U.S. Constitution protects a person's right to be free from inhibition to travel (commerce clause), it provides no protections for ensuring that each person has a minimum level of necessary transportation resources" (1997, p. 56). Put another way, human rights may ensure that no action is taken to deprive people of their rights, but it does not necessarily mean people have a right to claim assistance to ensure their rights are fulfilled.

The United Nations *International Covenant on Economic, Social and Cultural Rights* contains a clause that each state which is party to the covenant "undertakes to take steps ... to the maximum of its available resources, with a view to achieving progressively the full realisation of the rights recognised in the present Covenant" (Human Rights Commission, 1998, p. 43).

In New Zealand, the *Royal Commission on Social Policy* observed that "in reality, available resources are usually insufficient to provide for all needs and expectations. Decision-makers therefore establish priorities and (usually) allocate resources so that a reasonable 'match' is achieved between what is perceived as being needed, what is wanted and what is provided. The challenge for the transport sector can be stated as being to consider whether the existing 'match' is reasonable, fair and just, and, where there is a mismatch, to consider desirable changes" (Good, 1988, pp. 386-387).

## **2.6 What level of access and mobility should be available?**

The challenge to determine the level of access and mobility that people should be entitled to remains a challenge today, not just in New Zealand but also internationally. In the UK, Solomon has observed that:

*It is possible ... to suggest that any demands for movement which are not being met could be seen as a cause of some type of social exclusion. In that case those involved in evaluating*

*policies end up aiming at an infinite level of mobility for all. This is plainly absurd* (2003, p. 154).

In Canada, Litman suggested that "we need a standard definition of basic accessibility and basic mobility, which identify 'essential' activities and rank trips according to their importance to a community. This can help identify which basic accessibility needs are currently not being met for various demographic and geographic groups" (2003, p. 25). Litman suggested that basic mobility typically includes travel for:

- emergency services (e.g. police, fire, ambulance)
- health care
- basic food and clothing
- education and employment (commuting)
- public services, mail, and freight distribution and
- a certain amount of social and recreational activities.

Litman's list of basic mobility needs appears to include both general public mobility needs (mobility for emergency services and of public services, mail, and freight distribution) as well as personal mobility needs (health care; food and clothing; education and employment and social and recreational activities).

Lyons, Marsden, Beecroft and Chatterjee considered the merits of defining minimum acceptable levels of accessibility. They concluded that the concept was unacceptable, as to some people the minimum level would be considered good, while to others it would be considered poor. They suggested that "talk of 'minimum levels' ... was considered too cautious. Instead, a 'good level of accessibility' to enable people to access local services easily has, therefore, been accepted as the target." They considered that it was not feasible to determine access needs at the individual level, and that the objectives of the transport system should be focused on a number of key access needs. They suggested a hierarchy of access needs where areas of prime importance are access to work, education, food and health. Access to parks, other neighbourhoods, arts, sports, leisure, places of worship, heritage and nature were also "deemed valuable" (2001, p. 17).

The table below compares Lyons et al.'s access needs to Litman's basic personal mobility needs:

**Table Two: Comparison of mobility needs**

<b>Lyons, Marsden, Beecroft and Chatterjee</b>		<b>Litman</b>	
<b>access needs of prime importance</b>	work education food health	employment education food and clothing health care	<b>basic personal mobility needs</b>
<b>access needs deemed valuable</b>	parks other neighbourhoods arts sports leisure places of worship heritage nature	a certain level of social and recreational activities	

There appears to be a close correspondence between Lyons et al.'s access needs of prime importance and Litman's basic personal mobility needs. The only point of difference is that Litman includes as a basic personal mobility need a certain level of social and recreational activities, while Lyons et al. do not see this as being of prime importance.

The link between these access and mobility needs and the basic human needs and capabilities mentioned earlier is less obvious. It appears that both Lyons et al.'s list of "access needs of prime importance" and Litman's list of basic personal mobility needs have been derived, to use Gasper's words, in "pursuing a consensual priority for minimum requirements for decency", and excludes other access purposes that are still basic to human flourishing, such as cultural activities and community service.

In discussing the level of access and mobility that people should be entitled to, it is not sufficient to simply identify the access needs that people can satisfy. As we have previously noted, rather than being a matter of "can or cannot", mobility is a matter of degree. There should be some limit to the impediments that people must face, and the personal cost they must pay, in order to fulfil their access and mobility needs. The UK DETR has suggested that what is required "is to try to provide some objective criteria to assess what might be considered reasonable amounts of time, money and distance to expect people in different subgroups to spend travelling" (2000, chapter 2, section 2, para 7). This raises the question of what criteria can be considered to be objective, or how to determine what is "reasonable".

A parameter already used in transport planning is the generalised cost, or disutility of trips. The generalised cost is calculated as the weighted sum of a number of trip characteristics including walk time, wait time, travel time, fare and the comfort of the mode of travel. It could also include physical risk, and other impediments. Solomon suggested that:

*We could propose that, for example, twice the average generalised cost incurred in fulfilling any journey purpose is the maximum socially inclusive transport cost. If it takes the average person ten minutes and costs a pound to go to the doctor, then anybody taking longer than twenty minutes and spending more than two pounds is transport-poor as far as visiting the doctor is concerned. ... By adding up the generalised cost of fulfilling all journey purposes, it would be possible to locate individuals or groups in the transport poverty hierarchy (2003, p. 155).*

It has previously been noted in section 1.1 that a motivation to improving access and mobility is to reduce social exclusion. In section 2.4 it was observed that the government's motivation to address social exclusion is so that "ultimately all feel that they belong to, and can actively participate in society" (Maharey, 2000, para. 8). This ties in with Peace's definition of social exclusion outlined in

section 2.4 as the collective processes that work to deprive people of access to opportunities and means, material or otherwise, to achieve well-being and security in the terms that are important to them. Both of these statements place the emphasis on the subjective view, i.e. on how people feel about or perceive their situation. As mentioned in section 2.5, human rights instruments derive from the inherent dignity of the human person, and international case law on the meaning of human dignity also places the emphasis on the subjective view.

Thus this present research takes the subjective approach of identifying transport access and mobility needs and impediments, by focusing on people's own judgements. This research will also consider whether the subjective results have implications for other so-called "objective" perspectives.

## ***2.7 Who should access and mobility be improved for?***

If a motivation for improving access and mobility is to address social exclusion, it could logically be contended that access and mobility should be improved for people who would otherwise be socially excluded through impediments to their access and mobility. There has recently been much international interest in identifying people who are socially excluded through impediments to their access and mobility.

Kemming and Borbach (2003) suggested that the groups of people most frequently affected by social exclusion are:

Women – given their lower income compared to men, and difficulties of combining child care and paid employment.

Children/Young People – especially children of new settlers. Lucas (2003) indicated that in the UK children are disproportionately present in low-income households. This is also the case in New Zealand. In 2001, 29.1 percent of dependent children were living in economic family units with less than sixty percent of the 1998 median equivalent income (net of housing costs). This is

above the 22.6 percent of the total population living in economic family units with that level of income (Ministry of Social Development, 2003, p. 66).

Elderly people – due to lower income (especially for elderly women) and lack of useable transport options.

People with disabilities – because of lower income and transport barriers to the disabled.

New settlers – because of education issues and unemployment or low income. Litman (2003) suggested that new settlers from developing countries may face social exclusion through language barriers, social isolation, poverty, unemployment and low rates of vehicle ownership and driver licensing.

To the groups that may be associated with social exclusion, Litman (2003) added households that do not own a car, people without a driver's licence, low-income households, people who are unemployed or underemployed, and people on social assistance and other programmes to help disadvantaged groups.

Alternatively, Orfeuil suggested that there are at least six categories of people experiencing mobility problems, for whom problems and solutions are quite different:

People with "general competence" problems – which includes people who are not proficient in the language of the country concerned, people with mental disabilities, and low-educated people "with problems to orientate in space" (2003, p. 23).

Young people – including those who can drive and those who cannot.

People too poor to buy and maintain a car.

Quasi-poor households – which do own and maintain a car but still face financial constraints on their mobility.

People who have to care for children – usually women.

People with physical disabilities – including old people with physical disabilities.

From these sources the various aggregate groups of people identified as being at particular risk of social exclusion through transport impediments include women, children and young people, elderly people, people with disabilities, new settlers, households that do not own a car, people without a driver's licence, low-income households, people who are unemployed or underemployed, people on social assistance and other programmes to help disadvantaged groups, people with "general competence" problems, and people who have to care for children.

Attempts to address social exclusion, so that ultimately all feel they belong to and can actively participate in society, will potentially require improving transport access and mobility for all of these groups. Litman (2003) suggested that in Canada a major risk of addressing social exclusion is that only token solutions will be implemented focusing on a small part of the problem, for example introducing universal design standards that meet the needs of wheelchair users, while ignoring the mobility problems facing other disadvantaged groups, such as lower-income suburban non-drivers.

The need for improving access and mobility for people from some of these target groups, and the ways that access and mobility could be improved, will be discussed further in the context of the interview analysis.

## **2.8 Other studies of mobility impediments**

Much of the international literature on mobility impediments and social exclusion focuses on either a particular transport mode or a particular group at risk of social exclusion.

One of the studies to take a wider view was a study in the Ballymurphy area of North and West Belfast by McKenna and Lavery (1993). This study aimed to understand the needs of people with mobility difficulties (said to have a "mobility handicap"). Forty questionnaires were distributed, divided between elderly people, young people with disabilities and random households. Two-thirds of respondents indicated they were content with how much they got "out and about". The majority of people not content wished to do so more than two to three times a week. The main difficulties reported in getting to transport were walking distances, topography, bad pavements, bad lighting and no bus shelters. The main problems with using transport were access to and egress from the modes and cost. McKenna and Lavery concluded that because of the difficulties getting to transport, and because of the limited routes and frequencies, introduction of low-floor buses on the same limited routes and frequencies would be unlikely to make any difference to the mobility of the people interviewed.

Lucas, Grosvenor and Simpson (2001) undertook a study of transport and accessibility in the UK from the perspectives of disadvantaged groups and communities. Focus group discussions were carried out with local residents of five case study areas, selected to represent a different settlement type (e.g. inner city, suburban, rural) and with groups experiencing different aspects of disadvantage (e.g. unemployed males, young people, older people on low incomes, minority ethnic groups, disabled and mobility impaired people). The study found a number of cross-cutting themes. Poor transport provision was noted to act as a barrier to access to high quality education, the social integration of older people, access to adequate health care facilities and the take-up of employment, as well as adding to youth disaffection.

Barriers to the greater use of public transport included high fares, the inadequacy of routes accessing essential services such as hospitals, colleges and shops, poor vehicular access, inadequate staffing, poor staff training and issues with personal safety and security for vulnerable groups. Public transport was particularly unviable for people living in isolated rural communities, those working late-night shifts or in isolated locations, and women undertaking multi-purpose trips under time constraints.

The study concluded that:

*Almost anyone living in all but the very centre of our major cities needs to own a car in order to fully participate in all the activities that are considered necessary for achieving a reasonable standard of living in the twenty-first century (2001, p. vii).*

Hine and Mitchell (2003) reported on exclusionary mechanisms in transport in urban Scotland. They noted that transport disadvantage impacts to a greater extent on particular groups, for example the elderly, people with health problems, women, the unemployed, and those on low incomes. Lack of transport was found to be an important barrier to employment opportunities, and had a clear impact on whether particular goods and services could be accessed. They listed "internal barriers" to mobility such as non-access to car use, difficulty coping with traffic, and difficulty accessing non-car transport (including walking and cycling as well as public transport). "External barriers" included the concentration of facilities and services (especially if the locations were hard to access by public transport, foot and cycle), cost of transport, road design issues (e.g. lack of kerb ramps), heavy and/or fast traffic, inaccessible vehicle design, infrequent public transport services and long distances from home to public transport services. Impediments to driving included the cost of learning to drive and of running a car, and psychological barriers such as not having the confidence to learn to drive.

Policy interventions suggested by Hine and Mitchell to improve conditions included targeting of subsidies and concessions, coordination and monitoring of public transport services and of community and specialised transport operations, enhanced fares and ticketing agreements, provision for public transport in new developments, provision of cycling and pedestrian infrastructure, and non-transport solutions such as better transport information via the Internet.

A review of transport and social exclusion of seven countries (USA, UK, Japan, Germany, France, Canada and Italy) found that access to a car, particularly outside of major cities, appears to be essential for full participation in economic and social life in modern industrial societies. Lack of access to a car is the main transport factor in the social exclusion of low-income households and other marginalised groups. The problem of poor access for households without a car has been exacerbated by dispersed land uses, changing work and lifestyle patterns and the closure of local amenities, increasing car dependence (FIA Foundation, 2004).

### 2.8.1 Mobility for the elderly

In recent years, interest in the mobility needs and impediments for the elderly has been spurred on by the rising proportion of older adults in the population of developed countries. For example, the UK DETR (2001) undertook a major study of the transport needs and requirements of older people, including 1,445 face-to-face interviews with people over sixty years of age. They found that those able to do so would drive for most of their travel needs, although four-fifths of older drivers said they would prefer not to drive at night, in bad weather, or in town centres. For non-drivers, buses were the mainstay of the transport system, although there was also a significant level of taxi use. The most frequently mentioned barrier to travel was accessibility (defined as difficulties with boarding and alighting, carrying items, confusion over use and staff attitudes). As a result of such barriers to travel, a third of respondents said they had one or more activities that they would like to do more often, and about half

of these constrained activities were concerned with family and other social visits, suggesting a degree of isolation.

In New Zealand, Morrison conducted a series of face-to-face interviews to study the effects of giving up driving in old age. He found that when people gave up driving in old age they became dependent on others for travel assistance, relying on family members in particular. Buses were not regarded as a viable mode of transport. Morrison found that "many of the interviewees who lived alone were not as mobile as they would have liked, with fewer places being accessed than preferred. This was due to a reluctance to ask for transport assistance from relatives and others because of a wish to retain independence by not being a burden on others" (1996, p. 107).

Also in New Zealand, Dwyer, Gray and Renwick observed that "many studies ... have found that geographical isolation and lack of public transport limit older people's ability to be involved in social life, confining many to activities in their own, or at most, an adjacent suburb" (2000, p. 9). They suggested that "lack of accessible, affordable transport isolated older people in their own homes. It limited their access to health services, reduced their ability to do their own shopping and obtain personal services, and reduced their opportunities for social interaction" (ibid., p. 61). They concluded that "poor transport and limited local amenities can have immediate detrimental effects on the standard of living of older people, and flow onto the public sector as premature needs for acute health services, home-based services and residential care" (ibid., p. 69).

A recent New Zealand study on older people and transport by Davey and Nimmo used a literature review and telephone interviews with key informants. They found that factors such as topography, uneven footpaths, lack of pedestrian crossings and skateboarders and cyclists on the footpath were deterrents to walking for older pedestrians. Taxis were seen as an expensive luxury. Davey and Nimmo concluded that:

*The private car, largely self-driven, is by far the most popular travel mode for older people. Public transport accounts for only*

*2% of trips for the 65 plus age group and 4% of trips taken by people aged 80 plus. Transport patterns for older people are mainly for shopping, personal business/medical and social/recreational purposes, most of which require flexibility or the capacity to carry loads, and do not generally follow regular public transport routes at regular times. The transport needs of older people are thus very different from those of commuters to workplaces and of students to educational institutions. (2003, p. 60)*

Access getting on and off buses, high fares, and lack of facilities at bus stops, such as seating, were also identified as impediments to public transport use for older people.

#### 2.8.2 Mobility for the disabled

The 1996 Household Disability Survey is one of the few New Zealand studies that sought to identify activities not undertaken because of mobility impediments. The survey estimated that in over a thousand cases nationwide, lack of suitable transport to work was the main reason for adults in a household with a disability not being employed. In over three thousand cases nationwide, transport was the main reason for adults in a household with a disability not getting medical treatment (J. O'Connor, personal communication, June 7, 2001).

A survey of Total Mobility users and providers in New Zealand reported that ninety percent of users were satisfied or very satisfied with the service, and ninety-one percent of users indicated that the level of subsidy was reasonable. Thirty percent of users said that cost constrained their travel a lot, and thirty-eight percent said it constrained their travel a little. In regions where the number of trips was rationed with vouchers, ninety percent of users indicated they received sufficient vouchers for health appointments and over seventy

percent received sufficient vouchers for work travel. Sixty percent received sufficient vouchers for visiting friends (Cope, 2003).

In 2003 the Human Rights Commission began an inquiry into the availability, accessibility and affordability of public land transport services for people with disabilities including buses, trains, taxis and the Total Mobility scheme. The inquiry was still underway at the time of writing.

### 2.8.3 Mobility for women

Some international research has considered the particular mobility needs and impediments of women. A West Yorkshire study used in-depth interviews with sixty-five women to assess how far women's transport needs were being met, and to document the nature of women's transport problems. Mobility difficulties identified included travelling with young children, step height and inadequate luggage space on buses, and security at bus stations and stops at night. Women's travel tended to be non-radial (i.e. not in or out of the city centre) and multi-purpose, and was thus not well served by public transport (Hamilton, Jenkins and Gregory, cited by Department for Transport, 2000, p. 12-13).

Pickup (1988) listed three types of low mobility that occur among women as a result of their gender role:

1. The impact of their family role. The general pattern was that husbands had the first choice of car use, leaving the woman to find other means to travel.
2. The impact of gender-related tasks, e.g. cooking and child care, which restrict when women can travel.
3. The impact of the conditions under which women travel, e.g. problems with bringing children along, or security issues.

Women were more likely to rely on public transport, but cited difficulties such as unreliability, poor frequency, high fares, long walks to bus stops and fear of harassment while travelling.

Dowling, Göllner and Dwyer (1999) undertook semi-structured interviews with ten women from each of three areas of Sydney, Australia, to investigate how women use and interpret the role of the motor vehicle in their daily lives. They found that the car was seen as a way to combat isolation and enable women to be independent. Public transport was seen to waste too much time, while the infrequent services and rigid schedules made public transport difficult to use. Public transport was not regarded as reliable. Cars were used to ensure family members could get to where they wanted to be on time.

Bostock (2001) focused on the effects of lack of access to a car by interviewing thirty mothers on social security benefits in the UK Midlands in 1996. Bostock found that because of the need to economise, these women did not use public transport and mostly relied on walking for mobility. It was found that the need to walk for mobility could undermine health and well-being through the pressure of managing children while walking, and the physical fatigue caused by walking. Such difficulties restricted the mothers to their local area, which was often lacking in health, retail and other social resources.

#### 2.8.4 Mobility and public transport

Much international research has investigated travel experiences and needs by focusing on public transport users. For example, the UK DETR (2000) undertook a study of social exclusion and the provision and availability of public transport. They found that there appeared to be a clear connection between transport and social exclusion, particularly among unemployed people, families with young children, young people, older people, and all those on low (benefit level) incomes. Transport was found to be a very important consideration in rural areas, particularly for those without access to a car. For public transport

affordability, availability and accessibility were found to be key issues, as was the lack of information, particularly for making unfamiliar journeys.

Hine and Mitchell (2001) summarised a number of studies that investigated travel experiences and needs by focusing on public transport users. Common themes were problems with the inaccessible design of buses, trains and stations, the inconvenient location of bus stops and stations, unpredictable long waiting times, poor staff attitudes and lack of staff training, and high fares.

## **2.9 Summary and key questions**

This chapter has discussed and defined the meanings of key concepts for this research. Access has been defined as the right or opportunity to reach activities using the transport system and so participate in society. Mobility has been defined as a means to an end – the means being travel using the transport system and the end being to access opportunities to participate in society and thereby have a reasonable quality of life. Mobility impediments have been defined as hindrances or obstructions to individuals who wish to use the transport system. It has been suggested that impediments, rather than just being barriers that prevent mobility, are often a matter of degree.

This chapter has suggested that a motivation for improving access and mobility is to address social exclusion, and so access and mobility should be improved for people who would otherwise be at risk of social exclusion because of transport disadvantage. Consideration of the transport-disadvantaged in New Zealand transport policy has manifested itself through the funding of public transport generally, particularly in off-peak periods, through the provision of concessionary fares for students and pensioners, and through the provision of a "Total Mobility" scheme for those unable to use public transport. Similarly, New Zealand research has tended to focus on mobility issues for the elderly or the disabled, and has tended to focus on passenger transport and the Total Mobility scheme. International research has identified a broader set of overlapping groups of people as being at particular risk of social exclusion through transport

impediments, including young people, women, people on low incomes and new settlers.

The literature review has highlighted differing approaches to identifying need in general, and mobility needs in particular. Some attempts have been made to define needs objectively in terms of basic requirements that should apply to all. It has been suggested that, as the need for mobility is potentially insatiable, a focus on basic mobility needs provides a basis for prioritising mobility improvements. Critics of the basic needs approach argue that needs vary, and that a focus on basic needs may overlook valid needs of individuals, and the special needs of particular groups in society. This chapter has suggested that in the New Zealand policy context, mobility needs should be appropriately defined in terms of people's perceptions of their own broad range of needs for a worthwhile life, rather than attempting to objectively define the minimal requirements that should apply to everyone.

A number of questions concerning the access and mobility needs and impediments of New Zealanders emerge from this chapter: Are mobility impediments resulting in social exclusion in New Zealand? Is this a particular issue for the elderly and the disabled, or are other groups identified internationally, such as young people and new migrants, affected as well? What do people perceive as their mobility needs, and are there basic mobility needs that can apply to everyone? What is impeding mobility for people at risk of social exclusion? Are mobility impediments a matter of can or cannot, or a matter of degree? What can be done to improve access and mobility for the transport-disadvantaged? The next stage of this present research was designed to begin to answer these questions.

## Chapter Three

### Research method

#### 3.1 *Choice of research method*

This present research seeks to investigate the perceptions of transport-disadvantaged people's access and mobility needs and impediments. Because of its focus on people's perceptions, it can be considered a phenomenological inquiry. Patton observed that "the term phenomenology has become so widely used that its meaning has become confused. Sometimes phenomenology is viewed as a paradigm, sometimes as a philosophy or as a perspective, and it is sometimes even viewed as synonymous with qualitative methods or naturalistic inquiry" (1990, p. 68). But whatever the case, Patton suggested that "put simply and directly, phenomenological inquiry focuses on the question: What is the structure and essence of experience of this phenomenon for these people?" (ibid., p. 69).

A qualitative research method was chosen as appropriate to the subjective, phenomenological approach to this inquiry. Fisk and colleagues (cited in Sarantakos, 1998, p.125) suggested that certain conditions favour a choice of qualitative over quantitative research methods. The conditions that appear to particularly apply to this present research are:

*When the standard of knowledge in the area of the research subject is inadequate and provides no sound basis for a quantitative study, for example for defining the research question, familiarising oneself with the research environment, operationalising the variables etc. The qualitative research takes here the form of an exploratory study.*

and

*When there is a need to study reality from the inside rather than from the outside, that is, to understand it from the point of view of the subject.*

The international literature on mobility impediments and social exclusion reviewed in section 2.8 also generally used qualitative research methods.

Taylor and Bodgan suggested that "the phrase *qualitative methodology* refers in the broadest sense to research that produces descriptive data – people's own written or spoken words and observable behaviour" (1999, p. 7). They characterised qualitative research as being concerned with the meanings people attach to things in their lives, and as being concerned with how people think and act in their everyday lives, arguing that there is something to be learned in all settings.

Sarantakos has listed particular advantages of face-to-face interviews as a research method, including their flexibility, the need and wish to record spontaneous answers to complex questions, the wish to cover the interview schedule as fully as possible with all participants, and the capacity to correct misunderstandings by respondents (1998, p.266). These advantages aligned well with the needs of this present research, and so it was decided to conduct this research with face-to-face semi-structured interviews.

As discussed subsequently in section 3.3, a structured interview format was piloted but abandoned in favour of semi-structured interviews, which proved to be more effective in identifying access and mobility issues and increasing the amount of relevant material recorded from each interview.

### **3.2 Selection and recruitment of interviewees**

Chapter two has identified a number of groups of people at particular risk of social exclusion through transport impediments. It was beyond the scope of this present research to select and interview a statistically significant sample of

people reflecting the general population of these groups of people. But even understanding the travel needs of a small group of people who face transport difficulties, and the effects of those difficulties, was considered a potentially worthwhile contribution to understanding access and mobility needs and impediments. This present study therefore focuses on a limited number of interviewees selected from the following groups of people: young people, elderly people, people with disabilities, and new settlers. Two interviewees were recruited from each of these four groups. Two new settlers were recruited through the Shakti Migrants' Centre, two young people were recruited through the Partnerships and Advocacy Leader, Children and Youth of Waitakere City Council, two disabled people were recruited through CCS, and two elderly people were recruited through a mutual acquaintance.

Counting pilot interviewees, eleven people were interviewed in total. The interviewees included nine women, four young people, three elderly people, three people with disabilities, four new settlers, six people from households that did not own a car, seven people without a driver's licence, eight people from low-income households, three people who were unemployed or underemployed, four people on social assistance or other programmes to help disadvantaged groups, one person who had to care for children, and one person with a "general competence" problem of not being able to read or understand English. Thus the eleven interviewees included at least one member of all the overlapping groups of people at risk of social exclusion described in section 2.7.

All the people who assisted in recruiting participants, and six of the eight interviewees, were female. As the interviewees are not intended to be statistically reflective of the population as a whole, and as women were identified in chapter two as one of the groups of people who are generally most at risk of social exclusion, this gender bias was accepted.

Participation in this research was voluntary. When being recruited, potential participants were given an information sheet, describing the nature and purpose of the research, as well as indicating that the interview could take up to two

hours. There is a potential for bias by self-selection, in that those people experiencing severe mobility difficulties would be more likely to see the need for this research and thus might be more likely to agree to the inconvenience of a two-hour interview than people not experiencing difficulties. Again, as the interviewees were not intended to be statistically reflective of their group, but were interviewed to add to the understanding of travel needs and impediments, particularly for people at risk of social exclusion, this potential for bias by self-selection was accepted.

### **3.3 Ethical considerations**

The Massey University *Code of Ethical conduct for Teaching and Research Involving Human Subjects* was used to guide the interview process, and approval was sought and obtained from the Massey University Human Ethics Committee before interviews commenced. The application to the Ethics Committee, including copies of the information sheet and consent forms, are included in the appendix to this thesis.

The major principles of the University code for ethical research are respect for persons, minimisation of harm, informed and voluntary consent, respect for privacy and confidentiality, avoidance of unnecessary deception, avoidance of conflict of interest, and social and cultural sensitivity (Massey University, 2004).

It was not expected that participants would be put in a situation where they would be uncomfortable or exposed to any risk of harm. In an attempt to minimise the potential for harm, participants chose a time and place convenient to them for the interview, preferably where other people were nearby. They were invited to have a support person attend the interview with them if they wished. The participants were informed that they could stop the interview at any time for any reason without adverse consequences.

During or after the interview, where it appeared it might be helpful, participants were provided with information on travel assistance that might be available to them (e.g. grocery shopping opportunities on the Internet, or travel assistance

to medical appointments available to the mobility impaired through the St. John Ambulance Service).

To ensure the informed and voluntary consent of participants, a third party approached potential interviewees and told them about the research. Only those who voluntarily indicated they might agree to an interview were then contacted directly. These potential interviewees were provided with an information sheet explaining the purpose of the research, what was being asked of them and their rights as participants, and they were encouraged to ask questions. People who agreed to an interview were asked to read and sign consent forms before the interview began. When participants were unable to provide written consent because of a disability or language difficulty, consent was obtained orally and recorded as a spoken statement on a tape. One participant was not fluent in the English language, and so was assisted in consenting to the interview, and in completing the interview itself, by a support person acceptable to the participant and fluent both in their language and in English.

The identity of participants was kept confidential to the thesis author, the third party they were recruited through, and the support person for an interviewee unable to speak English. With the consent of participants, the interviews were audio-taped and transcribed in order to assist with analysis. The interviews were transcribed by a professional typist who was required to sign a transcriber's confidentiality agreement. The tapes and transcripts of recorded interviews, and the signed consent forms, were kept in a locked filing cabinet. Participants were promised that once the thesis was completed, their tape and transcript would either be returned to them or destroyed, depending on their preference. To maintain confidentiality, the interviewees are referred to by pseudonyms in this report.

Three pilot interviews were undertaken in May 2004. These pilot interviews were useful in testing, practising and refining the consent and interview process. Words or questions that were unclear, as well as some difficulties with recording and transcription, were identified and corrected. The pilot interviews were also

a useful opportunity to practise and improve the interview technique. For example, the first interviews were very structured. They focused on the interview questions as listed in the schedule in the order they appeared, and out-of-order or spontaneous comment was discouraged. This overly structured and formal approach disturbed the free flow of the interviews, and tended to restrict the interviewees into answering the questions strictly and narrowly as posed. As a result the interviews were rather short, and although all the information in the schedule was obtained, the material collected was limited.

During the third interview it became apparent that the interviewee had some particular transport issues to raise. She gave a minimum of detail in her answers to the initial questions, and expressed impatience to talk about some other specific issues, which were related to her mobility. The interview flowed much more freely and was fuller in content when the order and approach to the interview was relaxed and the interviewee was encouraged to talk about these issues.

This led to the adoption of a less rigid approach in the full interviews, in which the interview schedule was used as a checklist or prompt to raise issues that had not otherwise been discussed in the conversation. Such a less rigid semi-structured approach was more relaxing for both the interviewer and the interviewees, allowed for issues to be raised that might not otherwise have come up in response to the questions in the schedule and increased the amount of relevant material recorded.

Eight full interviews were conducted in August and September 2004. The elderly, new settler and young adult interviewees chose to be interviewed at home, while both disabled interviewees chose to be interviewed at their workplace. All interviews covered the full interview schedule. Interviews ranged in duration from thirty minutes to three and a half hours.

There were, however, disadvantages to the less rigid approach. The less structured interview approach meant that it was difficult to ensure that all points in the interview schedule were covered. There was also less control over the

time the interviews took. As a result, two interviews went longer than expected and had to end before all questions could be asked. One interview ended after three and a half hours because of fatigue and because the interviewee had another appointment. Another interview ended after an hour and a half because the translator had another appointment. In both of these interviews, the issue not covered was the ranking of travel priorities.

### **3.4 Interview schedule**

As mentioned above, the interview schedule was used as a checklist and as a prompt to ensure that a consistent range of issues was raised and discussed.

The interview schedule was designed to provide information that would help investigate the key questions noted in section 2.9. The schedule was divided into three parts. The first part covered questions of travel needs, including the purpose for travel, the relative importance of those purposes, the frequency of that travel, and the modes of travel used.

The second part of the schedule covered travel impediments, including whether the interviewee could travel by particular modes, the ease or difficulty of using each mode, the nature and effect of travel impediments, and suggestions for mitigating those impediments.

The final part of the interview schedule comprised some broad open-ended questions intended to build upon the issues raised, and to provide further opportunities for the interviewee to describe access and mobility needs or impediments that might not have been previously discussed.

The interview schedule is included in the appendix to this thesis.

### **3.5 Approach to interview analysis**

The research consisted of three pilot interviews and eight full interviews. As the information gathered in the pilot interviews was valid information, and could make a worthwhile contribution to the research objectives, it was decided to include the results of the pilot interviews in the analysis.

The data collected from the interviews included the interview tapes and transcripts, and notes taken during the interviews, including a completed table on travel frequencies for each interviewee and a completed table on travel priorities for the nine interviewees that completed this question.

The data on travel frequencies and priorities was numeric, and was most easily accessed from the interview schedule tables completed during the interviews. The data from these tables was entered into Excel spreadsheets, which allowed the data to be readily viewed and sorted, for example to allow travel purposes to be averaged for all interviewees and then sorted into ranked order.

The interview transcripts were checked against the interview tapes, and corrected by the researcher. The corrected transcriptions were then printed out and taped up onto cardboard sheets, which were hung up in the room the analysis took place.

Following an analysis method suggested by Patton, the analysis begun with a cross-case analysis, initially focusing on each interview question (1990, p. 376). The text relating to each particular issue was highlighted with a particular colour highlighter on all interview transcripts. In cases where the interview text dealt with a number of issues, it was highlighted in each relevant colour.

The colour coding allowed the ready retrieval and comparison of what each interviewee said about a particular issue, as well as showing what interview text

was being used and what text was not being used. The text not highlighted was re-read to seek new themes for analysis.

Although the interview results were initially written up centred on themes, the identity and circumstances of each interviewee was lost. It was decided to write up the results centred on each interviewee instead, in order to develop a picture of each interviewee to the reader. The interview analysis reported subsequently centres on themes. The themes discussed in chapter four comprise frequency of travel and the importance of travel purposes. The themes discussed in chapter five also comprise access without mobility, types of mobility impediment, modal mobility impediments and travel choices and the effects of mobility impediments

As suggested by Patton, a cross-classification matrix was developed to analyse mobility impediments (1990, p. 376). Initially, the impediments to using each travel mode were summarised for each interviewee. An Excel matrix was then constructed with each travel mode for each interviewee in the rows, and mobility impediments in the columns. Each impediment that applied to a travel mode for an interviewee was marked in the matrix cell, categorised as either a barrier that prevented use of the mode by the interviewee, or a hindrance that made use of the mode difficult.

It was notable that even though the interviewees were quite diverse in their circumstances, backgrounds and capabilities, there were many commonalities in the mobility impediments they identified. The impediments listed in the matrix columns were initially grouped as environmental, personal or trip-related, following the categories proposed by McKenna and Lavery (1993). A sub-classification of impediments was then developed by grouping the mobility impediment columns. The completed matrix could then be sorted, to group impediments by mode or by interviewee.

The cross-classification matrix was used to identify the general patterns in travel mode choice in response to the identified groupings of impediments.

## **Chapter Four**

### **Results**

This chapter introduces each interviewee and describes the information elicited by their interviews. The stated purposes they needed to travel for are outlined, together with their choice of travel modes. The travel impediments faced by interviewees and the effects of these impediments are described, using direct quotations when appropriate. Finally, this chapter summarises the travel frequency by travel purpose reported by interviewees, and the ranking of importance that each interviewee gave to these travel purposes.

#### **4.1 *Liu***

The first pilot interviewee was a female English language student from China, approximately twenty years of age, who lived on Auckland's North Shore. Due to technical difficulties this interview was not recorded, although some limited notes were taken. I refer to this interviewee as "Liu". Being a young woman and a new settler on low income without a car, Liu had many characteristics associated with a higher risk of social exclusion.

Liu primarily relied on public transport for mobility. Liu did not list the train as a travel option because there were no trains where she lived. She walked for local shopping, and did not use taxis at all because of the expense. Liu would rarely get a lift.

Liu mentioned the lack of buses in the evening, which restricted her social and recreational opportunities. She described waiting three hours for a bus to take her home on a public holiday.

#### **4.2 *Mandy***

The second pilot interviewee was also a young woman and a new settler on low income without a driver's licence. She was a university accounting student from

China, also living on Auckland's North Shore. She was over twenty years of age, and was in the process of completing her studies and thinking of her employment prospects. Due to technical difficulties only a part of this interview was successfully recorded, and again some limited notes were taken. I refer to this interviewee as "Mandy".

Mandy also primarily relied on public transport for mobility, occasionally getting a lift when public transport was not available or suitable. Mandy got a lift to church, to social/recreational activities at night, and occasionally for shopping, when these activities were more than half an hour's walking distance.

Mandy walked for local shopping, to church and for other purposes, for example social, within a half hour walk when a bus was not available. Mandy did not list the train as a travel option because there were no trains where she lived. Mandy did not consider cycling as a travel option because of the hills and because she did not think it was safe. She did not use taxis because of the expense.

Mandy indicated that for her bus travel routes on the North Shore there was usually only one bus an hour, and that in rush hour the buses were sometimes fifteen to twenty minutes late. She mentioned that some of her fellow students met on Sundays to help each other with their studies, but that she could not participate because of the lack of bus services.

Mandy was concerned that her travel impediments would make it difficult for her to find a job:

*Sometimes I think it's impossible ... [to] find the company [for which] you can easy to (easily) find the bus to go to the company to work. It's impossible, sometimes, I think. ... If you're lucky – if it's in a place like Takapuna – maybe it would be easy. But if it's somewhere else it could be quite difficult.*

### **4.3 Reena**

The third pilot interviewee was a self-employed female of forty-six years of age, also living on Auckland's North Shore. She had been blind since the age of twenty-one. This interview and all the subsequent full interviews were successfully recorded in full. I refer to this interviewee as "Reena". Reena was chosen for an interview because of her disability, but being a woman on low income unable to drive were other characteristics of hers that are associated with an increased risk of social exclusion.

Reena walked, with assistance from her guide dog, for short to medium distance travelling, and used taxis or public transport for longer distance trips or for trips where she needed to carry a lot.

Reena generally only used buses on occasional trips downtown. She observed that for other destinations buses were irregular and infrequent. She also raised issues with the lack of training of bus drivers. She indicated that there was not enough room for her to get off the bus at the same time as her guide dog, and she had been in the situation where "the bus driver has taken off with the dog still on the bus, because you get down first."

Reena did not list the train as a travel option because there were no trains where she lived. She seldom got a lift, mentioning that one of the difficulties in getting a lift was people's hesitation to transport her guide dog in their car. She could not drive or cycle because of her visual impairment.

As Reena primarily relied on walking with the assistance of a guide dog for most of her mobility, much of her activity was therefore within walking distance. She was very fit, carried groceries home and walked long distances. She indicated that the main constraint to where she walked was the time it took. Reena seemed justifiably proud of her fitness, and the level of mobility and independence she had. She was determined to be mobile, despite the difficulties and despite a number of accidents and other incidents, including

being seriously injured when she was struck by a car that did not stop for her on a pedestrian crossing. She described another incident as follows:

*I was walking through the Strand Arcade and I heard voices of two ladies standing talking ... and I thought they'd moved so I stepped sideways, and went straight down those stairs and all I heard was my cane go bing, bong, bong, bong to the bottom. Thank goodness ... the guy ran up and caught me. It would have broken my back.*

Reena had to face a variety of hazards when walking on footpaths. Pointing to scratches on her face she explained:

*All this stuff is from rose bushes. I've had thorns in my head, overhanging from all sorts of things, because your dog's looking left and right, you know. ... He can't look up into the air as well, and on the ground. If you don't go into a hole, you've got to hit your head. What's the best thing?*

Reena described the hazards of head-level objects, cars parked on the footpath, cars backing out from driveways, the difficulty of crossing roads and the scarcity of pedestrian crossings. She explained that "you need a really good guide dog. And all the time it's stressful, because even if you're doing the right thing ... there's always going to be an idiot." She suggested that she was more mobile than most blind people:

*Look, my dog's really, really good, but ... what do other people have? That's why they don't go very far. That's why you don't see many guide dogs around. And if they do, they do the same route. ... I know a lot of people, blind people, they don't go out. .... They stick around the golden mile, which is Newmarket, Parnell. They get on trains, I mean they go to and from work. But I'm a blind person that goes anywhere, everywhere, all the time.*

Reena was eligible for "Total Mobility", meaning she was entitled to a fifty percent discount on taxi fares, but still would only use a taxi if there was no other alternative because of their expense. Even after grocery shopping she would choose a twenty minute walk carrying her groceries home rather than taking a Total Mobility taxi. She explained: "They're inefficient, unreliable and cost too much. From home to my place they'll cost anything from five to six dollars. Far too much. It adds a lot on your groceries."

Reena had concerns about new settler taxi drivers not knowing where to go. She said that using taxis "is extremely difficult because most of the drivers are foreign, Asian. ... They have difficulty in reading maps." She gave some examples: "There was one guy, I told him how to get to the pools. He charged me heaps of money, far too [much]. He only went round and round in circles because he couldn't read the bloody map." She gave another example: "I have been dropped in the middle of Coatesville [a rural area just north of Auckland]. No footpaths, wrong address, too much charged, and vroom he's gone."

Reena explained that as a blind person with a guide dog she faced extra difficulties using taxis. She explained: "Some of them refuse to pick me up because they don't like dogs. They're allergic to dogs." Reena was also concerned about the lack of training for taxi drivers in how to deal with blind people:

*I feel very unsafe and I've had several accidents. ... I put my teeth through my lip with someone standing in front of me, tripping over and ending up falling over him because he gets in my way. I've poked my eye, which is just as well it's plastic because it'd be plastic by now, on the corner of the car door. They are not taught to put their hand on that corner. They are not taught to carry things. They are not taught to knock on the door and tell you they are there. They sit on their horn and wait. I could go through a list that is so long....*

In Auckland, Total Mobility users must have a Total Mobility electronic swipe-card and the taxis they use must be fitted with a swipe-card reader. Reena discussed problems with the electronic swipe-card system:

*Quite often, if I want to wait for a taxi on the North Shore, they'll say, oh there's nobody with a swipe-card [reader]. I can wait anything up to half an hour. I may as well walk. ... I might be really exhausted but I've got to walk. ... Yep. And if that [swipe] card is broken or lost or I've dropped it or if somebody hasn't given it back to me, I have to pay full fare until I get a replacement.*

Reena thought that one reason there might be a scarcity of Total Mobility equipped taxis was the cost of the swipe-card reader: "...and they [the Auckland Regional Council, which funds the Total Mobility system in Auckland] didn't even buy the machines and so a lot of the taxi drivers can't afford seven hundred dollars."

Reena described her views on transport and human needs for social participation:

*Transport affects your whole life, your lifestyle, your speed, and your social contribution, your growth, your communication, your certainty. ... You need connection, you know, like love and connection, and you need significance. ... It's just those simple things, and ... in transport, it's a huge thing because that affects one person's whole level of enjoyment of life, stress, you know, and choice.*

Reena had previously worked downtown, but to avoid the time and cost of commuting she was now self-employed and worked from home. She explained that:

*Everything I do is slightly slower because of my visual impairment and so it's not cost-effective for me to pay somebody to do these things and travel. ... Sitting on a bus going into the city, which I used to, it is at least two hours a day.*

Overcoming her mobility impediments, when she could, came at a human cost. Reena explained how critical it was for her to keep fighting her mobility impediments:

*These are all things that come back to transport. Independence. And when there's not ... it's very insulated and it's lonely and scary and it's stressful and damn that. I'm very independent. I probably travel more than a lot of people, but I had some terrible experiences and I'm probably – I'm soft – but it's my personality just to go out there and keep doing it. Because if I stop I wouldn't go out again. I'd lose my confidence that fast it doesn't matter.*

#### **4.4 Joy**

The first full interview was with a sixty-year-old political refugee living in an eastern suburb of Auckland. She had recently arrived from China without family or friends, did not speak English, and described the difficulties in starting a new life in a strange land. She worked part-time as a baby-sitter. The interview was undertaken with assistance of a translator from the Shakti Migrants' Centre. I refer to this interviewee as "Joy". Joy was chosen for an interview because she was a recent settler. She was also elderly, under-employed, with a low income, and did not understand English, factors that are also associated with a higher risk of social exclusion.

Joy could not cycle or walk far because of her age, and she did not use taxis at all because of the expense. Through a translator, Joy described difficulties with public transport:

*It's really difficult for me without personal transport. From ... this place to Henderson, to study the road code course, I need to get up really early in the morning, and to catch the bus [I have to use] two routes maybe, or three ... to get to Henderson. It's really inconvenient. ... I feel that the bus [service] is not enough, and the price is very high, and the waiting time is quite long. If I want to go to somewhere, I need to go to the city first, and then transfer to another place. ... It wastes a lot of time, on the road. For people ... my age, it's really hard to go somewhere. For my age, it's not so easy.*

The cost of public transport was also an issue for Joy.

Joy had a Chinese driver's licence and was in the process of learning for a New Zealand licence. She primarily relied on driving a car borrowed from her landlord for mobility. She had little driving experience and could not read street signs. She drove on particular routes that she had come to recognise. Despite these difficulties, Joy still found driving a better mode of travel than public transport.

#### **4.5 May**

The second interviewee was a former teacher and retired church minister in her seventies living in West Auckland. I refer to this interviewee as "May". May was chosen for an interview because of her age. She had other characteristics of being a disabled woman on low income, receiving social assistance and being unable to drive that are also associated with a higher risk of social exclusion.

Due to health problems May was unable to walk, to drive, or to board public transport. May had previously been a regular bus user but had not used buses for three or four years because her doctor had advised her not to after knee

problems and difficulties with getting on and off buses with steps. She indicated that she would be able to use kneeling low-floor buses without steps if they were available, but generally they were not.

Like Reena, May was eligible for Total Mobility, meaning she was entitled to a fifty percent discount on taxi fares, which was helpful for travel to her medical specialist:

*That's a big help with the medical care because that takes, every time I go to see the doctor it's sort of halved, transport [taxi fare] is halved. But for Remuera, of course, it's still quite a sizeable bill. You pay fifty dollars to go over there by taxi, so it's [still] twenty-five dollars.*

Even with the discount, her share of the fare was still an impediment to using taxis for other purposes. She explained:

*You think twice before you get a taxi, even from here to New Lynn. ... It would be between eight and ten dollars depending on the lights and things ... and ten dollars out of the pension, you know, you think twice about it, you know, because you're very limited, when you think of a pension being a very fixed budget.*

May indicated that when ordering a taxi she would only order a taxi fitted with a Total Mobility card reader. She told of how taxis fitted with a card reader do not always use it:

*Some taxi drivers refuse to use it, and if they refuse to use it and you've already done the journey you can't do anything about it but pay the fare. ... They say, oh it's not fair to ask us. It's three months before we can get paid from the swipe-cards.*

May primarily relied on getting a lift once a week with her home-caregiver for shopping and personal business, or a lift from friends for other activities. May

talked about how relying on others for lifts meant it was necessary to plan her travel: "You've got to really have everything organised and know exactly where you're going, what you're doing and what you can possibly fit in." May missed the ability to be spontaneous: "You can't do spontaneous things that you once could. I suppose that's what I miss really, because if you got a car, you can hop in the car whenever you want to, to the supermarket or whatever, but now you've got to really plan ahead." She also said that "it's impossible to do spontaneous activities. Activities like, for instance, my niece was up here from Palmerston North and she was over the North Shore, and I couldn't get to see her at all. See, I mean there was no way I could."

May described the effects of her mobility impediments: "Things like that make life a bit difficult, especially if you would love to go and meet a friend and take a bus or a car. I can't do that because I can't walk to the bus stop and I can't stand" and "life is sort of more restricting all the time."

May gave some examples of activities affected by her mobility impediments:

*It's such a hassle that you just don't go, you know. Like if there's been a very good movie that I'd like to go and see, well it's just so daunting that you just don't do it. The last movie I actually went to a theatre to see was the Whale Rider when it first came out, and that's, what, two years ago now.*

May gave another example: "There's a little group that I'd quite like to go to that meets in New Lynn once a week but I just couldn't do that because that would be an extra, you know. So it does affect, I suppose, your quality of life."

#### **4.6 Becky**

The third interviewee was a retired teacher living in West Auckland, seventy-four years of age. I refer to this interviewee as "Becky". Becky was chosen for an interview because of her age. She had other characteristics of being a

woman and on low income, factors that are also associated with a higher risk of social exclusion.

Becky relied primarily on driving her car for mobility. She described this as an easy mode of travel, but did not drive in the dark because of problems with her vision. She preferred not to drive in peak periods because of the stress of delay when driving on congested roads. She explained that because she is retired, she generally has some flexibility as to the time when she travels, and so she could generally avoid peak periods.

Becky could not cycle because of her age. She also had safety concerns with cycling. She walked for local shopping.

Becky had used trains occasionally. She described her experience when trying to visit a patient at Middlemore Hospital by train:

*It's brilliant that the station is right opposite the hospital. ... I used the Rideline [on the Internet], and it worked out a programme for me to get there ... printed the time schedule out, brilliant. Caught the train, came on time at Henderson, changed at Newmarket, got to Middlemore on time. ... On the way back, the train to take me to Newmarket didn't come on time. ... I decided to get on to the next train that came in, whichever way it was going. ... By this time, it was pitch black, and I couldn't see. ... Without exception, every single station name post was so covered with graffiti that you couldn't read it. So, it was so difficult, I was so worried, annoyed, when to get off. ... So, I did manage that, but then of course I had to get to my car in the dark.*

Becky did not mention any difficulties with getting a lift when she needed one. Although she seldom used taxis because of their cost she would share a ten-seater cab with friends for occasional evening cultural activities. Becky was one

of the few interviewees who did not believe mobility impediments restricted her ability to do things.

#### **4.7 Nick**

The fourth interviewee was a young man approximately twenty years of age with cystic fibrosis living in South Auckland. He was employed part-time and also did volunteer work at a hospital. I refer to this interviewee as "Nick". Nick was chosen for an interview because of his disability. He had other characteristics of being under-employed, young, without a driver's licence and receiving some welfare assistance, factors that are also associated with a higher risk of social exclusion.

Nick walked for local activities, particularly visiting the local doctor. He did not mention any difficulties with getting a lift and got a lift to work, to church and for most social activities.

Nick used public transport for shopping, personal business and recreation. Nick told of his frustration that in the afternoon peak buses were sometimes twenty minutes late, and mentioned an occasion when the bus had been an hour late. High bus fares were also an issue for him.

Nick found taxis convenient and used them occasionally for short local trips but also found them expensive. He explained: "Taxis, oh they're pretty cool. Only thing I don't like about it is the fares. It's going up and up and up and you just live down the road." Nick found that sometimes taxis did not know where to go or would not take the most direct route, and this increased the cost: "You know the short cut but they prefer to go the long way just to make that fare go up."

Nick was particularly concerned about new settler taxi drivers: "I reckon that they should have at least five or ten years, you know, living in New Zealand and just knowing where everything is before you become a taxi driver. Not straight

from overseas and get a job as a taxi driver when you don't know where you are going."

Nick aspired to drive: "For the job, the jobs I have been into ... you require a driver's licence and a car. So everybody is pushing me for that – to get, you know a car." For Nick the main impediments to driving were the stresses of driving, (both from the responsibility and the stress of being delayed in traffic), concern over the possibility of traffic crashes, and the cost of owning and running a car.

#### **4.8 Val**

The fifth interviewee migrated with her family from India a little over a year ago. She was approximately thirty years of age and lived in Epsom, a central Auckland suburb. She was currently self-employed and working part-time, but was looking for full-time employment. I refer to this interviewee as "Val". Val was chosen for an interview because she was a new settler. She had the other characteristics of being female, under-employed on low income and caring for a child, that are also associated with a higher risk of social exclusion.

While Val did take public transport for trips downtown, she relied on driving the family car for most of her mobility. Val also talked about her earlier experience when she was employed full-time and unable to drive. Before her family got a car, Val would need a lift for travel to a medical specialist, personal business, religious and social activities. For grocery shopping, Val's brother would rent or borrow a car to carry groceries.

Val had little local driving experience and found driving difficult. She thought it was hard for her because of the age at which she starting to drive, but she was also very concerned about the risks of driving. "I am so aware of the fact that the slightest error it will take split second ... to do great harm and I just can't get that off my head so it is difficult." As well as the risk, she talked about "the stress of driving and following all those rules and making sure you are not

getting honked at". To reduce the stress, Val generally confined her driving to familiar routes. As she explained: "If I have to do this route by car, I have to drive there with my brother a day before or in the night and do that route once and only then will I be able to do it the next day. I can't just independently do a different route."

Val discussed the difficulties of relying on public transport. She described how when she did not have access to a car and was working full-time her trip to work would take an hour and a half one-way, counting a twenty minute walk to the bus route and a fifteen minute walk at the end of the bus trip to get to work. Val also described the difficulties of relying on buses to travel to new places. Travelling to religious activities, many late at night, was also difficult. Val described a "long long walk" to the religious centre from where the bus stopped, and problems with the lack of late buses for the return trip. She recalled that once her brother had to sleep at the centre because he could not get home. Val also raised the cost of public transport as an issue for her.

The difficulties of using public transport were a major factor in Val's decision to drive instead of using public transport, despite her difficulties with driving.

Val could cycle, but was put off cycling by the hills: "I can cycle but this place is pretty difficult to cycle in. I mean there are places that are really steep. ... I don't think I am fit enough for that." Val walked to local activities, such as the local doctor. Val described how when her family did not have a car they would sometimes get lifts with the people they were flatting with:

*Like I said we were flatting with these other people and they had a car so we just got a lift with them but the thing is you have to wait for it to be convenient for them as well. You can't really go when you want to go or when you need to go, it's like they can't take you. That's horrible having to depend on, you know, other people to do you a favour, but that's how it ends up.*

Val emphasised that not wanting to depend too much on other people was a major deterrent to getting a lift:

*You are flating with these people, okay, and ideally you want to be on a situation that is on par, you know what I mean. But if you are going to be the one who is going to end up having to take favours, that's quite uncomfortable. So there are times when you have to choose not to take the favour to maintain some sort of integrity.*

Val described the difficulty for family members to give her a lift. This was particularly the case when she was studying:

*I so wanted to be able to drive myself, because it gets over at nine [pm] and my brother does nightshift. So, he used to come around in the afternoon, pick up my son from school at three, drop him here, have a little lunch, go to sleep and then get up at 5:30, drop me to college, come back, go to sleep for two hours then come back and pick me up and bring me back. That happened every Wednesday and I felt horrible about it.*

Val had to use a taxi a few times, for example to get medical tests, but explained that generally "taxis are too expensive. [I] just can't think about it." At times she had to use a taxi when she missed the bus: "I got really late and I missed my bus and I had a friend waiting somewhere so I had to take a cab. Twenty dollars to Royal Oak. I had to get there." Val also explained that most taxis required payment in cash, which could create problems: "Sometimes I got into this cab and I realised I didn't have money 'cause you can't use EFTPOS cards. Fortunately I had this man waiting at the other end, so [I] sort of borrowed money from him to pay the cabbie cash. That's another thing about cabs, they don't take cards."

Val described the effect of mobility impediments on her: "It's very frustrating. I can't tell you how frustrating that is, to not be mobile." She explained that for

her "there was some things you just couldn't do. Then there are some things which sort of lost their charm because of the difficulties, you know, to get access to it." She indicated that mobility impediments had affected social and cultural activities, and that her limited mobility had meant that her son could not participate in some clubs, classes and sport.

Val's response to the question: "Have you ever been unable to do something because of travel difficulties?" was: "Oh, a lot of things, a lot of things. Most places you can't get to because you can't drive."

Val also indicated that mobility impediments affected her employment options. She indicated that when she used to travel to full-time work by bus, there were certain shifts she could not do. Val thought that her limited mobility was impeding her ability to find a new job: "Like there was this ad the other day in the newspaper about a position in some petrol station and it was walk in and apply", but she explained that "I can't just walk in and apply ... because I can't travel." Val also said: "I would love to drive around and be more mobile – go and apply in ten thousand places for jobs – probably find a job faster if I was more mobile."

#### **4.9 Sarah**

The sixth interviewee was a secondary school student approximately seventeen years of age living in West Auckland. I refer to this interviewee as "Sarah". Sarah was chosen for an interview because of her youth. She had the other characteristics of being a woman with low income and without a driver's licence, that are also associated with a higher risk of social exclusion.

Sarah relied primarily on public transport and getting a lift from her parents for mobility. Sarah aspired to drive. She had previously not been allowed to drive because of a sport concussion, but had recently been allowed to get her licence and was in the process of learning to drive.

For Sarah, the cost of public transport was an issue. She explained:

*The bus is quite expensive for a student. ... It mounts up and it's five stages from town to here at eighty [cents] a pop and if you don't have your student ID on you it's a dollar and thirty cents and that's a lot of money to spend on travel. That's, like, as much or more money than you would spend on petrol to get you there.*

Sarah also talked about the scarcity of buses. On weekdays the last bus ran at 5:55 pm and there was no bus service on weekends. She talked about walking seven kilometres to Titirangi to access a bus service on weekends.

Sarah could cycle, but was put off cycling by the hills. Sarah also explained that "I don't have muscles for this bike riding. It makes me tired. No, it's hard work and, like, if you are going to a friend's house or something you don't want to turn up all sweaty."

Despite sometimes walking seven kilometres to access the bus service on weekends, Sarah explained that she was deterred from walking because "you're prone to the weather, time, because you use a lot of time and I have an old sport injury which is a bad ankle which gets tight but that's not that much of an issue. I just ignore it."

Sarah needed to get a lift home after sport activities and needed a lift to social and recreational activities on weekends. Sarah would generally only get a lift from her parents, or from people she knew when they were already going somewhere:

*Like if I want to go out with my mates, sometimes I just can't go because I just can't get a lift. I remember like if my parents go away, I am really stuck for rides. I have to, like, ring up people who live around me and ask them when they are next going to go out and try and get a lift with them then, because I don't*

*really like asking people "can you please just take me out for my sake and just don't worry about yourself?", you know.*

Sarah described the difficulty it could make for family members to give her lifts. Sarah believed that the need to give her and her siblings lifts was a continual burden to her parents:

*It means that so much of their time is tied up in transporting us kids to sport and social activities and recreational activities. ... It does take up so much of their time that, you know, they don't have all that much, they forfeit a lot of their time ... which is why I don't like asking for a lift. I try to coordinate, while they are out doing something. Now that can be quite restricting and limiting to me as well and it can be a real hassle for them.*

Sarah was the only interviewee who mentioned hitch-hiking as a potential travel mode. But she did not hitch-hike if she had a choice because, as she explained:

*I don't feel very comfortable. I mean I will jump in a ride if it is somebody I know but I am sort of wary of jumping in a car with people I don't know. You are just so vulnerable and you have to place all your trust in them, which I would rather not do.*

Sarah had used taxis but also did not consider them to be a viable travel option. She explained that "[a] taxi is quite expensive. From New Lynn to here it costs twenty dollars if you get a cheap one" and "I don't have a job therefore I don't have enough money to pay for it."

Sarah talked about how relying on others for lifts meant it was necessary to plan her travel: "I have to get up early on the weekends ... just to catch a lift out and I have to get home early and when it suits them because they are going to be out and they are coming home at that time or something like that. That may not suit me and I just have to deal with it."

In discussing the effect of her mobility impediments, Sarah described how they restricted her ability to do things: "Like if I want to go out with my mates, sometimes I just can't go because I just can't get a lift."

#### **4.10 David**

The seventh interviewee was a man of some thirty years of age living in South Auckland and working full-time. He was physically unable to walk and used a wheelchair. I refer to this interviewee as "David". David was chosen for an interview because of his disability. He was also without a driver's licence, a factor that is associated with a higher risk of social exclusion.

David relied primarily on passenger rail for mobility. He wanted to drive, but said that for him the cost was a prohibitive barrier. This primarily referred to the cost of driving training, but also to getting a vehicle and adapting it for his use.

David could only use wheelchair-accessible buses. He indicated that, aside from of the special downtown services, he was effectively unable to use buses:

*There are wheelchair accesses for buses. However, there is no way of knowing whether a wheelchair-accessible bus is going to be on the route that you need that bus to be on. Rideline don't know. Stage Coach don't know. It's a matter of how they are drawn. I have rung Rideline in the past and have asked them and they said there was just no way we could tell whether you are going to be able to get on this particular bus or not, which to me completely defeats the purpose of having accessible buses because it means you can't plan your routes, can't plan your access.*

David relied on trains for most of his mobility. He described his trip to work:

*Yeah, basic day: leave the house about 6:40, push [by wheelchair] to the train station which is about a kilometre. Get on the train with the assistance of guards. ... Jump off the train at Britomart and literally jump, close my eyes and leap, because the ramps that they have got fitted on the trains aren't wide enough for my chair.*

David praised the assistance he was given by rail staff, but indicated that the design of train carriages and stations presented significant impediments for him:

*I do damage to my chair getting off trains. ... Most of the platforms are, well, every platform on the Auckland suburban route is a different height. There is no uniformity in platform heights so basically where at one stop it will be a simple job for ... a guard just to pop you down, at another drop it might be, maybe a three foot drop. A great example is the Papakura train station. Now if you are on the suburban platform, because they have also got variable height [train carriage] units as they have bought a hodge-podge of units from some place. ... if they come in on the suburban platform it is possible to jump out. You damage the chair but you can jump out. If they come in on the middle line, which is the station platform, there is a drop off. It can be upwards of three and a half to four feet before you hit the ground. It is not actually safe. ... It is further complicated by the fact that they put the ramp out, not only can the chair only just fit and not particularly safely down the ramp but there are metal barriers on the side of the platform which means when you go down the ramp you just hit the barrier and you can't go anywhere. You have to get out of the chair. Which is then further complicated – God am I whining – um, by the fact that the rail bridges aren't actually accessible. They are too steep. So even though I can bench press one hundred and forty-five kilograms I struggle to push myself up them, the rail bridges.*

David admitted that using the train was difficult, but regardless of this he considered trains to be his only practical travel option for longer trips.

David used his wheelchair to access activities within three to four kilometres, including the local doctor, shopping, personal business, recreation and social activities. In his local suburb, which was flat, David found travel by wheelchair easy, but in the downtown area it was a "freaking nightmare" because of the hills. David also mentioned difficulties with the footpath surface:

*Some neighbourhoods are appalling with regards to footpath surfaces. ... If you catch the front wheels on an uneven surface and you tumble you can harm yourself and the chair quite badly.*

David indicated he would only get a lift once in three months, because he did not want to rely on people too much. He also said that:

*The only people I get into the car with are people that I know and trust and have known for quite some time usually. It is usually family or close friends so they know what to do in terms of pulling the chair apart and stashing it away.*

David regularly used a taxi to take groceries home from the supermarket, but was deterred from using them for anything else because of the expense.

As a wheelchair user, David was potentially eligible for a fifty percent discount on taxi fares through the Total Mobility scheme, but he was not enrolled in the scheme. He explained: "For the extent to which I would use it, I mean, within Papakura I would use maybe one or two four dollar taxi rides a month so it isn't actually really worth it." He went on: "Yeah, and there is a cap on the taxis [subsidy] and so my taxi fare back from Papakura, back from Auckland wouldn't be particularly influenced anyway so it doesn't really fit my needs as I understand the system."

David was also concerned about eligibility requirements:

*The other thing with Total Mobility is that it tends to, as I understand it, it's very much driven or delivered through community groups and if you don't have involvement in those community groups or any particular interest in becoming involved in those community groups that can be a barrier.*

David described the effect of his mobility impediments: "Mostly frustration. I mean it's basically a matter of limiting scope and frustration" and "there are extra realities and extra burdens that are placed on you living with disability that aren't necessarily there if you are not. And those costs, and they do lower your quality of life relative to your income, relative to somebody else who is earning the same amount."

He indicated that there were things he could not do because of mobility impediments. He gave as examples: "Do absolutely anything on a Sunday [because no trains run on Sunday]. I mean, as we have said, I think I have brought up a couple of times, you can't stay in town, you can't etc, I can't access anything off the main rail lines." David explained that for him "for work, recreation, entertainment as well, there are areas, vast areas of Auckland that I can't access. I can't go to Botany, I can't. I can't stay in town after a certain time at night, recreationally, because the last service is eight o'clock – unless I want to use taxis, but it's eighty to ninety dollars to Papakura."

David also explained that mobility impediments constrained his employment options: "In terms of work, I am tied to the train lines. I basically can't work anywhere that there isn't a train line at the moment."

#### **4.11 Kath**

The eighth interviewee was a secondary school student approximately seventeen years of age living in West Auckland. I refer to this interviewee as "Kath". Kath was chosen for an interview because of her youth. She was also

female and with low income, characteristics that are associated with a higher risk of social exclusion.

Kath had a driver's licence and access to a car, and chose to drive for most of her travel. But while Kath described driving as an easy mode of travel, she did not have a lot of experience driving, and preferred not to drive to the city because she did not feel safe doing so: "I guess just what makes it difficult for me to drive is the traffic and stuff because I am not a very experienced driver yet. The traffic kind of scares me."

For travelling downtown Kath preferred to drive to the train station and take the train downtown. A difficulty with using the train was the worry with leaving her car at the station. She explained her worry:

*Just for security reasons because usually, I don't know, the train stations around here, it's pretty dodgy. Like, people, like 'cause when I catch the train I don't arrive back until eight o'clock at night and so usually by then there is people hanging around the train stations. Like, you just don't know what's going on.*

She also mentioned some difficulties when scheduled trains did not turn up.

When asked what deterred her from using buses, Kath responded:

*That they are never on time. And some of them don't have direct routes to where I want to go. Like if I want to catch a bus into the city to a meeting I will have to catch a bus into Henderson and then perhaps another bus to New Lynn to go into town, so that's two or three buses just to get one place.*

Kath was deterred from cycling because of safety concerns. When asked what would encourage her to walk more, Kath responded "More lighting on streets. Yeah, I just think lighting. I would walk heaps more if there was more lighting, it's so dodgy."

Kath did not use taxis because of the expense. She advised that it was easy for her to get a lift from a family member, but getting lifts from other people was quite difficult:

*The people that we associate with live kind of out of the way from here. And then, I guess that's it really, it's just that they live further away and sometimes I don't like getting lifts if it is just me going with somebody else who I am not really familiar with. I would rather be with somebody I knew or something.*

In discussing the effects of mobility impediments, Kath explained that for her: "I am further away from my friends and stuff so I don't do that as much because of the travelling time in traffic" and also: "Sometimes I haven't been able to go out to, like, friend's places or social activities at night time because there is no buses home and taxis are too expensive and late at night my parents are sleeping." Kath also indicated that mobility impediments meant that she missed some meetings for her voluntary community activities.

#### **4.12 Frequency of travel**

The interviewees were asked about their frequency of travel for various purposes. Table three summarises the frequency of travel reported by the interviewees. For ease of comparison all the travel frequencies are expressed as trips per week.

In this question, Becky, Mandy, Nick and Sarah did not differentiate recreation and entertainment from social activities, as their recreation and entertainment was usually enjoyed socially with other people. Kath considered sport activities to be part of recreation, while Sarah categorised sport as a separate activity.

**Table Three: Weekly travel frequency by purpose reported by interviewees**

Travel purpose	Work	Study	Medical care	Food shopping	Other shopping	Personal business (e.g. banking)	Church/religious	Cultural activities	Recreation and entertainment	Social activities	Other	TOTAL
Liu		5			1				1	0.25		7.25
Mandy		5		2	0.1		1		1			9.1
Reena	5		1	2	1	1			1			11
Joy	1	1		1			4					7
May			0.25	1	0.25	1	1			0.4		3.9
Becky			0.08	4	4	0.25		0.06	2		1.25	11.64
Nick	2		1	0.5		1	1		7		1	13.5
Val without car	5	0.25		0.25	0.08	0.08	0.25 - 7	0.08	1	0.5	1	8.41-15.16
Val with car	1	0.1-1		1	0.25	0.08	0.25 - 7	0.08	0.25	0.25	1	4.26-11.91
Sarah		5							1-2		7	13-14
David	5		0.1	0.5	1	0.5			1	1		9.1
Kath		5	0.1		0.3				6	1	1-2	13.4-14.4

#### **4.13 Ranking of importance of travel purposes**

All but two of the interviewees, Reena and Joy, were asked to rank the importance they placed on each of the identified travel purposes. Reena and Joy were not asked this question because it did not occur naturally in the flow of conversation and was thus left to last. Because these interviewees raised other matters, the interviews went longer than expected and had to end before these questions could be asked. Reena's interview ended after three and a half hours, because of fatigue and because she had another appointment. Joy's interview ended after an hour and a half because the translator had another appointment.

Table four summarises the ranking of importance that the nine interviewees asked this question gave to each travel purpose. While most of the interviewees gave a range of rankings, Val only identified two rankings: the travel purposes that were "very very important" that "you just can't do without", which she gave equal top priority, and travel purposes that she would probably compromise and therefore were a lesser priority.

Table four also shows the average ranking for each travel purpose. To enable this average to be calculated, separate but equal priorities have been assigned to both social activities and to recreational activities for Mandy, Nick and Sarah, even though they did not distinguish between these two travel purposes.

**Table Four: Importance of travel purposes as ranked by interviewees**

Travel purpose	Work	Job Hunting	Sport	Study	Food shopping	Community services	Medical care	Church/religious	Personal business (e.g. banking)	Social activities	Recreation and entertainment	Other shopping	Cultural activities
Liu				1	2					3	4	5	
Mandy				1	1			3		4	4	6	
May					3		1	4	2	6	8	5	7
Becky					2	1	3		4	5	7	6	7
Nick	1								4	2	2		
Val	1	1		1	1		1	1	1	9	9	1	9
Sarah			1	4						1	1		
David	1				3		2		6	5	4	7	
Kath			2	1		3	6			4		5	
Average	1	1	1.5	1.6	2	2	2.6	2.7	3.4	4.3	4.9	5	7.7

## Chapter Five

### Discussion

This chapter discusses the interview results. Firstly, the frequency of travel and ranking of importance of travel purposes reported by interviewees are discussed. Then the views of interviewees on the ability to access opportunities without travel are reported. This chapter analyses the types of mobility impediments identified in the interviews by travel mode, and the effects of these mobility impediments on interviewees. Finally, the prospects for improving access and mobility by addressing the impediments identified are discussed.

#### *5.1 Frequency of travel*

Table three in section 4.12 summarises the weekly frequency of travel for various purposes reported by the interviewees.

Two notable consistencies of travel frequencies between interviewees evident in table three are that all of the interviewees studying full-time travelled five days a week to their place of study, and that all of the interviewees working full-time travelled five days a week in connection with work.

While table three provides totals of reported weekly activities undertaken, this does not necessarily reflect the number of trips made. For example, May would deal with personal business in the course of the same trip as food shopping, and both Sarah and Kath participated in some of their sport activity after school.

The reported travel frequencies indicate the level of mobility of the interviewees and the kinds of activities this mobility gave them access to. But, as discussed in section 2.2, actual travel behaviour does not necessarily reflect travel wants or needs. Most interviewees, with the exception of Becky and Sarah, indicated that they would travel more if travel difficulties were ameliorated. Interviewees variously indicated they would travel to undertake more social, recreational,

cultural and religious activities, general shopping, part-time study and more job-hunting if travelling was easier for them.

Significantly, no interviewee indicated they would travel for medical care more often if travelling was easier. As May stated, transport "doesn't influence the medical care because you've got to have it."

The degree to which travel difficulty and travel choices affects travel frequencies would thus appear to depend on the importance of the travel purpose concerned.

## **5.2 Access without mobility?**

Most interviewees indicated that they could not participate in the activities they identified without travel, and so generally access required mobility. Becky, David and Val did most of their banking and some of their personal business like insurance by telephone or Internet, but at other times they still needed to travel for these services, for example they still needed to go to the bank to deposit a cheque. While social activities could be done at home, i.e. friends could visit them, this was not seen as sustainable. As Val expressed it: "You can't avoid it. You go to people's houses, they come to yours and that's how it is." As David asked: "How often can you expect people to come to you?"

While some shopping could potentially be done by Internet, none of the interviewees mentioned this as something they did as a matter of course. When pressed about grocery shopping on the Internet, David responded that "It's possible, but I wouldn't do it. I've got to be honest with you, I want to be able to fondle my produce." David explained that "it's impossible to gauge quality over the Internet" and "it kind of diminishes from the experience. There is nothing quite like wasting three hours wandering around the supermarket looking at stuff you don't need. It's about quality of life." When asked if she had tried shopping over the Internet, Kath responded: "No. I know heaps of people

that do, but I don't feel comfortable putting trust in a computer to buy stuff for me."

From their responses it appears that, for the people interviewed, physical mobility by use of the transport system is the usual way to access activities. "Virtual mobility" – having electronic access to activities that, in the past, required physical travel (Kenyon et al., 2003) – was not always considered to be an adequate substitute for physical mobility to the interviewees, even if the technical means were available.

### **5.3 *Ranking of importance of travel purposes***

Table four in section 4.13 summarised the ranking of importance that the nine interviewees asked this question gave to each of the travel purposes identified.

For the purposes of this discussion it is assumed that the top three ranked travel purposes are a high priority, that the next two purposes are a medium priority and that other purposes are a low priority.

Every interviewee who travelled for work gave work the top priority, while every interviewee who was studying, with one exception, gave travel to study the top priority. Val was the only interviewee who identified job-hunting as a travel purpose, and she gave this a high priority. All interviewees gave food shopping a high priority. To those interviewees who identified sport as a travel purpose, it was a high priority.

The two interviewees who identified community services as a travel purpose gave it a high priority. Five interviewees identified medical care as a travel purpose, and all but one placed a high priority on it.

Religious activities were identified as a travel purpose by three interviewees who gave it a high or medium priority ranking.

Personal business received varied rankings. Two interviewees gave it a high priority, two gave it a medium priority, and one gave it a low priority. Four interviewees did not identify it as a travel purpose.

Recreation, entertainment and social activities also received varied rankings. Two interviewees gave them a high priority, four rated them as a medium priority, and three gave them a low priority.

Shopping other than for food was given a medium or low priority by almost everyone who identified it as a travel purpose, with one exception.

The three interviewees who identified cultural activities as a travel purpose gave it a low priority.

Using the average priority score, table four suggests a hierarchy of importance of travel purposes going from left to right. It would appear that for those who participate in these activities, work, job-hunting, sport, study, food-shopping, community services, medical care and religion are high priorities. Personal business and social activities generally have a medium priority, while recreation and entertainment have a varied priority ranking. Non-food shopping and cultural activities have a low priority.

Leaving out the rankings of any one interviewee does not materially change the overall average ranking or the overall average order of priorities. The averaged order of travel purpose priorities does fit roughly with the priorities that most interviewees gave, but there are notable exceptions, which will be discussed shortly.

As discussed in section 2.6, Lyons, Marsden, Beecroft and Chatterjee (2001) suggested access needs of prime importance and access needs deemed valuable. Table five compares their rankings with the averaged rankings suggested by interviewees.

**Table Five: Comparison of importance of travel purposes**

Lyons, Marsden, Beecroft and Chatterjee		Travel purpose rankings of interviewees	
<b>access needs of prime importance</b>	work education food health	work participation in sport education food community services health care places of worship	<b>high priority</b>
<b>access needs deemed valuable</b>	parks other neighbourhoods arts sports leisure places of worship heritage nature	personal business social activities recreation	<b>medium priority</b>
		non-food shopping cultural activities	<b>low priority</b>

The interviewee rankings support Lyons et al.'s suggestion that access to work, education, food and health are matters of prime importance. But, contrary to Lyons et al.'s assessment, the interviewee rankings suggest that sport, community services and religion are also of prime importance to those people who undertake such activities. Lyons et al. did not state how they developed their priorities, and so it is not possible to explain this difference.

As discussed previously, these averaged travel priorities do not reflect every participant's priorities. For example, while travel for study was a top priority to almost all interviewees studying full-time, Sarah gave it her lowest priority. And while medical care was a high priority to most of the interviewees who mentioned it as a travel purpose, it was the lowest priority to Kath. At the other end of the scale, although shopping other than for food was a low priority to almost all interviewees, it was a top priority to Val. And while recreation,

entertainment and social activities were a low or medium priority to most interviewees, they were a top priority to Sarah and Nick.

The interviewees were not asked to justify the priority rankings they gave, but it is conceivable that, for example, for Sarah and Kath, sport was a prime source of personal fulfilment, as were social activities for Nick and Sarah, and hence they gave these activities a top ranking. It is possible that study was not rewarding for Sarah, and that Kath had only needed to seek medical care for minor ailments and therefore they gave a low priority to these travel purposes.

The difficulty, then, with trying to determine basic mobility needs by defining travel purposes of prime importance (a normative approach, which seeks to establish a standard below which nobody should fall) is that these basic needs will not reflect everyone's personal needs, and may include some travel purposes not needed or important to some people, and may exclude travel purposes of prime importance to others.

A further complication is that, regardless of whether access to some activities received a lower priority ranking, this does not necessarily mean that the activities are not important for social participation and subjective well-being. For example, when May placed her lowest priority on entertainment she was asked if she could get by without it. She responded that "Yes, you can if you have to. There's no life if you do that, but you can if you have to."

Thus a further difficulty with focusing on basic mobility needs is that it will not include all the mobility needs of a worthwhile life. If the goal of improving access and mobility is not just to support basic survival, but is to address social exclusion so that "ultimately, all feel that they belong to, and can actively participate in, society" (Maharey, 2000, para. 8), a less restricted approach would be required – one that does not predetermine what a person's basic needs are.

## **5.4 Types of mobility impediment**

Section 2.3 noted that McKenna and Lavery (1993) classified mobility impediments as being either personal, environmental or trip-related. By "personal" impediments McKenna and Lavery meant impediments relating to the individual traveller, such as health, age or fear. By "trip-related" impediments they meant impediments relating to the qualities of a specific trip, e.g. the length of the trip, the quality of information on that service, the attitudes of staff, etc. Finally, they classified "environmental" impediments as the impediments resulting from broader physical surroundings or conditions, such as the weather, topography and quality of pavements, rest facilities and lighting.

Each of these three broad classes of impediment includes quite different types of impediment. For example, environmental impediments include impediments such as the weather, which are beyond societal control, and street lighting, which is a facility provided by society to whatever level society specifies.

A discussion of impediments would benefit from making such distinctions, as it would help highlight those impediments that can be directly addressed, such as street lighting, as distinct from impediments that can not be addressed directly, such as the weather. Thus, this discussion uses McKenna and Lavery's three broad classifications of mobility impediment, but incorporates a number of subcategories of impediment, as defined below. These subcategories have been derived by grouping the range of mobility impediments mentioned by interviewees. For the purposes of this analysis:

Environmental impediments include the subcategories of:

- Facility impediments: meaning system-wide impediments relating to the features of fixed man-made facilities such as footpaths, signage and lighting.
- Natural impediments: meaning system-wide impediments relating to natural conditions such as weather or topography.

Personal impediments include the subcategories of:

- Medical impediments: meaning physiological or medical impairments or disabilities.
- Material impediments: meaning impediments relating to an individual's material resources, for example not having a bicycle or car or enough money.
- Psychological impediments: meaning impediments arising in the individual mind, for example fear, stress, lack of knowledge or experience.
- Interpersonal impediments: meaning impediments arising from relations between persons, for example not knowing people or not wanting to be too dependant on others.

Trip-related impediments include the subcategories of:

- Service limits: meaning impediments arising from the limited frequency, times or routes that a travel mode operates on.
- Service quality: meaning impediments relating to the quality of a service, such as driver competence, service reliability, and fare charged.

## **5.5 Modal mobility impediments and travel choices**

Mobility impediments can be discussed both in terms of the overall mobility impediments to individual interviewees, and in terms of the range of impediments relevant to the travel mode.

Table six summarises the impediments faced by each interviewee in using different travel modes, using the subcategories described above. The impediments identified by interviewees were specific to particular modes of travel.

Table six distinguishes between two types of impediments:

1. Barriers that acted as obstructions and prevented use of the mode altogether (marked with an "X").
2. Hindrances that caused some inconvenience or restrictions (for example by restricting the places that could be reached or the times that travel could occur), but still allowed interviewees to use the mode for mobility (marked with a "1").

Table six summarises which modes interviewees could use for travel, and the level of mobility the mode gave them. Table six also shows the total weekly trips made by each interviewee.

**Table Six: Summary of mobility impediments**

Interviewee	Mode	Mobility Impediments								Use of mode? Mobility provided?	Total weekly trips
		Environmental		Personal				Trip-related			
		Natural	Facility	Medical	Material	Psychological	Interpersonal	Service limits	Service quality		
Liu	Car				X					No	7.3
	Bus				1			1	1	Main, but limited by time & location	
	Train							X		No	
	Cycle				X					No	
	Walking									Yes, e.g. local shopping	
	Lift							1		Sometimes, entertainment	
	Taxi				X				X	No	
Mandy	Car				X					No	9.1
	Bus							1	1	Main, but limited by time & location	
	Train							X		No	
	Cycle	X				X				No	
	Walking									Yes, up to 30 minutes	
	Lift							1		Yes, social/cultural/ other shopping	
	Taxi				X				X	No	
Reena	Car			X						No	11
	Bus							1	1	Only downtown	
	Train							X		No	
	Cycle			X						No	
	Walking					1			1	Main - several kms	
	Lift						1		1	Rarely	
	Total Mobility				1				1	Long distance where no PT	
Joy	Car					1				Main but only known routes	7
	Bus				1			1	1	Limited	
	Train							X		No	
	Cycle	1		X						No	
	Walking									Short only	
	Lift							1		Seldom	
	Taxi				X				X	No	
May	Car			X						No	3.9
	Bus			X						No	
	Train			X						No	
	Cycle			X						No	
	Walking			X						No	
	Lift									Main, when convenient to others	
	Total Mobility				1				1	Medical only	
Nick	Car				1	X			1	No	13.5
	Bus								1	Yes	
	Cycle									No	
	Walking									Yes	
	Lift									Yes	
	Taxi				1				1	Local	

Key: X = barrier that prevents use of this travel mode.  
1 = hindrance to using this travel mode.

**Table Six continued: Summary of mobility impediments**

Interviewee	Mode	Mobility Impediments								Use of mode? Mobility provided?	Total weekly trips
		Environmental		Personal				Trip-related			
		Natural	Facility	Medical	Material	Psychological	Interpersonal	Service limits	Service quality		
Becky	Car			1		1				Main, but not peak or night	11.6
	Bus							1		Very infrequently	
	Train		1						1	Very rarely	
	Cycle			X		X				No	
	Walking									Seldom, for local shopping only	
	Lift									Yes, occasionally	
	Taxi									Seldom	
Val	Car					1				Main, but only known routes	4.3-11.9
	Bus				1			1	1	Limited - job hunting	
	Cycle	X								No	
	Walking									Local only, e.g. medical	
	Lift						1	1		Some, with co-worker or brother	
	Taxi				1				1	Infrequent, if no alternative	
Sarah	Car			X						No	13-14
	Bus							1	1	Main, but restricted times	
	Cycle	X								No	
	Walking	1				1			1	Yes, up to 7 kms	
	Lift						1	1		Frequent, limited to when available	
	Taxi				1				1	Very infrequent, if no alternative	
David	Car				X				X	No	9.1
	Bus			X						No	
	Train			1				1		Main, restricted to route and times	
	Cycle			X						No	
	Walking			X						No	
	Wheel-chair	1	1							Main, up to 3-4 kms	
	Lift						1			Rarely	
	Taxi				1				1	Grocery shopping only	
	Total Mobility									No	
Kath	Car					1				Main, but not to city	13.4-14.4
	Bus							1	1	No	
	Train					1		1	1	Downtown only	
	Cycle					X				No	
	Walking					1			1	Seldom, as too far to walk	
	Lift						1	1		Seldom, for medical	
	Taxi				X				X	Very rarely	

Key: X = barrier that prevents use of this travel mode.  
1 = hindrance to using this travel mode.

From table six it is evident that all interviewees had some choice of travel modes to access activities and participate in society, but most interviewees identified some impediments to mobility. The impediments to mobility vary from person to person, depending on their personal circumstances and capabilities, and the characteristics of the travel options in their locality. In many cases mobility impediments limited the use made of a travel mode.

Some interviewees had fewer useable travel choices than others. For example, while Becky could choose between six travel modes (drive, bus, train, walk, lift, taxi), May had only two travel modes available: getting a lift or getting a taxi.

Travel modes were not interchangeable: interviewees who could walk would do so to access local activities, but impediments such as time, effort and topography prevented many interviewees from walking to access activities at longer distances.

In some cases the interviewees' mobility impediments appear to have directly affected the total weekly trips they made. For example Becky, the elderly retired interviewee who was able to drive and use public transport, travelled three times as often as May, the elderly retired interviewee who could do neither, but relied on getting lifts or using taxis for her mobility. But in other cases no such effect was evident. For example Sarah and Kath, the two secondary school students, made virtually the same number of weekly trips, despite the fact that Kath had a car but Sarah did not. Val reported that she made fewer trips when she had access to a car than before, when she did not. For Val, employment and religion had a much bigger effect on her trip-making. When her family did not have a car, she was working full-time and studying and she travelled more for these purposes. The level of trip-making for Val doubled during religious seasons when daily religious participation was required, regardless of car availability. Thus, for some interviewees, their frequency of travel for some purposes appeared to be more driven by their want or need to travel for those purposes, rather than the availability of travel modes or the level of mobility impediment.

Mobility impediments can also be considered in terms of the range of impediments relevant to each travel mode and the effect of those impediments on the interviewees' use of each mode. Table seven summarises the range of impediments associated with each travel mode and their effect on the interviewees' use of each mode.

Some broad patterns were evident in the modal travel choices made in the face of mobility impediments.

Physical/medical conditions prevented two interviewees from walking. All other interviewees, who could walk, did so to access local activities. Consideration of the time, effort, topography and safety concerns deterred many interviewees from walking to access activities at longer distances, although Sarah and Reena were fit and determined enough to walk appreciable distances despite these impediments.

None of the interviewees travelled by bicycle. One interviewee could not cycle because of health problems. Two interviewees could not cycle because of their age. Two were physically unable to cycle because of disabilities. Other interviewees were deterred from cycling by the hilly topography of their neighbourhood, and by safety concerns.

Those interviewees able to drive chose to do so for most of their longer-distance travel. Two interviewees had their own cars, and described this as an easy mode of travel, although they would not drive at certain times or to some places due to inexperience or for medical reasons.

The two new settler interviewees both had access to a car and chose to drive for most trips, even though they found driving difficult and stressful and only drove on familiar routes. Three interviewees aspired to drive, seeing this as the travel mode that would provide them with the most mobility.

**Table Seven: Mobility impediments and effects by mode.**

Travel Mode	Mobility Impediment	Impact on travel by that mode
Driving	Physical/medical	Sarah, May and Reena could not drive at all. Becky did not drive at night.
	Stress of driving in heavy traffic Safety concerns	Becky did not drive in peak periods. Val only drove known routes. Kath did not drive downtown.
	Unable to read street signs	Joy only drove known routes.
	Cost	David and Nick did not drive at all.
Bus	Physical/medical condition and inaccessible buses	May could not use buses at all. David could not use buses outside the downtown area.
	Limited frequency, times Limited routes Unreliable Costly Takes a lot of time	Joy, Val and Kath preferred to drive for most of their travel. Reena only used buses for going downtown. Liu, Mandy, Nick and Sarah were regular bus users regardless of the impediments.
Train	No train services where the interviewee lives and/or wishes to travel	Liu, Mandy, Reena, Joy, May, Nick, Val and Sarah did not use trains at all.
	Limited service times Security at stations Unreadable station signage Unreliable	Kath only used trains for going downtown. Becky used trains rarely, for travel to particular destinations.
	Unuseable wheelchair ramps Differences in carriage and platform heights Steep bridges at stations	For David, train use was difficult and with some personal risk, but there were no other feasible transport options.
Cycle	Physical/medical	Joy, Becky, May, David and Reena did not cycle at all.
	Topography Safety	Mandy, Liu, Kath, Val, Nick and Sarah did not cycle at all.
Walking	Physical/medical	David could not walk at all and May could not walk any appreciable distance.
	Weather Time Safety	Sarah walked substantial distances when a bus service was not available.
	Time Safety Hazards for the blind	Reena relied on walking with the assistance of a guide dog for her mobility, despite the traffic safety risks and the risks from hazards for the blind on footpaths.
	None mentioned	Liu, Mandy, Becky, Joy, Val, Nick and Kath walked for some local trips.
Getting a lift	Not wanting to depend on others Not wanting to be a burden on others Not knowing people well enough Differences in desired destination or time of travel Security issues	Reena, David, Kath, Val and Sarah tended to get lifts as seldom as possible, only with friends or family and only at times that suited the person giving the lift.
	Guide dog	It was more difficult for Reena to get a lift as she needed to bring her guide dog with her.
Taxis	High cost	Mandy, Liu, Kath and Joy did not use taxis at all. Sarah, Val and Nick used taxis infrequently, when no other travel choices were available. May tended to use taxis only for access to medical care, and David only for grocery shopping. Reena used taxis when no other travel choices were available, particularly for longer trips out of walking range.
	Driver incompetence	Reena had suffered some injuries because some taxi drivers did not know how to deal with blind people. Nick and Val found some taxi drivers did not know where to go, or did not take direct routes.
	Requiring cash payment	Val and Reena had experienced difficulty paying for taxi rides on occasion because of limited payment options.
Total Mobility	High cost Limited availability Technical problems with Total Mobility cards Some taxi drivers equipped for Total Mobility not accepting Total Mobility cards	May tended to use Total Mobility only for access to medical care. Reena used Total Mobility when no other travel choices were available, particularly for longer trips out of walking range. David was not a member of the Total Mobility scheme.

Most of the interviewees who could not drive used public transport for most of their longer-distance travel. Only three interviewees listed trains as a travel option. Most interviewees did not list the train as a travel option because there were no trains where they lived, or because the trains did not run where they needed to go. The other public transport users used buses.

All interviewees mentioned some impediments with using public transport. The impacts of these impediments varied. Some impediments (for example, lack of low-floor kneeling buses for the interviewees unable to walk) were absolute barriers preventing use of the mode. Some impediments pushed several of the interviewees to driving a car instead. A common theme for many interviewees was that there were too few public transport services and routes, and limited times that they operated. Also, interviewees indicated issues with the cost of bus transport, with the long time it took to travel by bus including the time walking, waiting and transferring between buses, and that often public transport did not run on time. For the regular users, the impediments prevented interviewees taking public transport to certain places or at certain times and impacted on the quality and convenience of the trip.

For the interviewees who could not drive or use public transport, and for the interviewees who wanted to access activities at places or at times not serviced by public transport, travel by other modes was difficult and mobility was often restricted.

All interviewees considered cost to be a major impediment to using taxis. Four interviewees did not use taxis at all because of the expense. Five interviewees were occasional taxi users out of necessity. Two interviewees were users of the Total Mobility scheme, which gives them a fifty percent discount on taxi fares, but both still found the expense prohibitive and used taxis sparingly. Both mentioned difficulties in getting their Total Mobility discount. Issues were also raised with the standard of training of taxi drivers. Some taxi drivers did not take direct routes, either through lack of knowledge or deliberately, which further increased the cost of this mode.

Getting a lift depended on knowing people close by who had a car and were willing to offer a lift. But use of lifts as a travel mode was limited to the convenience of the driver, and limited by the interviewees not wanting to be too dependent on others.

## **5.6 *Effects of mobility impediments***

All of the interviewees faced some impediments with travelling by all modes of transport.

The effect of these impediments varied. Some impediments caused stress and frustration. The time and cost of some travel modes was an impediment to interviewees who had limited time and money. Some interviewees could not be spontaneous and needed to restrict their activities depending on times convenient to others. Others routinely faced physical hazards in their travel, but chose to travel regardless because of their determination to be mobile and to access activities.

Some mobility impediments were spatial, i.e. some areas were inaccessible to some interviewees, and access was restricted to particular corridors only for other interviewees. Some mobility impediments were temporal, i.e. for many interviewees their mobility was restricted in evenings or weekends, while for one interviewee, mobility (and therefore, her access to activities) could only occur on those days when her home-caregiver was available, and even then only for a limited time. These spatial and temporal mobility impediments meant that spatial and temporal restrictions applied to the range of activities interviewees could access.

Some of the interviewees explained the effect that these impediments had on them in terms of stress and frustration, restricted opportunities and reduced quality of life. Many interviewees were able to describe activities for which their participation was restricted by their mobility impediments.

For four interviewees social participation was reduced by mobility impediments. For one of the new settlers, cultural participation was also restricted, while for one of the young interviewees, community activities were restricted. Five interviewees indicated that mobility impediments affected their employment options. One interviewee chose to work at home to avoid travel difficulties, while two had their choice of employment limited to employment along accessible corridors. One interviewee indicated that mobility impediments made it difficult for her to apply for jobs and limited the jobs she could apply for.

For most of the interviewees, mobility impediments reduced their ability to participate in activities and their independence. Social exclusion has been defined in section 2.4 as the collective processes that work to deprive people of access to opportunities and means, material or otherwise, to achieve well-being and security in the terms that are important to them (Peace, 2001, pp. 33-34). Thus, by this definition, most of the interviewees were experiencing some degree of social exclusion through impediments to their mobility. This suggests that transport and social exclusion are not just a particular issue for the elderly and the disabled, but also for other groups such as young people and new migrants.

## **5.7 Addressing mobility impediments**

The *New Zealand Transport Strategy* states that "the government will improve access to appropriate transport for all, including for vulnerable users, for the transport-impaired and their caregivers, in order to enhance participation and independence and reduce social exclusion" (Swain, 2002, p.26).

Mobility impediments can be addressed in a number of ways. Some impediments can be addressed directly, for example by improving the range of public transport service routes and increasing the times at which they operate. Impediments might also be addressed by reducing the need to travel or by providing travel alternatives. For example, Litman describes a "taxibus" service operating in Quebec where users book an hour ahead of time by telephone, a

vehicle somewhat like an airport shuttle. The taxibus arranges its journeys in a flexible way to pick and drop off the people who have booked their travel (Litman, 2003, p. 26). The taxibus provides a new travel choice somewhere between the flexible but expensive option of taxis and the fixed route, inflexible but more affordable travel option of scheduled buses.

The *New Zealand Transport Strategy* identifies a number of initiatives to help improve access and mobility. Improving the public transport system, providing improved pedestrian facilities, reviewing vehicle design, improving availability of information and physical access to stations, stops and facilities, increasing the consistency and quality of the Total Mobility scheme, and changing driver licensing procedures to help older New Zealanders are initiatives that would address some mobility impediments directly.

The *New Zealand Transport Strategy* also indicates that the current government supports the *Auckland Regional Growth Strategy*, a strategy that aims to refocus much of Auckland's future development on intensification nodes along rapid-transit corridors. Over time the *Auckland Regional Growth Strategy* is expected to increase the range of employment and other opportunities accessible through the scheduled public transport system.

However, this research has highlighted access and mobility impediments that are not specifically mentioned in the *New Zealand Transport Strategy* that might also warrant addressing.

Some interviewees were restricted in where they could drive because of stress and safety concerns or inexperience. These impediments could be addressed through targeted assistance with driver training. Other interviewees found the cost of learning to drive and the cost of driving an impediment. This could be addressed through targeted financial assistance for driver education and the cost of vehicle purchase and fitting out for wheelchair users. Other impediments to driving, particularly physical or medical impediments, could be addressed indirectly by providing or improving alternative travel modes.

All the impediments to using buses mentioned by interviewees could potentially be addressed, e.g. by increasing bus frequencies and coverage, by improving accessibility by wider provision of low-floor accessible buses, and by reducing cost through increased financial assistance.

All the impediments to using trains mentioned by interviewees could in theory be addressed, although the cost could be prohibitive for some actions. For example it would be extremely expensive to increase the coverage of train services to make trains a feasible travel option for most interviewees. The impediments mentioned by interviewees who already used trains could be addressed by expanding train service times, improving station security and signage, improving the maintenance of trains and tracks (to improve reliability), by using rail carriages of standard floor heights and by improving wheelchair accessibility of stations and train carriages.

The safety of cycling could potentially be improved, e.g. by better control of traffic speeds or by physically separating bicycles from motor vehicles where feasible. The physical and topographical impediments to cycling could not be addressed directly, but could be addressed indirectly over time by encouraging future development in flatter areas where cycling is easier.

The safety of walking could be improved by improving pedestrian facilities and removing physical hazards such as irregular surfaces and low branches. The time impediment to walking could be addressed over time through land use policies that encourage land use development closer to the populations that these land uses serve. The physical/medical and weather impediments to walking could not be addressed directly. The hazards to wheelchair users of uneven footpaths could be improved with better maintenance. The topographical impediments to wheelchair use could not be readily addressed.

Some regional councils try to make car-pooling or getting a lift easier by trying to match up people who register with them who wish to make similar journeys.

The impediment of high taxi costs could be addressed by increasing financial assistance for those who need to use taxis for their mobility, or by providing other less expensive transport options, for example taxibuses. Taxi driver competence issues could be addressed with better standards for taxi driver licensing. Limited payment options could be addressed by wider use of EFTPOS or credit card facilities in taxis.

The impediment of high Total Mobility costs could be addressed by increasing financial assistance for those who qualify for Total Mobility, or by providing other less expensive transport options. Other problems with Total Mobility identified by interviewees can be addressed, but appear to require greater awareness of drivers and users. For example, if there is a problem with reading a Total Mobility card, it is possible for the taxi driver to enter the details manually and thus still be able to offer the fare subsidy to passengers. Also, taxi drivers who are equipped for Total Mobility but not accepting Total Mobility cards can be reported to the Regional Council. Council staff advise they would then follow up with the taxi company concerned.

The Auckland Regional Council indicates that there are currently 9,000 Total Mobility card-holders and 1,400 taxis equipped with Total Mobility card readers. Installation of card readers costs between \$700 and \$2,500. Up to July 2003, taxi companies received a subsidy of between \$169 and \$300 for each card reader installation, but this subsidy is no longer available. The availability of taxis equipped to accept Total Mobility cards could be increased by reintroducing a subsidy for card reader installation in taxis.

Determining to what extent access and mobility should be improved is problematic. As noted in section 2.6, any desire for movement which is not being met could be seen as a cause of some type of social exclusion, but to aim to ensure all desired mobility is satisfied could mean aiming to provide a level of mobility that is extreme, if not infinite.

Another difficulty discussed in section 2.2 is that subjective transport need is not necessarily static. It has been suggested that the more mobility there is, the

greater becomes the expectation of mobility (DETR, 2000). As discussed in section 2.5, resources are insufficient to provide for all needs, and decision-makers therefore establish priorities and allocate resources to try to match what is wanted and what is provided (Good, 1988).

The interview results have shown that, while everybody faces some mobility impediments, some people are unable to travel to certain places or can travel only at certain times, and that in the course of travel some people endure stress, personal risk or high financial costs. Some extreme examples of mobility hardship identified in the interviews included:

- the risks of injury that Reena had to face when walking
- the risks that David had to face when leaping down from the train to the platform in his wheelchair
- Sarah having to walk seven kilometres on a bad ankle to reach the nearest bus service running on weekends
- the spatial and temporal restrictions on activities May and other interviewees could access because of mobility impediments.

Section 5.3 discussed how it was not possible to identify priorities based on travel purpose that would reflect everyone's personal needs because priorities varied so much between individuals.

A possible approach to prioritising mobility improvements is to target improvements so that there is some limit to the impediments that people must face, and the personal cost they must pay, to fulfil their access and mobility needs. As discussed in section 2.6, it has been suggested that what is required "is to try to provide some objective criteria to assess what might be considered reasonable amounts of time, money and distance to expect people in different subgroups to spend travelling" (DETR, 2000, chapter 2, section 2, para 7).

An approach that has been suggested to determine the ease or difficulty of travel, and to quantify a targeted upper limit of mobility difficulty, is by using the generalised cost, or disutility, of trips. This parameter, already used in transport

planning, is calculated as the weighted sum of a number of trip characteristics including walk time, wait time, travel time, fare and the comfort of the mode of travel. It could also include physical risk, and other impediments.

As noted in section 2.6, Solomon (2003, p. 155) has suggested that, for example, the maximum transport cost considered to still be socially inclusive could be set at twice the average generalised cost incurred in fulfilling any journey purpose. By adding up the generalised cost of fulfilling all journey purposes, it would be possible to locate individuals or groups in the transport poverty hierarchy, who could then be targeted as a priority for mobility improvements. This approach essentially shifts the focus from establishing and providing for access and mobility needs, to providing access and mobility opportunities instead

This is one way that might warrant consideration in New Zealand of making the match between where mobility is needed and where it is provided.

## **Chapter Six**

### **Conclusions**

This chapter summarises the questions this research was intended to address. The results of the research are then discussed in terms of how they answer these research questions. The usefulness and limitations of the research are discussed, and suggestions for future research are described.

#### ***6.1 Research questions and context***

Recent developments in New Zealand government policy, legislation and funding described in section 1.1, particularly a new legislative requirement for land transport agencies to improve access and mobility, have brought transport access and mobility to the fore. But the access and mobility needs of New Zealanders, as well as existing impediments to access and mobility, are not well understood.

The main objective of this research, as specified in section 1.2, was to further the understanding of transport access and mobility needs and impediments. The motivation for doing this was the hope that this understanding would assist various land transport agencies to meet their statutory requirements to improve access and mobility. Because of this, this research has also investigated for whom access and mobility should be improved, and what level of improvement is needed.

Another objective of this research was to develop and pilot research tools for understanding what people perceive to be their transport access and mobility needs, and impediments to these needs.

While these research objectives are potentially very broad, New Zealand government policy and legislation provide a context that has been used to focus the scope of this research. For example, as the land transport agencies

covered by this new legislative requirement are primarily concerned with the planning and funding of land transport infrastructure and services, this research has focused on the land transport aspects of access and mobility.

A motivation of the legislative requirement is to address social exclusion, so that ultimately all feel that they belong to, and can actively participate in society. In government policy the emphasis for determining whether social exclusion is occurring is placed on the subjective view, i.e. on how people feel about or perceive their own situation. This research has therefore focused on the subjective determination of access and mobility needs and impediments, and focused on the views and experiences of people recruited from groups at risk of social exclusion.

## ***6.2 Understandings of access and mobility needs and impediments gained through this research***

The definitions of access, mobility, need and impediment used in this research were developed from a literature review and from the context provided by government policy and legislation. Access and mobility have been defined as inter-related concepts linked to the need to participate in society. Access was defined as the right or opportunity to reach activities using the transport system and so participate in society. Mobility was defined as a means to an end – the means being travel using the transport system, and the end being access to opportunities to participate in society and have a reasonable quality of life. The interviewees in this research had no difficulty in discussing mobility as a means to access various activities. As discussed in section 5.2, interviewees tended to see mobility through travel as a necessary requisite for accessing the activities discussed.

The need for access and mobility has been considered in terms of the want or requirement for the activity that access and mobility would help fulfil. In section 2.2, it was noted that there are potentially wide differences between the activities that are wanted (for example, going to the beach) and the activities

that are required (for example, going to hospital), and both could potentially be considered a need. The literature review has discussed various published attempts to define needs in general, as well as basic mobility needs. The interviews in this present research showed some commonality between the mobility needs of highest priority reported by interviewees and the basic needs suggested in published literature, but table five in section 5.3 also shows some important differences. The analysis suggests that identifying and addressing only basic needs will not suit everyone. Such basic needs may include some travel purposes not needed or considered important to some people, and may exclude travel purposes considered to be of prime importance to other people.

This present research has suggested that in the New Zealand policy context, mobility needs would be more appropriately defined in terms of the broader range of needs necessary for a worthwhile life, rather than the minimal requirements for survival.

Mobility impediments have been defined as the hindrances or obstructions to individuals who wish to use the transport system. Section 2.3 suggested that impediments, rather than just being barriers that prevent mobility, are often a matter of degree. This appears to have been confirmed in the interviews, which identified a range of mobility impediments. Impediments ranged from those for which it was inconvenient for some interviewees to travel in some ways at some times, to impediments involving risks of injury when travelling, and to impediments that restricted what activities could be accessed, such as social, cultural and community activities, and employment options.

Many of the mobility impediments reported by interviewees corresponded to the impediments identified in international research, as described in section 2.8. The literature suggested that mobility impediments could be classified as either personal, environmental or trip-related. This present research has confirmed the applicability of these broad categories of impediment, and section 5.4 has suggested a number of subcategories, based on the kinds of impediment identified by interviewees.

The analysis of impediments and modal choices in section 5.5 suggests that travel impediments can be related to travel modes, but that travel modes are not interchangeable. For example, walking appeared to be an adequate travel mode for many people making short trips, but time, effort and topography prevented walking being a viable mode for making longer trips.

Although mobility impediments appeared in some cases to restrict the number of trips people made, this was not always the case. Some interviewees with many travel options made fewer trips than other interviewees, who had fewer options facing more impediments. It would seem that for some interviewees, the number of trips they made was more driven by their need or want to travel, regardless of the impediments they faced.

Interviewees could suggest many ways that impediments could be addressed to improve their access and mobility, and similar suggestions are made in international literature. But the literature also suggests that determining what level of access and mobility improvement is needed is problematic. While any mobility wish not being met could be seen as a cause of some type of social exclusion, providing for all mobility wishes would not be feasible. Another difficulty is that the more mobility there is, the greater becomes the expectation of mobility. In reality, available resources are usually insufficient to provide for all needs and expectations, and decision-makers must therefore establish priorities and allocate resources to achieve a reasonable "match" between what is perceived as being needed and what is provided (Good, 1988, pp. 386-387).

The research in this thesis has thus gone some way towards an understanding of transport access and mobility needs and impediments, particularly for people at risk of social exclusion. It has done so by showing the applicability of relevant international research to New Zealand, as well as providing some detail on the range of access and mobility needs and impediments faced in New Zealand and the effect of those impediments on the experience of individuals at particular risk of social exclusion. However, as discussed in the next section, this picture is not complete.

### **6.3 Usefulness and limitations of research tools and suggestions for future research**

One objective of this present research was to develop and pilot research tools for understanding what people perceive to be their transport access and mobility needs, and impediments to these needs. This present research has used semi-structured face-to-face interviews with small numbers of people recruited from groups at risk of social exclusion as the research tool.

As discussed in section 3.1, face-to-face interviews were favoured as the research method, given their flexibility, the need and wish to record spontaneous answers to complex questions, the wish to cover the interview schedule as fully as possible with all participants, and the capacity to correct misunderstandings by respondents.

Section 3.3 described how a structured interview format was piloted but abandoned in favour of semi-structured interviews which proved to be more effective in identifying access and mobility issues, and increasing the amount of relevant material recorded from each interview.

A disadvantage of the less-structured approach was that two interviews were not completed in full. This could have been corrected by undertaking follow-up interviews to collect the missing information. This was not done here, as the only information missing was two interviewees' ranking of priorities of travel purposes. The lack of their rankings was not considered to be critical, as the information on priorities collected from other interviewees was sufficient to demonstrate the commonalities and differences of travel priorities between interviewees, and between this present research and published information.

From section 6.2 it appears that the research tool was successful in collecting information on the interviewees' perceived transport access and mobility needs and impediments. The information collected showed that existing access and mobility impediments are resulting in social exclusion for some people, in that they are not participating in all the activities they would wish to.

As discussed in section 3.2, while the scope of this present research was limited, it was considered that understanding the travel needs of even a small group of people that face transport difficulties, and what effects those difficulties have, would make a potentially worthwhile contribution to understanding access and mobility needs and impediments.

A limitation of this present research is that the understanding gained is far from complete. It has been acknowledged that the sample of interviewees is not a statistically representative sample of people reflecting the general population of groups at risk of social exclusion. This is due not only to the small number of interviewees, which was limited to people living in suburban Auckland, but also due to the potential for bias by self-selection described in section 3.2.

To gain a fuller picture of access and mobility needs and impediments it would be necessary to interview a much larger sample, selected across New Zealand including people living in rural areas and other urban areas, for example smaller towns. A difficulty with extending the sample would be the cost of undertaking a larger number of face-to-face interviews, lasting up to two and a half hours each, across the country.

To reduce the potential for bias by selection, it would be desirable to ensure that everyone from the groups to be studied, including people who do not believe they have significant mobility impediments, are motivated to participate.

Another reason that the understanding gained with this research is not complete is that not all groups of people at particular risk of social exclusion through transport impediments identified in the literature in section 2.7 were covered by the interviews. For example no children were interviewed. Also, it is not proven that the groups identified in literature completely cover all groups at risk of social exclusion through mobility impediments. A possible approach to broadening this picture would be by undertaking surveys to identify or verify the groups of people who believe the range of activities they participate in is limited by their access and mobility impediments. To be complete, it would be

necessary to ensure that such surveys include people without telephones, people without a permanent address, and people who are not fluent in English, which would present new challenges.

A more fundamental limitation of this research is that it has relied on the subjective view of the interviewees, and is thus subject to the limitations of subjective research described in section 2.2. Specifically, as argued by Doyal and Gough (2002), people may desire what they do not need and not desire what they do need. Also, as Sen (1985) and Lawrence (1995) have argued, a lack of desire may reflect a lack of hope arising from a long history of deprivation, rather than reflecting the needs of a worthwhile life.

A stated government motivation for improving access and mobility is to reduce social exclusion. In section 2.6, this present research has argued that in New Zealand the definition of social exclusion, and the government's stated reason for seeking to addressing social exclusion, both place the emphasis on the subjective views and experiences of people to define what they need, regardless of the limitations of the subjective view. But, given the difficulties in determining need as described, an alternative approach to improving access and mobility that may be worth consideration is not to focus on establishing and providing for access and mobility needs, but to focus on providing access and mobility opportunities instead. A suggested approach of this kind, described in section 2.6, is to allocate resources to improve access and mobility so that there is a maximum generalised cost of fulfilling all journey purposes for all people. This would set some limit to the impediments that people would need to face, and the personal cost they would pay, to access activities for a worthwhile life, regardless of whether they are currently perceived as a need or not. As new mobility opportunities are made available, people with long histories of deprivation might raise their hopes, and access activities they previously thought they did not need.

If this alternative approach were to be pursued, future research would be desirable to develop ways to determine the generalised cost of fulfilling all

journey purposes, including the generalised cost of all the categories and subcategories of mobility impediment identified.

Also, further research would be desirable on the development of mobility options to assist the people identified as facing an exceptionally high generalised cost of travel. Such improvements will not necessarily just improve access and mobility for people at risk of social exclusion. Many improvements to access and mobility, for example improvements to public transport service frequency and coverage, or the taxibus scheme described in section 5.7, have the potential to improve access and mobility for everyone as well as contributing to other government transport objectives.

#### **6.4 Conclusions**

The present research has focused on groups of people that international research suggests are at risk of social exclusion because of their transport disadvantage. It has developed and piloted research tools for understanding what people perceive to be their transport access and mobility needs, and what they see as impediments to these needs. It has established that mobility impediments are resulting in social exclusion in New Zealand. While current consideration of the transport-disadvantaged in New Zealand is largely focussed on the elderly and the disabled, this research has shown that other groups identified internationally, such as young people and new settlers, are also at risk of social exclusion because of impediments to their mobility.

The present research has examined what people perceive as their mobility needs, and suggests that as needs are variable, it is not possible or appropriate to identify basic mobility needs that should apply to everyone. Also, mobility impediments, rather than being a matter of can or cannot, are a matter of degree.

Finally, the present research has examined how access and mobility might be improved. It has suggested that because of the difficulties in establishing and

providing for access and mobility needs, it may be more appropriate to focus on providing access and mobility opportunities instead. A suggested approach of this kind, described in section 2.6, is to allocate resources to improve access and mobility so that there is a maximum generalised cost of fulfilling all journey purposes for all people.

## **Appendix**

### ***MUHEC Application forms***



## Human Ethics Committee

### APPLICATION FOR APPROVAL OF PROPOSED RESEARCH/TEACHING/EVALUATION INVOLVING HUMAN PARTICIPANTS

(All applications are to be typed and presented using language that is free from jargon and comprehensible to lay people)

#### SECTION A

1. Project Title Exploration of access and mobility needs and impediments in New Zealand

Projected start date May 2004 Projected end date January 2005

2. Applicant Details (Select the appropriate box and complete details)

#### ACADEMIC STAFF APPLICATION

Full Name of Staff Applicant/s \_\_\_\_\_

School/Department/Institute \_\_\_\_\_

Region (mark one only) Albany  Palmerston North  Wellington

Telephone \_\_\_\_\_ Email Address \_\_\_\_\_

#### STUDENT APPLICATION

Full Name of Student Applicant Anatole Michael Sergejew

Employer (if applicable) Ministry of Transport

Telephone (09) 379 0075 Email Address a.sergejew@transport.govt.nz

Postal Address P.O. Box 106 238, Auckland.

Full Name of Supervisor(s) Dr Marilyn Waring and Dr Grant Duncan

School/Department/Institute School of Social and Cultural Studies

Region (mark one only) Albany  Palmerston North  Wellington

Telephone (09) 379 0075 Email Address a.sergejew@transport.govt.nz

#### GENERAL STAFF APPLICATION

Full Name of Applicant \_\_\_\_\_

Section \_\_\_\_\_

Region (mark one only) Albany  Palmerston North  Wellington

Telephone \_\_\_\_\_ Email Address \_\_\_\_\_

Full Name of Line Manager \_\_\_\_\_

Section \_\_\_\_\_

Telephone \_\_\_\_\_ Email Address \_\_\_\_\_

3. Type of Project (mark one only)

Staff Research	<input type="checkbox"/>	Student Research:		Evaluation Programme	<input type="checkbox"/>
		PhD Research	<input type="checkbox"/>	Undergraduate Teaching Programme	<input type="checkbox"/>
		Master's Research	<input checked="" type="checkbox"/>	Other	<input type="checkbox"/>
		Honours Research	<input type="checkbox"/>	If Other, specify:	<input type="checkbox"/>
		Undergraduate Research	<input type="checkbox"/>		
		(individual project)			

4. Summary of Project

Please outline in no more than 200 words in lay language why you have chosen this project, what you intend to do and the methods you will use.

(Note: all the information provided in the application is potentially available if a request is made under the Official Information Act. In the event that a request is made, the University, in the first instance, would endeavour to satisfy that request by providing this summary. Please ensure that the language used is comprehensible to all)

The 2003 Land Transport Management Act places a statutory requirement on transport agencies to improve access and mobility. However, the access and mobility needs of New Zealanders, and existing impediments to access and mobility, are not well understood. The justification for this research is that it develops and pilots a method to understand access and mobility needs and impediments. Subsequent application of this method on a wider scale would help various transport agencies to meet their statutory requirements to improve access and mobility.

I propose to achieve this research objective through a literature review, and through developing and piloting semi-structured interviews with a suitable range of people on their access and mobility needs and impediments. I would interview a total of eight people for two hours each, to discuss their travel needs (for example travelling to go shopping, to visit people, go to the doctor, etc.), any difficulties they may face with travel (for example cost, time), what effect travel and travel difficulties have on them, and what they think could be done about those difficulties.

5. List of Attachments (tick boxes)

Completed "Screening Questionnaire to Determine the Approval Procedure" (compulsory)	<input checked="" type="checkbox"/>	Advertisement	<input type="checkbox"/>
Information Sheet/s (indicate how many)	<input type="checkbox"/>	Health Checklist	<input type="checkbox"/>
Translated copies of Information Sheet/s	<input type="checkbox"/>	Questionnaire	<input type="checkbox"/>
Consent Form/s (indicate how many)	<input type="checkbox"/>	Interview Schedule	<input checked="" type="checkbox"/>
Translated copies of Consent Form/s	<input type="checkbox"/>	Evidence of Consultation	<input type="checkbox"/>
Transcriber Confidentiality Agreement	<input checked="" type="checkbox"/>	Letter requesting access to an institution	<input type="checkbox"/>
Confidentiality Agreement (for persons other than the researcher / participants who have access to project data)	<input checked="" type="checkbox"/>	Letter requesting approval for use of database	<input type="checkbox"/>
Authority for Release of Tape Transcripts	<input checked="" type="checkbox"/>		

## SECTION B: PROJECT INFORMATION

### General

6 I/we wish the protocol to be heard in a closed meeting (Part II). Yes  No   
*(If yes, state the reason in a covering letter)*

7 Does this project have any links to other approved Massey University Human Ethics Committee application/s? Yes  No

If yes, list HEC protocol number/s and relationship/s.

---

8 Is approval from other Ethics Committees being sought for the project? Yes  No

If yes, list the other Ethics Committees.

---

9 For staff research, is the applicant the only researcher? Yes  No

If no, list the names and addresses of all members of the research team.

---

### Project Details

10 State concisely the aims of the project.  
The objective of this research is develop and pilot a method to provide a better qualitative understanding of the range of access and mobility needs of New Zealanders, and the range and implications of impediments to access and mobility.

---

11 Give a brief background to the project to place it in perspective and to allow the project's significance to be assessed. *(No more than 200 words in lay language)*  
The 2003 Land Transport Management Act places a statutory requirement on transport agencies to improve access and mobility. However, the access and mobility needs of New Zealanders, and existing impediments to access and mobility, are not well understood. The justification for this research is that it develops and pilots a method to understand access and mobility needs and impediments. Subsequent application of this method on a wider scale would help various transport agencies to meet their statutory requirements to improve access and mobility.

---

12 Outline the research procedures to be used, including approach/procedures for collecting data. Use a flow chart if necessary.

An outline of the proposed research project methodology and milestones is as follows:

#### 1. Design of Semi-Structured Interviews

The interview design will be semi-structured. This means that while key information will be sought and recorded, the interview design will be open enough to seek out any additional relevant matters or concerns the interviewees may themselves wish to raise.

The interview design will be informed by previous relevant research methodologies identified in a literature review and through discussion with key stakeholders from central and regional government (particularly the Ministry of Transport, Transfund, and key regional councils) and relevant support groups.

---

## 2. Undertaking of Semi-Structured interviews

The process for recruiting participants is described in section 17.

Semi-structured interviews will be conducted with a range of people to explore the range of their access and mobility needs, the priority or value they place on access and mobility for various purposes, and any restrictions they face to their access and mobility needs. It is intended that in-depth interviews will be undertaken with eight people with a range of backgrounds, i.e. disabled, elderly, students and new migrants. With the consent of participants these interviews would be recorded and subsequently transcribed.

## 3. Analysis and Reporting

The researcher will analyse the interviews and prepare a report on the success of the research in establishing the range of access and mobility needs of the participants, and any impediments they face to their access and mobility needs. The researcher will discuss how as a second stage the method might be applied on a wider scale to a stratified representative sample from which a national picture of access and mobility needs and impediments could be extrapolated.

- 13 **Where will the project be conducted? Include information about the physical location/setting. If the study is based overseas, specify which countries are involved.**

I would undertake the interviews at a time and place that is convenient to each participant.

- 14 **What experience does the researcher/s have in this type of project activity?**

None.

## **Participants**

- 15 **Describe the intended participants.**

The research will involve eight interviewees. This will involve:

- Two retired persons personally known to me;
- Two secondary school students aged 16 or over recommended by the Partnerships and Advocacy Leader, Children and Youth of Waitakere City Council as having an interest in accessibility issues;
- Two volunteers who respond positively to an initial approach of persons contacted through the Disabled Person's Association; and
- Two volunteers who respond positively to an initial approach of persons contacted through the Shakti Women's Centre.

- 16 **How many participants will be involved?**

The research will involve eight interviewees as described above.

### **What is the reason for selecting this number?**

*(Where relevant, attach a copy of the Statistical Justification to the application form)*

This number was selected as being a sufficient number to develop and trial the interview process and undertake some initial evaluation. It is not statistically significant or representative.

- 17 **Describe how potential participants will be identified and recruited?**

The research will involve eight interviewees. This will involve:

- two retired persons personally known to me;
- two secondary school students recommended by the Partnerships and Advocacy Leader, Children and Youth of the Waitakere City Council as having an interest in accessibility issues;
- two volunteers who respond positively to an initial approach of persons contacted through the Disabled Person's Association; and

- two volunteers who respond positively to an initial approach of persons contacted through the Shakti Women's Centre.

The Partnerships and Advocacy Leader, Disabled Person's Association and Shakti Women's Centre would make initial contact with potential interviewees and provide them with the information sheet and my contact details. It would be up to those people who are interested in participating to make first contact with me. I would then arrange to meet them at a time and place that is convenient to them. I would explain the purpose of the research, what is being asked of interviewees, the rights of participants and other issues outlined in the attached Information Sheet and Consent Form, with any further elaboration they might require. I would leave a copy of the information sheet and consent form with potential interviewees to consider. After a week or so I would contact the potential interviewees again to see if they have any further questions or concerns, and see if they are willing to participate. Note: particular issues with recruiting participants who are not fluent in the English language are discussed further in section 42.

18 **Does the project involve recruitment through advertising?** Yes  No   
*(If yes, attach a copy of the advertisement to the application form)*

19 **Does the project require permission of an organisation (e.g. a school or a business) to access participants or information?** Yes  No

*(If yes, attach a copy of the request letter/s, e.g. letter to Board of Trustees/Principal, CEO etc to the application form. Note that some educational institutions may require the researcher to submit a Police Security Clearance)*

20 **Who will make the initial approach to potential participants?**

The Partnerships and Advocacy Leader, Children and Youth of the Waitakere City Council, Disabled Person's Association and Shakti Women's Centre would make the initial approach to potential participants.

21 **Describe criteria (if used) to select participants from the pool of potential participants.**

N/A

22 **How much time will participants have to give to the project?**

The interviews will be up to two hours duration. Explaining the project to potential participants and gaining their informed consent will take some additional time.

### Data Collection

23 **Does the project include the use of participant questionnaire/s?** Yes  No   
*(If yes, attach a copy of the Questionnaire/s to the application form)*

If yes: i) **will the participants be anonymous?** Yes  No

ii) **describe how the questionnaire will be distributed and collected.**

*(If distributing electronically through Massey IT, attach a copy of the request letter to the Director, Information Technology Services to the application form)*

24 **Does the project include the use of focus group/s?** Yes  No   
*(If yes, attach a copy of the Confidentiality Agreement for the focus group to the application form)*

25 **Does the project include the use of participant interview/s?** Yes  No   
*(If yes, attach a copy of the Interview Questions/Schedule to the application form)*

26 Does the project involve audiotaping? Yes  No

27 Does the project involve videotaping? Yes  No

*(If agreement for taping is optional for participation, ensure there is explicit consent on the Consent Form)*

**If yes, state what will happen to the tapes at the completion of the project.**

*(e.g. destroyed, returned, stored by the researcher, archived in an official archive)*

---

28 If audiotaping is used, will the tape be transcribed? Yes  No

**If yes, state who will do the transcribing.**

Interviews will be transcribed by a professional typist who will be required to sign a Transcriber's Confidentiality Agreement (attached).

29 Does the project require permission to access databases? Yes  No

*(If yes, attach a copy of the request letter/s to the application form)*

30 Who will carry out the data collection?

---

## SECTION C: BENEFITS / RISK OF HARM TO PARTICIPANTS

31 What are the possible benefits (if any) of the project to the participants?

Should they not be aware of it, I will provide participants with information on travel assistance that might be available to them (e.g. concessionary fares, total mobility). Also, if the research eventually helps inform improvements to government policies and programmes to improve access and mobility this could be of benefit to the participants.

---

32 What discomfort (physical, psychological, social), incapacity or other risk of harm are participants likely to experience as a result of participation?

Discussing mobility impediments may be upsetting to some participants. Also, they may be concerned about being identified in my research and about loss of privacy.

33 Describe the strategies the researcher will use to deal with any of the situations identified in Q32.

Potential participants will choose a time and place convenient to them for an initial meeting, and those who agree to participate will choose a time and place convenient to them for the interview. No interview will proceed or continue if the participant indicates, or I suspect, that participation will expose the participant to any potential risk of physical or emotional harm.

Participants will be invited to have a support person attend the interview with them if they wish.

Participants will be advised of their right to refuse to answer any question, or to withdraw from the study at any time.

Should they not be aware of it, I will provide participants with information on travel assistance that might be available to them (e.g. concessionary fares, total mobility), or contact information to agencies that may be of assistance, e.g. Age Concern, Human Rights Commission, Disability Services, Auckland Regional Council.

The identity of participants will only be known to me and to the agency through which they are recruited. For the purposes of this research, e.g. for transcription of interviews and for discussion in my thesis, they will only be referred to by a pseudonym. Further details of confidentiality and privacy issues are given in section E.

---

34 What is the risk of harm (if any) of the project to:

---

i) **Researcher/s**

None.

---

ii) **Any other persons/groups/organisations affected by the research.**

The agencies through which participants are recruited might believe their independent position could be compromised by being identified with my research without having any control over the results.

---

35 **How do you propose to manage the risk of harm for points i) and ii) above?**

The agencies through which participants are recruited will be able to choose if and how they are referred to in my thesis.

---

36 **Is ethnicity data being collected as part of the project?**

Yes  No

*(Note that harm can be done through an analysis based on insufficient numbers)*

If yes: i) **will the data be used as a basis for analysis?**

Yes  No

ii) **justify this use in terms of the number of participants.**

---

37 **If participants are children/students in a pre-school/school/tertiary setting, describe the arrangements you will make for children/students who are not taking part in the research.**

*(Note that no child/student should be disadvantaged through the research)*

No arrangements are necessary for students who are not taking part in the research and no student will be disadvantaged through the research.

---

#### **SECTION D: INFORMED AND VOLUNTARY CONSENT**

38 **By whom and how, will information about the research be given to participants?**

At the recruitment stage, the contact agency will provide potential interviewees with the attached Information Sheet and Consent Form which explain the purpose of the research, what is being asked of interviewees and the rights of participants. Potential participants who choose to make contact with me will be encouraged to ask questions and will receive any further elaboration they might require. A copy of the information sheet and consent form would be left with potential interviewees to consider for a week or so.

At the end of the interview, participants will be asked if they want the interview tape and transcript destroyed or returned to them once the thesis is completed.

Participants will be given a summary sheet on the outcome of the research and will be advised where the full thesis will be available for them to read if they wish.

---

39 **Will consent to participate be given in writing?**

Yes  No

*(Attach copies of Consent Form/s to the application form)*

---

**If no, justify the use of oral consent.**

---

40 **Will participants include persons under the age of 16?**

Yes  No

**If yes, indicate the age group and competency for giving consent.**

---

*(Note that parental/caregiver consent for school-based research may be required by the school even when children are competent. Ensure Information Sheets and Consent Forms are in a style and language appropriate for the age group)*

- 
- 41 Will participants include persons who are vulnerable or whose capacity to give informed consent may be compromised? Yes  No

**If yes, describe the consent process you will use.**

The informed consent of all prospective participants will be sought. Through the consent form, information sheet and recruitment process, prospective participants will know:

1. the names of the people responsible for the research project;
2. the procedures which they will be asked to agree to participate in;
3. how the researcher obtained their name to ask them to consider participating in the project;
4. how the information will be used;
5. what will happen to the information when it is obtained;
6. how confidentiality and anonymity will be protected; and
7. what will happen to the data on completion of the project.

A Consent Form as attached will be provided to participants for signing prior to the beginning of the research. The Consent Form provides for agreement to audio taping of interviews as this is part of the method to be used. A period of a week or so will be allowed for between provision of the Information Sheet and the formal signing of a Consent Form. This will provide an opportunity for prospective participants to consider the request to participate, to ask further questions that may occur to them and to discuss the request with others before completing the Consent Form.

If a participant is unable to provide written consent because of a disability, or if it is more culturally appropriate for any participant, consent would be obtained orally and recorded as a spoken statement on a tape. An appropriate third party could also be used to support the participant and as a witness in these circumstances.

The students participating in this research will be 16 years of age or older.

If a participant is not fluent in the English language the information sheet and consent form will be translated (see section 42) and a support person, acceptable to the participant and fluent in their language and in English, will assist in ensuring participant consent is informed (see section 64).

An interview will not proceed if a potential participant does not appear to fully understand what is being asked of them and their rights.

- 
- 42 Will the participants be proficient in English? Yes  No

**If no, all documentation for participants (Information Sheets/Consent Forms/Questionnaire etc) must be translated into the participants' first-language**

At this stage the first language of the new migrant participants is not known. The Information Sheet and Consent Form will be translated by a translation service when it is known, and before informed consent is sought.

## SECTION E: PRIVACY/CONFIDENTIALITY ISSUES

- 43 Will information about participants be obtained from third parties? Yes  No

**If yes, describe how and from whom.**

If potential participants would rather I contacted them than they contacted me, they could choose to allow the recruiting agency to provide me with their contact details.

44 Will any identifiable information on the participants be given to third parties? Yes  No

If yes, describe how.

---

45 Will the participants be anonymous (i.e. their identity unknown to the researcher?) Yes  No

If no: i) will the participants be given a unique identifier? Yes  No

ii) will the participants' identity be disclosed in publication of the research? Yes  No

46 Will an institution (e.g. school) to which participants belong be named or be able to be identified? Yes  No

As mentioned in section 34(ii), the agencies that assist with recruiting participants would only be named in the thesis if they wish to be named. *(Ensure that institutions have been informed of this in your request to access them)*

47 Outline how and where the data (including tapes/transcripts) and Consent Forms will be stored.

*(Note that Consent Forms should be stored separately from data)*

The name and contact details of the persons contacted and those who agree to participate will be kept by me on my personal computer in a password-protected file. I will not disclose the password to anyone else, will use the file only for the purpose of undertaking the thesis, and will delete the file on completion of the thesis.

The tapes and transcripts of recorded interviews, and the signed consent forms, will be kept in a locked filing cabinet for which I will have the only key. An agency would be contracted to type up the interviews. The agency would not be told who has been interviewed, and would also have to sign the attached Confidentiality Agreement.

To maintain confidentiality, the agency transcribing the tapes would need to agree in writing to the following:

- The real name of the participant will not be recorded in the typed notes.
- The transcriber will not discuss or disclose the content of the interviews to anyone other than myself.
- The tapes will be transcribed onto floppy disk in Word format. Both the tapes and the transcriptions will be kept in a locked filing cabinet when not being transcribed.
- Once the transcriptions are complete both the tapes and the transcripts on disk will be given to me, and no copy in any format will be retained by the transcriber.

I would not refer to the participants by name in the thesis, nor in any other record apart from their consent form and the password-protected contact file mentioned above. Once the thesis is completed I would, depending on their preference, either return their tape and transcript to each participant, or else erase the tape and destroy the typed record of the interviews.

---

48 i) Who will have access to the data/Consent Forms?

The consent forms and (once transcription is completed), the data, would only be accessible to myself.

ii) How will the data/Consent Forms be protected from unauthorised access?

The tapes, transcriptions and consent forms will be kept in a locked filing cabinet for which I will have the only key.

---

49 **Who will be responsible for disposal of the data/Consent Forms when the five-year storage period is up?**

When the five year storage period is up I will bring the data and consent forms to my supervisor, Dr Marilyn Waring, who will be responsible for the disposal of this material. *(The Massey University HOD Institute/School/Section / Supervisor / or nominee should be responsible for the eventual disposal of data)*

---

50 **Will participants be given the option of having the data (particularly tapes) transferred to an official archive?** (This option may apply when data collected is of historical significance) Yes  No

*(If yes, include this option in the Consent Form)*

51 **Will participants be given the option of having their tapes returned to them?** (If yes, include this option in the Consent Form) Yes  No

## SECTION F: DECEPTION

52 **Is deception involved at any stage of the project?** Yes  No

If yes, justify its use and describe the debriefing procedures.

---

## SECTION G: CONFLICT OF INTEREST

53 **Is the project to be funded in any way from sources external to Massey University?** Yes  No

If yes: i) state the source.

I will personally meet cash costs of this research, and the Ministry of Transport has granted me study leave for the time to undertake this research.

---

ii) does the source of the funding present any conflict of interest with regard to the research topic?

No.

---

54 **Does the researcher/s have a financial interest in the outcome of the project?** Yes  No

If yes, explain how the conflict of interest situation will be dealt with.

---

55 **Is there any professional or other relationship (e.g. employer/employee, lecturer/student, practitioner/patient, researcher/family member) to the researcher?** Yes  No

If yes, describe the relationship and indicate how the resulting conflict of interest situation will be dealt with.

The two intended retired participants are personal acquaintances. They are not dependant on me, their participation would be voluntary and informed, and no conflict of interest is anticipated.

---

## SECTION H: COMPENSATION TO PARTICIPANTS

56 Will any payments or other compensation be given to participants? Yes  No

If yes, describe what, how and why.

I will offer to compensate all participants for the reasonable transport costs associated with their interview. (Note that compensation (if provided) should be given to all participants and not constitute an inducement. Details of any compensation provided must be included in the Information Sheet)

---

## SECTION I: TREATY OF WAITANGI

57 Does the proposed research impact on Maori persons as Maori? Yes  No

If yes describe how.

---

58 Are Maori the primary focus of the project? Yes  No

(If yes, complete Section I, otherwise proceed to Question 63)

59 Is the researcher competent in te reo Maori and tikanga Maori? Yes  No

If no, outline the processes in place for the provision of cultural advice.

---

60 Identify the group/s with whom consultation has taken place or is planned and describe the consultation process.

(Where consultation has already taken place, attach a copy of the supporting documentation to the application form, e.g. a letter from an iwi authority)

N/A.

---

61 Describe any ongoing involvement of the group/s consulted in the project.

N/A.

---

62 Describe how information resulting from the project will be shared with the group/s consulted?

N/A.

---

63 If Maori are not the focus of the project, outline what Maori involvement there may be and how this will be managed.

Some of the participants may be Māori. They will be treated with the cultural respect that will be offered all participants.

---

## SECTION J: OTHER CULTURAL ISSUES

64 Are there any aspects of the project that might raise specific cultural issues, other than those covered in Section I? Yes  No

If yes, explain. Otherwise, proceed to Section K.

---

I anticipate that the participants recruited through the DPA and the students recruited through the Waitakere City Council will be "kiwis" or otherwise comfortable working within the New Zealand cultural context. However, for the participants recruited through the Shakti Women's Centre there is every likelihood that they will not be comfortable working within the New Zealand cultural context. They may not be very fluent with English, and they may be hesitant to meet a stranger.

I will need some assistance to understand the culture(s) of the participants recruited from the Shakti Women's Centre and to find ways to recruit, meet and interview them that are effective for this research while providing appropriate dignity and comfort to these participants. If they are not fluent speaking or understanding English, I would also need help to gain informed consent and to undertake their interview. I therefore propose that in these cases a support person needs to be involved. The support person would have the same cultural background as, and would preferably be known to the participant. The support person would be more fluent with English and more comfortable working within the New Zealand cultural context. The support person would be recruited through the Shakti Women's Centre with the consent of the participant. The support person would discuss with me the aspects of their culture that I should understand and respect for the interview. Depending on what the participant and the support person decide is appropriate, the support person might also attend and facilitate the interview. In any case, I would need to seek the informed consent of the support person to participate in this research, and they would also need to sign a confidentiality agreement.

---

**65 What ethnic or social group/s (other than Maori) does the project involve?**

The project will involve new migrants but their ethnicity is not known at this time.

---

**66 Does the researcher speak the language of the target population?**

Yes  No

**If no, specify how communication with participants will be managed.**

If required, with the assistance of a support person as described above.

---

**67 Describe the cultural competence of the researcher for carrying out the project.**

*(Note that where the researcher is not a member of the cultural group being researched, a cultural advisor may be necessary)*

I have no specific cultural competences, beyond my life experience in interacting with and respecting people of other cultures.

---

**68 Identify the group/s with whom consultation has taken place or is planned.**

*(Where consultation has already taken place, attach a copy of the supporting documentation to the application form)*

I have consulted with the Ministry of Transport, Transfund New Zealand and the Wellington Regional Council on this research proposal and will undertake further consultation on the design of the interview schedule. I also need to consult with the Partnerships and Advocacy Leader, Children and Youth of Waitakere City Council, with the Disabled Person's Association, and with the Shakti Women's Centre on this research and on the recruitment of participants.

---

**69 Describe any ongoing involvement of the group/s consulted in the project.**

I plan to keep selected staff at the Ministry of Transport, Transfund New Zealand and the Wellington Regional Council informed of progress with my research

---

**70 Describe how information resulting from the project will be shared with the group/s consulted.**

I would supply a summary sheet on the outcome of the research to the groups consulted, and will make the full thesis available for them to read if they wish.

---

**71 If the research is to be conducted overseas, describe the arrangements you will make for local participants to express concerns regarding the research.**

---

## SECTION K: SHARING RESEARCH FINDINGS

- 72 Describe how information resulting from the project will be shared with participants.  
Participants will be given a summary sheet on the outcome of the research and will be advised where the full thesis will be available for them to read if they wish.
- 

## SECTION L: INVASIVE PROCEDURES/PHYSIOLOGICAL TESTS

- 73 Does the project involve the collection of tissues, blood, other body fluids or physiological tests? Yes  No

*(If yes, complete Section L, otherwise proceed to Section M)*

- 74 Describe the material to be taken and the method used to obtain it. Include information about the training of those taking the samples and the safety of all persons involved. If blood is taken, specify the volume and number of collections.

- 
- 75 Will the material be stored? Yes  No   
If yes, describe how, where and for how long.
- 

If no, describe how the material will be destroyed.

*(Note that the wishes of relevant cultural groups must be taken into account)*

- 
- 76 Will material collected for another purpose (e.g. diagnostic use) be used? Yes  No

If yes, did the donors give permission for use of their samples in this project? *(Attach evidence of this to the application form)* Yes  No

If no, describe how consent will be obtained. Where the samples have been anonymised and consent cannot be obtained, provide justification for the use of these samples.

- 
- 77 Will any samples be imported into New Zealand? Yes  No

If yes, provide evidence of permission of the donors for their material to be used in this research.

- 
- 78 Will any samples go out of New Zealand? Yes  No

If yes, state where.

*(Note this information must be included in the Information Sheet)*

- 
- 79 Describe any physiological tests/procedures that will be used.
-

---

80 Will participants be given a health-screening test prior to participation? Yes  No   
(If yes, attach a copy of the health checklist)

**SECTION M: DECLARATION** (Complete appropriate box)

**ACADEMIC STAFF RESEARCH**

**Declaration for Academic Staff Applicant**

I have read the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants. I understand my obligations and the rights of the participants. I agree to undertake the research as set out in the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants. My Head of Department/School/Institute knows that I am undertaking this research. The information contained in this application is to the very best of my knowledge accurate and not misleading.

Staff Applicant's Signature \_\_\_\_\_ Date: \_\_\_\_\_

---

**STUDENT RESEARCH**

**Declaration for Student Applicant**

I have read the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants and discussed the ethical analysis with my Supervisor. I understand my obligations and the rights of the participants. I agree to undertake the research as set out in the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants. The information contained in this application is to the very best of my knowledge accurate and not misleading.

Student Applicant's Signature \_\_\_\_\_ Date: \_\_\_\_\_

**Declaration for Supervisor**

I have assisted the student in the ethical analysis of this project. As supervisor of this research I will ensure that the research is carried out according to the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants.

Supervisor's Signature \_\_\_\_\_ Date: \_\_\_\_\_

Print Name \_\_\_\_\_

---

**GENERAL STAFF RESEARCH/EVALUATIONS**

**Declaration for General Staff Applicant**

I have read the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants and discussed the ethical analysis with my Line Manager. I understand my obligations and the rights of the participants. I agree to undertake the research as set out in the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants. The information contained in this application is to the very best of my knowledge accurate and not misleading.

General Staff Applicant's Signature \_\_\_\_\_ Date: \_\_\_\_\_

**Declaration for Line Manager**

I declare that to the best of my knowledge, this application complies with the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants and that I have approved its content and agreed that it can be submitted.

Line Manager's Signature \_\_\_\_\_ Date: \_\_\_\_\_

Print Name \_\_\_\_\_

---

**TEACHING PROGRAMME**

**Declaration for Paper Controller**

I have read the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants. I understand my obligations and the rights of the participants. I agree to undertake the teaching programme as set out in the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants. My Head of Department/School/Institute knows that I am undertaking this teaching programme. The information contained in this application is to the very best of my knowledge accurate and not misleading.

Paper Controller's Signature \_\_\_\_\_ Date: \_\_\_\_\_

---

**Declaration for Head of Department/School/Institute**

I declare that to the best of my knowledge, this application complies with the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants and that I have approved its content and agreed that it can be submitted.

Head of Dept/School/Inst Signature

Date:

Print Name

## ***Exploration of access and mobility needs and impediments in New Zealand***

### **INFORMATION SHEET**

My name is Anatole Sergejew and I am a Master of Public Policy degree student at Massey University Albany Campus. I work as a Policy Advisor for the Ministry of Transport, who have allowed me to do this study and are interested in what it shows.

My Master's degree thesis is about access and mobility needs and impediments in New Zealand. As part of my studies, if you agree I would like to meet you for two hours and discuss your travel needs (for example travelling to go shopping, to visit people, go to the doctor, etc.). I would also like to discuss any difficulties you may face with travel (for example cost, time), what effect travel and travel difficulties have on you, and what you think could be done about those difficulties. By interviewing you and other people, I hope to build up a picture of the range of travel needs and difficulties that people face.

You have been invited to participate for this study because [I personally know you and thought you would have an important perspective / you indicated you might be interested when contacted through the Partnerships and Advocacy Leader, Children and Youth of Waitakere City Council / CCS / Shakti Migrant's Centre] delete as appropriate.

I plan to interview a total of eight people, including yourself if you agree. This number of interviews will enable me to develop and pilot the interview and analysis process.

If you agree to participate, I would like to tape record our interview to help me with my analysis. The interview would then be typed up, to help me refer back to it when writing my thesis. Your identity would remain confidential. The agency typing up the interviews would not be told who has been interviewed, and would also have to sign a Confidentiality Agreement. I would not refer to you by name in the thesis, or in any other record. Once my thesis is completed I would either erase the tape and destroy the typed record of our interview, or else return them to you if you would prefer that.

If you agree to participate, I will send you a summary sheet on the outcome of the research and say where the full thesis will be available for you to read if you wish.

If you agree to participate, you would be involved in recruitment, in semi-structured interviews, in being advised of the outcome of the research and in deciding if your interview tape and transcript should be destroyed or returned to you.

At the recruitment stage, you would choose a time and place convenient to you for an initial meeting, when I will explain the purpose of the research, what is being asked of you, the rights of participants and other issues outlined in this Information Sheet and the attached Consent Form. You would be encouraged to ask questions and will receive any

further elaboration you might require. A copy of the information sheet and consent form would be left with you to consider for a week or so.

If you agree to participate, you would then choose a time and place convenient to you for a semi-structured interview of up to two hours duration. I would reimburse you for your reasonable travel costs associated with the interview. In the interview we would discuss your travel needs, any difficulties you might face with travel (for example cost, time), what effect travel and travel difficulties have on you, and what you think could be done about those difficulties.

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- ask for the audio tape to be turned off at any time during the interview;
- withdraw from the study;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- be given access to a summary of the project findings when it is concluded.

I do not expect you to be put in a situation where you uncomfortable or exposed to any risks if you agree to participate. However you would be welcome to have a support person with you during the interview.

If you have any questions you can contact me by calling me on 379-0075, or you can contact my thesis supervisors at the Massey University School of Social and Cultural Studies in Albany: Dr Marilyn Waring on 414-0800 x9085 and Dr Grant Duncan on 414-0800 x9086.

This project has been reviewed and approved by the Massey University Human Ethics Committee, ALB Application 04/026. If you have any concerns about the conduct of this research, please contact Associate Professor Kerry Chamberlain, Chair, Massey University Campus Human Ethics Committee: Albany, telephone 09 414 0800 x9078, email [humanethicsalb@massey.ac.nz](mailto:humanethicsalb@massey.ac.nz).

[Massey University letterhead]

## ***Exploration of access and mobility needs and impediments in New Zealand***

### **PARTICIPANT CONSENT FORM**

**This consent form will be held for a period of five (5) years**

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree to the interview being audio taped.

I wish/do not wish to have my tapes returned to me.

I agree to participate in this study as explained in the Information Sheet.

**Signature:**

.....

**Date:**

.....

**Full Name - printed**

.....





Travel difficulties / continued

Trip mode	Walk	Cycle	Drive	Bus	Get a lift	Taxi	Total mobility	Other - please describe
For those modes that do <u>not</u> apply, tick off corresponding box as you ask the following:								
Why can you not travel by this mode? (e.g. : Not available when needed or where needed, too expensive, too slow, too uncomfortable, too difficult, not safe, not physically useable, other - describe)								
What effect does not being able to travel by this mode have on you? (e.g. financial, quality of life, loss of time, other)								
Is there something that could be done so you could travel this way? (e.g. more/better services, reduce cost, improve speed, other)								

What are the key transport issues/problems for you?

Is there anything else you would like to say about your travel needs or difficulties?

Have you ever been unable to do something because of travel difficulties? Describe.

Would you travel more if you didn't have these difficulties? What would you do?

[Massey University letterhead]

***Exploration of access and mobility needs and  
impediments in New Zealand***

**TRANSCRIBER'S CONFIDENTIALITY AGREEMENT**

I ..... (Full Name - printed) agree to  
transcribe the tapes provided to me.

I agree to keep confidential all the information provided to me.

I will not make any copies of the transcripts or keep any record of them, other than those  
required for the project.

**Signature:** ..... **Date:** .....

[Massey University letterhead]

***Exploration of access and mobility needs and  
impediments in New Zealand***

**CONFIDENTIALITY AGREEMENT**

I ..... (Full Name - printed)

agree to keep confidential all information concerning the *project Exploration of access and mobility needs and impediments in New Zealand.*

I will not retain or copy any information involving the project.

**Signature:**

.....

**Date:**

.....

[Massey University letterhead]

***Exploration of access and mobility needs and  
impediments in New Zealand***

**AUTHORITY FOR THE RELEASE OF TAPE TRANSCRIPTS**

This form will be held for a period of five (5) years

I agree that the edited transcript and extracts from this may be used by the researcher, Anatole Sergejew, in reports and publications arising from the research.

**Signature:**

**Date:**

.....

**Full Name - printed**

.....

## References

Banister, D. (1980). *Transport mobility and deprivation in inter-urban areas*. Farnborough, England: Saxon House.

Benwell, M. (1981). Access to activity, need and welfare; towards a fuller view of transport demand. In D. Banister and P. Hall. (Eds). *Transport and public policy planning*. (pp. 220-229). London: Mansell Press.

Bostock, L. (2001). Pathways of disadvantage? Walking as a mode of transport among low-income mothers. *Health and Social Care in the Community*, 9, (1), 11-18.

Cameron, M. (1997). Transportation efficiency and equity in Southern California: Are they compatible? In R. Bullard and G. Johnson (Eds.), *Just transportation: Dismantling race and class barriers to mobility*. (pp. 53-67). British Columbia: New Society Publishers.

Cope, D. (2003). *Total Mobility 2003*. Wellington. Transfund New Zealand.

Dalziel, L. (2001a). *The New Zealand Disability Strategy*. Wellington: Minister for Disability Issues.

Dalziel, L. (2001b). *The New Positive Ageing Strategy*. Wellington: Minister for Senior Citizens.

Davey, J. & Nimmo, K. (2003). Older people and transport. Scoping paper. New Zealand Institute for Research on Ageing. Wellington: Victoria University. Retrieved November 19, 2004 from <http://www.itsa.govt.nz/research/older-people/docs/older-people-and-transport.pdf>

Dowling, R., Göllner, A. & O'Dwyer, B. (1999). A gender perspective on urban car use: A qualitative case study. *Urban Policy and Research*, 17, (2), 101-110.

Doyal, L & Gough, I. (1991). *A theory of human need*. Hampshire: The MacMillan Press.

Dwyer, M. Gray, A. & Renwick, M. (2000). *Factors affecting the ability of older people to live independently, a report for the International Year of Older Persons*. Wellington: Ministry of Social Policy.

FIA Foundation. (2004). *Transport & social exclusion. A survey of the Group of Seven nations. Summary report*. Retrieved May 21, 2004 from [http://www.racfoundation.org/our\\_research/240204rac.pdf](http://www.racfoundation.org/our_research/240204rac.pdf)

- Fraser, I. (1996). Hegel and modern needs theory. In I. Hampsher-Monk and J. Stanyer. (Eds). *Contemporary Political Studies 1996*. Proceedings of the Political Studies Association Annual Conference (pp. 424-431). University of Glasgow. Retrieved October 11, 2004 from <http://www.psa.ac.uk/cps/1996/fras.pdf>
- Good, R. (1988). Transport: Access or isolation? In *Report of the Royal Commission on Social Policy, Volume IV Social Perspectives*. (pp. 386-453). Wellington: GP Print.
- Gasper, D. (2004). *Conceptualising human needs and well-being*. Paper for the International Workshop on Researching Well-being in Developing Countries. Retrieved October 11, 2004 from <http://www.welldev.org.uk/news/hanse-pdfs/gasper-2-full.pdf>
- Gough, I. (2002). *Lists and thresholds: Comparing our theory of human need with Nussbaum's capabilities approach*. Draft paper for Conference on Promoting Women's Capabilities. Cambridge. Retrieved October 11, 2004 from <http://www.st-edmunds.cam.ac.uk/vhi/nussbaum/papers/gough.pdf>
- Gray, A. (2002). *Indicators of accessibility. A report for the Ministry of Transport*. Unpublished report.
- Hine, J. & Mitchell, F. (2001). Better for everyone? Travel experiences and transport exclusion. *Urban Studies*, 38, (2), 319-332.
- Hine, J. & Mitchell, F. (2003). *Transport disadvantage and social exclusion*. Hants, England: Ashgate Publishing.
- House of Representatives. (1989). *Parliamentary Debates. (Hansard.) Vol. 497. 11 April to 4 May 1989*. Wellington: Government Printer.
- Houseman, G. (1979). *The right of mobility*. New York: Kennikat Press.
- Human Rights Commission. (1998). *International instruments on human rights*. Auckland: Human Rights Commission.
- Human Rights Commission. (2004). *Inquiry into accessible public land transport. Consultation report*. Auckland: Human Rights Commission.
- Kemming, H & Borbach, C. (2003). *Transport and social exclusion. A G7 comparison. An overview of the German position*. Retrieved May 21, 2004 from [http://www.fiafoundation.com/content/media/German\\_paper.doc](http://www.fiafoundation.com/content/media/German_paper.doc)
- Kenyon, S. Rafferty, J & Lyons, G. (2003). Social exclusion and transport in the UK: A role for virtual accessibility in the alleviation of mobility-related social exclusion? *Journal of Social Policy*, 32, (3), 317-338.

Lawrence, D. (1995). *Who disables whom on public passenger transport?* Master of Social Science Thesis. Department of Geography, University of Waikato.

Litman, T. (2003). *Social inclusion as a transport planning issue in Canada*. Retrieved May 21, 2004 from [http://www.fiafoundation.com/content/media/Canada\\_paper.doc](http://www.fiafoundation.com/content/media/Canada_paper.doc)

Lucas, K., Grosvenor, T. & Simpson, R. (2001). *Transport, the environment and social exclusion*. York: York Publishing Services.

Lucas, K. (2003). *Transport and social exclusion. A G7 comparison. An overview of the UK position*. Retrieved May 21, 2004 from [http://www.fiafoundation.com/content/media/UK\\_paper.doc](http://www.fiafoundation.com/content/media/UK_paper.doc)

Lyons, G., Marsden, G., Beecroft, M & Chatterjee, K. (2001). *Transport visions. Transport requirements*. London: Landor Publishing.

Maharey, S. (2000). *Social exclusion a threat to social cohesion*. Press Release. July 26th 2000. Retrieved August 7, 2000 from <http://www.executive.govt.nz/speech.cfm?speechralph=31761&SR=0>

Maslow, A. (1970). *Motivation and personality*. (2nd ed.). New York: Harper & Row Publishers.

Massey University. (2004). *Code of ethical conduct for research, teaching and evaluations involving human participants*. Revised 23/01/04. Retrieved March 24, 2004 from [http://humanethics.massey.ac.nz/pdf/muhec\\_code.pdf](http://humanethics.massey.ac.nz/pdf/muhec_code.pdf)

McKenna, O. & Lavery, I. (1993). Quantifying the unquantifiable. Numerical evaluation of the personal, environmental and trip barreirs [sic] to travel. In *Transport for people with a mobility handicap. Proceedings of Seminar J held at the PTRC European Transport, Highways and Planning 21st Summer Annual Meeting*. (pp. 115-126). London: PTRC Education & Research Services.

Ministry of Social Development (2003). *The social report. Indicators of social wellbeing in New Zealand*. Wellington: Ministry of Social Development.

Morrison, L. (1996). *Driven to despair? Geographical implications of giving up driving in old age*. Master of Arts Thesis. Dunedin: University of Otago.

National Advisory Committee on Health and Disability. (1998). *The social, cultural and economic determinants of health in New Zealand: Action to improve health*. Wellington: National Advisory Committee on Health and Disability.

Orfeuil, J. (2003). *Mobility, poverty and social exclusion in France*. Retrieved May 21, 2004 from [http://www.fiafoundation.com/content/media/French\\_paper.doc](http://www.fiafoundation.com/content/media/French_paper.doc)

O'Fallon, C. (2001). *Thinking about mobility, accessibility & passenger transport*. Unpublished report to Transfund New Zealand.

Patton, M. (1990). *Qualitative evaluation and research methods*. (2nd ed.). California: Sage Publications.

Peace, R. (2001). Social exclusion : a concept in need of definition? *Social Policy Journal of New Zealand / Te Puna Whakaaro*, 16, 17-35.

Percy-Smith, J. (Ed). (2000). *Policy responses to social exclusion. Towards Inclusion?* Buckingham: Open University Press.

Pickup, L. (1988). Hard to get around: a study of women's travel mobility. In J. Little, L. Peake and P. Richardson (Eds.), *Women in Cities*. (pp. 98-147). Hampshire: MacMillan Education Publishers.

Sarantakos, S. (1998). *Social research*. South Yarra: MacMillan Education Australia.

Sen, A. (1985). The standard of living: Lecture 1, Concepts and critiques. In G. Hawthorn (Ed.) *The standard of living*. (pp. 1-19). Cambridge: Cambridge University Press.

Solomon, J. (2003). What is transport social exclusion? In A. Root (Ed.), *Delivering sustainable transport. A social science perspective*. (pp. 151-156). London: Pergamon Publishers.

Swain, P. (2002). *New Zealand Transport Strategy*. Wellington: Minister of Transport.

Taylor, S & Bodgan, R. (1998). *Introduction to qualitative research methods. A guidebook and resource*. New York: John Wiley and Sons.

Thompson, D. (Ed). (1998). *The concise Oxford dictionary of current English*. (9th ed.). Oxford: Clarendon Press.

UK DETR. (2000). *Social exclusion and the provision and availability of public transport. Summary report*. Retrieved October 17, 2000 from <http://www.mobility-unit.detr.gov.uk/social/ex/index.htm>

UK DETR. (2001). *Older people: Their transport needs and requirements. Main report*. Retrieved May 19, 2004 from [http://www.dft.gov.uk/stellent/groups/dft\\_mobility/documents/pdf/dft\\_mobility\\_pdf\\_506792.pdf](http://www.dft.gov.uk/stellent/groups/dft_mobility/documents/pdf/dft_mobility_pdf_506792.pdf)

UK DFT. (2000). *Public transport gender audit evidence base*. Retrieved January 19, 2004 from [http://www.dft.gov.uk/stellent/groups/dft\\_mobility/documents/pdf/dft\\_mobility\\_pdf\\_506790.pdf](http://www.dft.gov.uk/stellent/groups/dft_mobility/documents/pdf/dft_mobility_pdf_506790.pdf)

Williamson, M. (1998). *National Transport Statement*. Wellington: Minister of Transport.