

Centre for Disability Studies



UNIVERSITY OF LEEDS

# Secondary analysis of existing data on disabled people's use and experiences of public transport in Great Britain

A research report for the Disability Rights Commission

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# 1. Background to the report

The research on which this report is based was commissioned by the DRC via tender and was conducted between April and July 2006. The research team, from the Centre for Disability Studies at the University of Leeds, included Debbie Jolly and Mark Priestley (School of Sociology and Social Policy) and Bryan Matthews (Institute of Transport Studies). The project was managed for DRC by Abul Momin. The tender invited the research provider to investigate the availability of existing data on disabled people's use of public transport, to evaluate the usefulness of this evidence in consultation with DRC staff, and to present findings in support of the Commission's transport campaign. There was extensive dialogue in the conduct of the work, according to a written work plan, and members of the research team met with DRC staff six times (three meetings in Manchester and London and three visits to Leeds by the DRC project officer). Four written updates or reports were also submitted to the DRC detailing work in progress.

The research work was conducted in three phases. As this was a scoping project, the first priority was to establish what datasets might exist for secondary analysis relating to disability and public transport (this was unknown at the outset). The research team were advised to focus on large datasets within the UK Data Archive and also to collect examples of smaller studies through personal contacts. In the first month the research team produced a list of more than 300 hundred potential datasets, together with an initial analysis of their usefulness. In the second phase it was agreed to focus on a subset of key datasets and copies of these were purchased for more detailed analysis. The research team produced an interim report of key features and findings and this was revised in consultation with DRC staff. The final phase of the research involved more specific investigation of questions and themes highlighted by DRC as particularly relevant (e.g. regional differences, changes over time, breakdown by ethnicity and impairment etc.). The material presented in this report includes a combination of findings and commentary from the various stages of the project.

## Context and limitations

One of the main purposes of the research was to investigate whether existing large-scale datasets might be exploited for secondary analysis in support of DRC objectives. Given the context of the tender, the data sources were largely unknown at the beginning of the contract and the research methods were therefore exploratory. This had the advantage of opening new areas of enquiry and producing some profitable results without the need for expensive new data collection. However, there were also limitations on what could be achieved with data that had been collected by other research teams for other purposes, and the extent that this could be manipulated in a reliable way. For example, as most of the datasets were not specifically concerned with disability, disabled respondents were often few in numbers (making it impossible to draw many detailed conclusions beyond the national level). There were also limitations on transferability arising from the different definitions of disability used in different surveys. An overview of the characteristics, strengths and limitations of each major dataset is included in Appendix A and Appendix B.

The work involved in producing this report has therefore been considerable, involving detailed work on individual datasets and the production of several hundred pages of output for analysis (in addition to the time involved in obtaining multiple datasets and becoming familiar with their characteristics). The significance of each individual data find had to be tested and in many cases rejected as lacking reliability. Some variables and data had to be extensively manipulated or transformed in order to produce relevant findings. In a longer timescale and with more prior knowledge of the available data, more complex analysis could also be achieved using regression techniques and tests of association between variables. However, this has been a productive process and much has been learned in collaboration with the DRC project officer. One of the conclusions of this report is that existing surveys are not providing a complete picture upon which to base disability policy and that there is a case for larger-scale research to support DRC objectives and policy evaluation.

### **Key to abbreviations and data sources**

In order to avoid unnecessary repetition, the original source of illustrative data examples mentioned in the text can be identified by the abbreviation codes contained in Appendix B (for example, the abbreviation 'TAA01' refers to the Transport and Ageing survey of 2000-2001, while 'BHPS04' refers to data from the 2004 wave of the British Household Panel Survey).

## 2. Some examples of headline findings

- Disabled people attach greater importance to public transport than non-disabled people
- Disabled people are less likely to go out or to make long journeys than non-disabled people.
- Over half of disabled people would like to go out more often
- Disabled people find it difficult to travel to basic services, such as their GP or Post Office
- Disabled people are twice as likely to turn down a job because of travel difficulties
- Almost half of disabled people are totally reliant upon public transport
- Use of taxis and door-to-door services is higher amongst disabled people
- The biggest reason for disabled people using public transport is lack of access to a car; the second is not wanting to ask for lifts
  - Lack of access to a car is more than twice as high for disabled people
  - Non disabled people are almost twice as likely to have full driving licence and six times more likely to have a company car
- Disabled people are less satisfied with public transport and more likely to see it as unreliable
- Reported difficulties in using buses have improved since 1999, including difficulties getting on and off buses
- Disabled people feel that improvements in public transport would substantially contribute to improved quality of life and higher usage
- Transport operators think of largely in terms of wheelchair accessibility and sensory impairments are often overlooked.
- Almost three quarters of disabled people felt that their needs were not considered by bus operators
- Half of disabled people felt that their needs were not considered by train operators
- Specific barriers are easily identified but need to be viewed within the wider context of whole journeys and the 'travel chain'
- Disabled people are up to three times less likely to be aware of travel information services, and are less likely to use travel information web-sites
- Disabled people are more than twice as likely to be unsatisfied with travel information available during bus and train journeys
- Poor connections inhibit travel for disabled people
- Underlying income differences between disabled and non-disabled people mean that on average disabled people may spend a greater proportion of their income on travel costs

### 3. The importance of access to public transport (background)

The evidence available from existing research studies highlights the importance of access to public transport for disabled people in Britain. Disabled people are less likely to drive or to have access to a car than non-disabled people and they are more likely to think of public transport as essential to their mobility. Improved access to public transport, and improved confidence amongst its users, is required in order to reduce the 'travel gap' that exists between disabled and non-disabled people. The following examples illustrate the current situation.

Data from the British Crime Survey (2004-2005) suggests that one quarter of disabled people (25.6%) do not go out compared with 1.5% of non-disabled people (disabled people are also slightly more likely to avoid high streets and centres at rush hour periods or school ending times, and more likely to avoid these places at night). This proportion rises with age and data from the Transport and Ageing Survey suggest that about one third of older disabled people say they do not go out at all. The BCS data suggests that men within long standing illness/disability were twice as likely to fear going out on their own compared to non-disabled men (6.1% compared to 3.1%). However, the figures for disabled and non-disabled women were similar although much higher (17.8% compared to 15.8%).

#### Case study

One member had what was described as severe arthritis. She was also a carer for her two disabled sons. She said that she had not left the house for a number of months, and rarely left the house since her husband, a car driver and owner had died several years ago. (The death of a partner who was also the main car driver was one of the prime reasons given for public transport use in the Transport and Aging survey).

Source: *Caerphilly Community Transport Study 2003*

It is important to view data on public transport experiences as framed within a 'whole journey' context. In addition to obvious barriers related to the design of vehicles and infrastructure there are wider social and environmental factors. The travel gap may thus be compounded by subjective feelings of confidence in embarking on journeys. The following Table illustrates the range of reasons why disabled people may choose not to travel, using data from British Crime Survey.

*Table 1: reasons for not using public transport (source BCS04)*

Issue	%
Concern about anti-social behaviour	60%
Overcrowded services	54%
Slow journey times	51%
Fear of crime on system	49%
Fear of crime getting to system	44%
Station not near journey origin/destination	44%
Fear of crime on train	22%

**Quote**

*Just that, if you're disabled in any way, public transport is very difficult to use. Also, I'm thinking in terms of possibly getting a car again. It is expensive to run. But I do dislike the state of public transport - dirty, anti-social behaviour - and feel that a car gives you comfort. (source TAA04)*

**Extracts from the Scottish Executive**

The recent Scottish Executive study, *Improved Public Transport for Disabled People* (2006) which used data from a range of sources to demonstrate that there are inequalities between disabled and non-disabled travellers, and that the considerable majority of disabled adults would like to travel more than they currently do. Analysis of the Scottish Household Survey showed that a non-disabled adult is 50% more likely to make any kind of trip on a given day than a disabled adult.

*Generally, more than one obstacle or barrier exists for each journey; the barriers vary by journey type and transport mode and those with different impairments face different barriers. The evidence shows that because the problem is multi-faceted, no one single 'solution' is likely to make a difference to the travel opportunities of disabled people.*

*Any move towards creating equality of travel opportunity will require a range of co-ordinated schemes and initiatives tailored to both the local physical environment, the needs of specific people in any local area and dovetailing with existing transport opportunities. Additionally, all modes of transport need to be included as do longer journeys that span more than one local area.*

Source: Scottish Executive: *Improved Public Transport for Disabled People*

**Evidence of the travel gap between disabled and non-disabled people**

Evidence from the diary component of the most recent National Travel Survey (2002-2004) suggests that disabled people are also much less likely to make long distance journeys when compared to non-disabled people. More than half of non-disabled respondents had

made a journey of more than 100 miles in the past week, compared to an average of just over one quarter for disabled people. Disabled people were almost three times as likely to record an average weekly travel distance of less than 30 miles, compared to non disabled people, and up to five times as likely to record 'no mileage' or no travel in the seven day period. Although these figures vary for different groups there appears to be a clear association between disability/impairment status and the distance travelled in an average week (i.e. the 'travel gap' is real and it increases with distance travelled).

### **Access to services**

The Omnibus Survey (2001) suggests that more than one third (34.5%) of disabled people found it very difficult or fairly difficult to get to their local hospitals, almost 20% difficult to get to their GP, 16.5% difficult to get to their main food shopping place and 10.2% had difficulties in getting to their local post office. In answer to a separate question, more than half of disabled people (52.5%) expressed some difficulties in getting to all main services (including GP, dentist, hospital/clinic, day centre, local authority offices, etc) whereas no non-disabled people identified this extent of difficulty. Disabled people are much more likely to rely on help from others to visit their GP, and more likely to travel there by car than any other group (e.g. retired people, those looking after a family and home, those classified as temporary sick or injured, or students). Indeed, disabled people are four times more likely than retired people to only visit their GP with help from others and more than twice as likely as retired people to carry out their main shopping only with help from others (OB01).

### **Lack of access to a car and dependency on public transport**

Lack of access to a car is a significant issue for disabled people and their families and results in a greater reliance upon public transport services. Data from the Omnibus Survey (2004) suggests that disabled people were more than twice as likely to have no access to a car in the household than non-disabled people (i.e. 35.3% of those defined as having 'health conditions that limited activity or work' compared to 14% without). Similarly, 40% of non-disabled people had access to two cars compared to just 23% of disabled people.

This picture is reinforced by other studies, which confirm that the main incentive for disabled people to use public transport is lack of access to a car (e.g. 84.3% gave this reason in the Transport and Ageing Survey compared to 60% for non-disabled people). People defined as long-term sick or disabled in the British Social Attitudes Survey study were also the least likely to have access to a car, while in the Transport and Ageing Survey 61% described their car availability as low compared to 42% of non-disabled people. Almost 20% of disabled people in this study also found it very difficult or extremely difficult to travel as a passenger in a car (more than half of disabled people believed that their needs were not considered by car designers compared to just over a quarter of non-disabled people, and one third considered that they would find it difficult or impossible to drive). Data from the National Travel Survey 2002-2004 indicates that disabled people are up to three times more likely to be non-drivers without access to a household car when compared to non-disabled people (40.5% compared to 12.7%). Non disabled people are almost twice as likely to have a full driving licence and six times more likely to have a

company car. Reliance on public transport was thus higher overall for disabled people than non-disabled people.

### The importance of public transport to disabled people

Given this background it is not surprising that disabled people are also more likely to perceive public transport as important to them. Seventy per cent of those identified as disabled in the Transport and Ageing Survey described public transport as important, very important or essential (32% of disabled people claimed that it was essential for them, compared to 22% of non-disabled people). Importantly, half of disabled people in this study (49.2%) considered themselves totally dependent on public transport, compared to one third of non-disabled people (32.4%). More than half of the disabled respondents (55.7%) wanted to go out more often compared with one third of non-disabled people. The main reason given by disabled people for using public transport was again the lack of access to a car. The second most common reason was not wanting to ask for lifts. Here, the proportion of disabled people citing this reason (87.6%) was much higher than that for non-disabled people (55.6%). The proportion of people claiming to have turned down jobs because of travel difficulties is very low but, according to the Labour Force Survey, it is twice as high for disabled people (4.1%) as for non-disabled people (1.8%).

### Concerns around public transport and impacts on disabled people's lives

In a recent review, transport issues were identified as the most prominent concern for disabled people (mentioned by 48% of disabled people, compared to 39% of the general public). This was particularly evident for wheelchair users and those with visual impairments as the following table illustrates.

*Table 2: disabled people citing transport as main concern in local area (source: Disabled People's Transport Needs 2005)*

Impairment label	%
Wheelchair users	57%
Visually impaired	53%
Mobility impaired	47%
Learning difficulties	45%
Hearing impaired	42%
<i>All disabled respondents</i>	<i>48%</i>

Data from the same review suggests that lack of access to transport created real knock-on effects for disabled people in terms of their wider inclusion (although the percentage figures should be treated with caution as they are not easily substantiated by the larger national datasets).

- 23% of those actively seeking employment had turned down a job offer
- 23% had turned down a job interview,
- 20% found it difficult or impossible to get the healthcare they needed
- 15% were unable to collect prescriptions

- 50% of those who do not see family and friends as often as they would like state inaccessible transport as the reason.
- 18% had missed a special birthday party
- 12% had missed a wedding or funeral
- 27% said inaccessible transport restricted their leisure pursuits

Data from the Transport and Aging survey suggests that improvements in public transport would significantly contribute to improved quality of life and higher usage by disabled people. Sixty-four percent of disabled people in the Transport and Ageing Survey said that improved public transport would significantly improve their quality of life, with 71% claiming that they would use public transport more often if it was improved.

As these examples show, there is considerable evidence from existing large-scale surveys to indicate that access to, and confidence in, public transport are essential to achieving greater mobility and independence for disabled people in Britain.

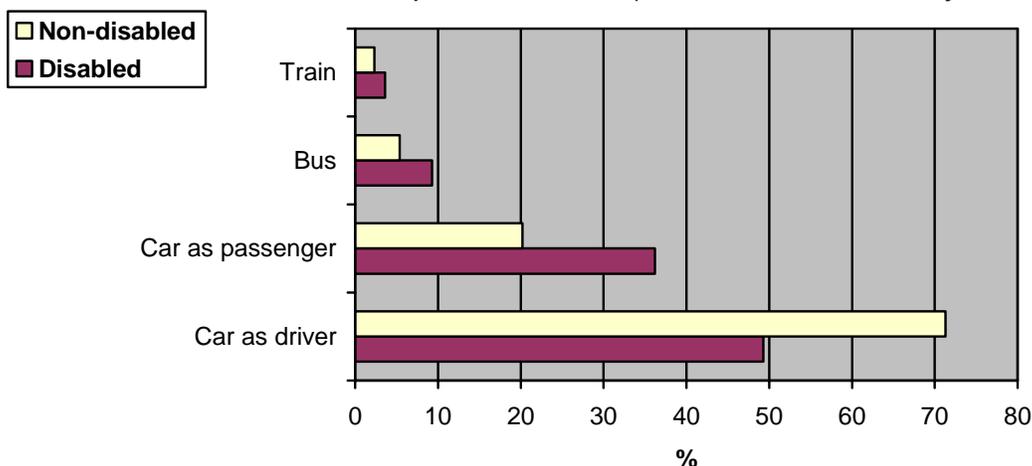
## 4. Disabled people’s use of transport

In this section we show how disabled people use public transport, for what purposes and how this compares with non-disabled people.

### Disabled people are more likely to use buses than trains

The Omnibus Survey (April 2004) provides a useful baseline. This data shows differences between the types of transport used by disabled and non-disabled people over a six month period. In this survey, 49.3% of disabled people reported travelling as the driver of a car as their main mode of travel, followed by car as a passenger at 36.2%, bus at 9.3% and train at 3.6%. It is worth noting that ‘Car as driver’ was the most commonly reported mode of transport for both disabled and non-disabled people, followed by ‘car as passenger’ but that disabled people were more likely to travel as passengers and non-disabled people as drivers. Disabled people were more likely to use buses and trains.

Figure 1: main mode of travel in the past six months (source Omnibus Survey 2004)



### More disabled people use public transport in London and Scotland and fewest in the South West of England

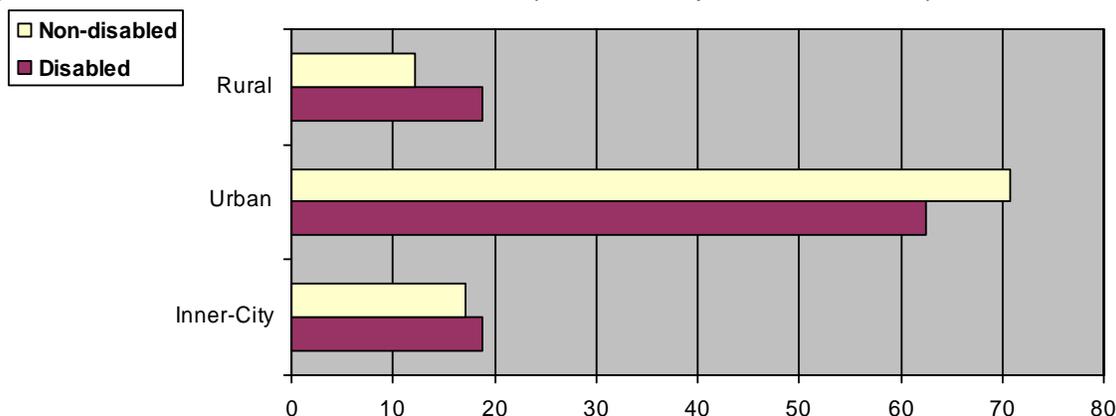
It is not possible to be precise about very local differences in the Omnibus Survey (2004) because of the small numbers of disabled respondents in each area, but breaking the figures down by region does show significant differences. London showed far more disabled people using buses than elsewhere (23.1%), followed by Scotland (14.1%). Train use was also highest in London (15.4%) followed by Scotland (10.7%). Although this may be unsurprising, both have large numbers of accessible buses compared to other regions. Next come Yorkshire and the Humber (12.8%), the North East (12.5%) and the West Midlands (11.8%) - the lowest reported bus use by disabled people was in the South West (3.8%).

### Car use and bus use in urban and rural areas

Conversely, London registered the lowest car use as driver by disabled people (26.9%) followed by the North East of England (29.2%) and Scotland (35.7%). The South West had the highest percentage of disabled people using a car as driver in the six months prior to the survey, while those travelling by car as a passenger were highest in the North East (54.2%) followed by Wales (38.5%). Car ownership was consistently higher for non-disabled people by region but the biggest differences were in Wales.

Although breakdowns by government office regions are not possible in all surveys (due to the sample size) data from the British Crime Survey suggests that (amongst people who use buses) a higher proportion of disabled people in rural areas are likely to use the bus than non-disabled people, but the situation is reversed in urban areas.

Figure 2: bus use in urban and rural areas (source: adapted from BCS05)



Looking at the Adults with Learning Difficulties Survey (2004) the main modes of transport were by car with family and friends, by bus or by being taken in a special bus/car with other people with learning difficulties (although the most common response was that they would usually get to places by walking or wheelchair). When asked about how they got to places just 1.1% used their own car/ moped/ motorbike compared to 29.9% using taxis.

### Disabled people appear to be using buses more often

Nationally, the number of train trips has increased in recent years, but data from the National Travel Survey suggests that it may have decreased slightly for disabled people – although this may be due to differences in the samples between the two studies. By comparison there is some evidence that more disabled people are using buses. The NTS travel diary data shows year on year increases in the number of bus journeys taken by disabled and by retired people between 2002-2004, especially in the densest urban areas and in rural areas. Taken as a whole, it is likely that regional differences can be accounted for by the accessibility of (primarily urban) bus and train services, by differences in household income, and by the availability of lifts in private vehicles. More women than men travel by bus overall.

### **Regular taxi usage is much higher amongst disabled people**

Data from the National Travel Survey 2002-2004 shows that disabled people were more than twice as likely to use a taxi or minicab two or three times a week compared with non-disabled people. People with incomes between £5,999 and £10,000 were the most likely to use taxis three or more times per week and this income group included the largest number of disabled people without access to a car. The largest group to use taxis three or more times per week (by work status) were those from the 'retired and permanently sick group' and who report travel difficulties by either 'foot' or 'foot and bus'. Data from the NTS (2002-2004) suggests that the proportion of disabled people using taxis 1-3 times per week has increased (but stayed the same for more frequent users). Taxi usage appeared to be evenly split between disabled women and men (compared to the tendency for women in the general population to use taxis more often, due to safety concerns and lack of access to a car).

Data from the Labour Force Survey (2005) also shows that disabled people are twice as likely to use a taxi as their main method of travel to work compared to non-disabled people. Those using taxis to travel to work are most likely to be (in order of most use) mental health users, those with visual impairments, those with learning difficulties and those with mobility/dexterity impairments.

#### **Case study**

Concerns were raised by users of London Taxi-card schemes about differences in fare charging between boroughs, and several research participants noted that the metre would have £6-7 pounds at the start of the journey leading to conclusions that drivers may be abusing the scheme.

Source: *Transport for all? Dial a Ride and Taxi-card users speaking'*

### **Disabled people are much more likely to use door-to-door travel services**

The NTS data 2002-2004 shows that up to 42% of disabled people have used a dial-a-ride service, and up to 30% a supermarket bus service (this compares to 0.2% of non-disabled people for supermarket buses). Hospital transport services, including car transport, was used by up to 43.3% of disabled people and those who also reported difficulties travelling by bus were the group most likely to use this form of transport. In combination with the data on taxi usage, this data suggests a greater reliance on door-to-door services. The importance of direct routes to destination is underlined by the finding that disabled people were up to three times more likely than non-disabled people to cite poor connections as an inhibiting factor in their bus and rail travel (this may also indicated lack of access at stations, and/or consequent problems associated with missing a connection).

#### **Examples from the *Caerphilly Community Transport Study 2003***

Overall very little use was made of community transport. In some cases rides did not turn up or were overbooked. In one instance a participant said: 'She came to see us and said

they could not accommodate his large wheelchair in any of their vehicles. We were disappointed thinking there'd be specialised for people in their wheelchairs and all.'

The inability to book community transport was due to a number of factors according to the participants including over-booking and subsidiary school runs. It did seem for some that if they had tried to book once and were unsuccessful; they would not attempt another request for transport.

*'I tried it at one time, the answer was negative so I didn't pursue it.'*

*'There's no access to them, when I ring there's usually an answering machine'*

*'When you're not a regular booking, Community Transport can be impossible to get. When I had my operation, and I couldn't drive for 2 or 3 weeks, I rang her up and she said "You know there's nothing can be done"*

*'I couldn't get access to it on Tuesday (to attend a course in Newport) not for the times I needed it. So I paid for taxis for 14 months.'*

Dial a Ride's policy of not stating specific charges but requesting donations deterred some from using it: *'You wouldn't know how much to give them.'*

There were feelings that community transport should be more reliable and readily available to reduce dependence on family and friends.

*'There's got to be something else that's available apart from relying on family and friends.'*

*'Why should I travel on a disabled bus?...you get off the bus and you're stigmatised wherever you go, and you're facing the apathy of the public. I mean, I can walk round with a white stick, and I might as well walk round with a Christmas cracker in my hand because half of them don't know what its for...'*

#### **Example comments from older disabled people (source TAA04)**

- *Major concern amongst older disabled people about the lack of services or lack of frequency (common amongst non-disabled people too).*
- *Special or increased transport for disabled people. Dial-a-bus service not easily available*
- *I would like to see transport competition in this area, and I would like to see a wider use of the small 'Dial-a-bus', which travels more or less with few passengers or sits empty at the side of the road.*
- *Several years ago ASDA put on a bus to take us shopping - we had 1 1/2 hours in store, then returned home more or less to the end of our road. Another company, DART I think, ran a bus from Houston to Braehead every hour. This was not*

*advertised, and so few used it. The company discontinued the service. This would be excellent, even just once a week...*

### Case study

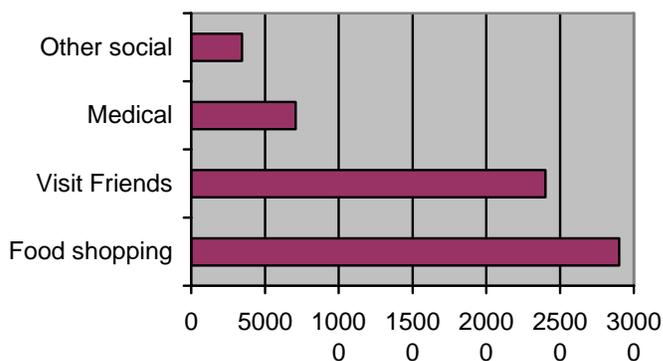
In London, reported problems with Dial-a-Ride included frequency of service and difficulty booking because lines were often engaged. Problems with taxi-card scheme included the call centre to arrange bookings being based in Scotland where there was a lack of knowledge about London's geography. This often led to taxis not turning up or arriving late. Drivers were said to be unaware/unable or unwilling to use ramps and some lacked disability awareness. Some taxis within the scheme also refused to take disabled passengers when taxis were flagged down in the street. In addition, the design of the newer vehicles made access difficult for some with mobility impairments. When complaints were made they did not appear to be followed up.

Source: *Transport for all? Dial a Ride and Taxi-card users speaking'*

### Purpose of trips

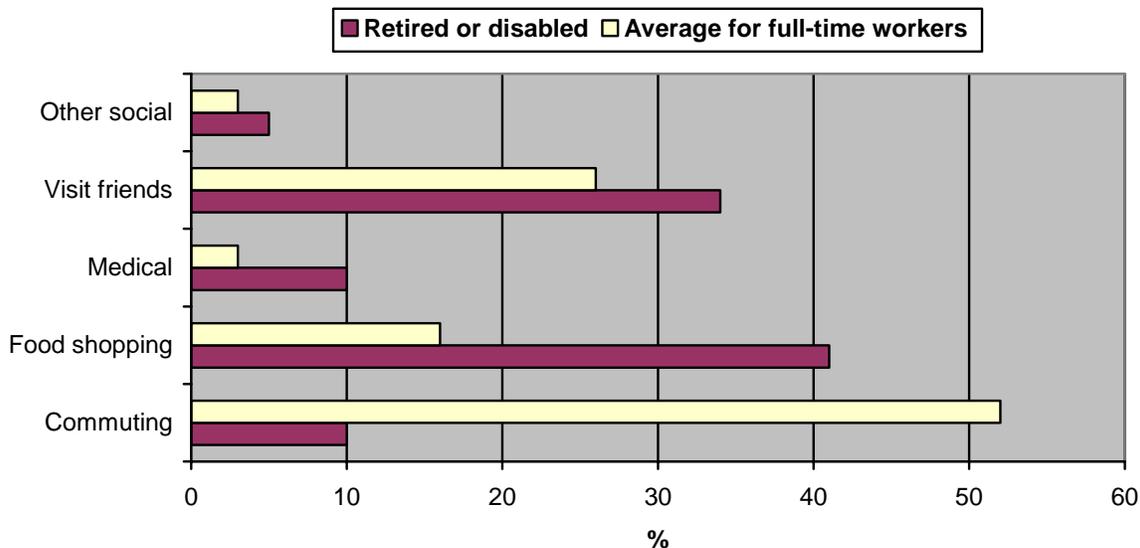
Although it is not possible to precisely separate 'disabled people' as a group in all of the data, the following Figure illustrates the significance of different kinds of journey for those who were classed as 'retired or disabled' in the household level data of the National Travel Survey.

Figure 3: number of trips made by 'retired or disabled' people (source NTS04)



Trips for food shopping and for visiting friends formed the largest proportion of total journeys for disabled and retired groups (while commuting to work was the most frequent trip purpose for those in full-time employment). Food shopping made up more than 41% of trips for disabled/retired people.

Figure 4: proportion of trips made for different purposes (source NTS04)



## Travel to work

As mentioned above, travel to work represents the majority journey type for non-disabled people but only 10% of disabled people’s journeys (reflecting lower rates of employment and the higher prevalence of impairment amongst people over retirement age). However, for those in work (or implicitly those seeking employment) travel to work remains an essential precursor to wider social inclusion. It is also an area where there has been much more data collection in previous surveys (underlying the significance of work in government policy making).

### Travel to work modes

When considering those in employment the National Travel Survey 2002-2004 indicates that the most common mode of travel to work for both disabled and non disabled people was ‘car as a driver’ (although non-disabled people are almost four times as likely to use this mode). Disabled people were more likely than non-disabled people to travel to work as a passenger in a car, particularly where they had identified specific difficulties using buses. When travelling to work as a passenger in a car is broken down by impairment (using data from the Labour Force Survey 2005) the most likely groups are (in order of most use) those with learning difficulties (32.5%), mental health users (20.9%), epilepsy (19.3%) followed by mobility/dexterity and visual impairments.

In all other modes of travel to work disabled people were more likely to use train, bus or walking to get to their place of work than non-disabled people (where more than one mode is used, the mode used for the longest distance is taken as the main mode, NTS04). This again underlines disabled people’s greater reliance on public transport.

### **Time taken to get to the workplace**

In general terms, the Labour Force Survey 2005 shows that 80% of disabled people take between 5 and 30 minutes to travel to work (also the most likely time taken for non-disabled people), 17.6% take 35-60 minutes and less than 1% for longer periods of travel up to 180 minutes. Women tend to have slightly quicker/shorter journeys than men, with men often working further away from home. There may be some indication that BME groups, both disabled and non-disabled, are more likely to have longer lasting journeys to work (perhaps reflecting the location of poorer black neighbourhoods further from places of employment?).

### **Gender differences are similar for disabled and non-disabled people**

There is very little difference in the overall gender profile of travel to work between disabled and non-disabled people. More disabled men than women drive to work (with 56.3% of disabled men using this method). More disabled women use buses or taxis to travel to work than disabled men (although this is strictly a measure of numbers rather than proportions it probably holds true). By contrast, although train travel is less likely as a mode to travel to work than car or bus for disabled people, more men use this method than women (this may relate to the longer distances travelled by men in getting to their work place and/or to higher earnings). In all cases gender divisions in mode of travel to work produce similar trends for disabled and non-disabled women and men (i.e. women are more likely to travel shorter distances to work than men, men are more likely to use the car 'as driver' and women 'as passenger', women are more likely to use bus, with men more likely to use the train).

Breakdown by age groupings show that disabled people under 45 years of age are more likely to use the bus while those over 45 years are more likely to use the 'car as driver' and the train as the main modes of travel to work. With those aged 46-55 being the biggest car users and those 36-45 being the biggest bus users. For non-disabled people those from 16-25 are the biggest bus users overall (perhaps suggesting that fewer young disabled people are in employment or travelling independently to work than non-disabled young people).

### **Using taxis to get to work**

The Labour Force Survey (2005) data shows that disabled people are twice as likely to use a taxi as their main method of travel to work compared to non-disabled people. Those using taxis to travel to work are most likely to be (in order of most use) mental health users, those with visual impairments, those with learning difficulties and those with mobility/dexterity impairments.

Of those using taxis that are also classified as having a learning difficulty, mental health or visual impairment, *96% are employed on government training schemes*. This appears to suggest that the headline use of taxis by disabled people may in fact be associated with packages of employment and training provision (and not necessarily with ease of travel or personal choice of taxi over public transport per se).

Ninety per cent of those using taxis to get to work are identified as 'white', followed by 4% 'Asian British' but, once disability and ethnicity sampling are intersected the numbers become too low to draw any significant conclusions.

### **Travel to work as passenger in a car**

Disabled women are more likely than disabled men, and slightly more likely than non-disabled women, to travel to work in a car 'as a passenger' (the proportions for disabled and non-disabled people are similar with fewer men using this mode than women overall).

The age group most likely to rely on lifts to work are women aged 16-25 (for both disabled and non-disabled women, although much more so for non-disabled women). Interestingly, disabled women aged 26-35 are less likely to get lifts to work in a car than their non-disabled peers, whilst older disabled women workers are slightly more likely. Since lifts to work are more likely to be provided by men 'as drivers' there may be a connection here in disabled women's mode of travel to work and their family or social relationships with men.

When travelling to work as a passenger in car is broken down by impairment the most likely groups are (in order of most use) those with learning difficulties (32.5%), mental health users (20.9%), epilepsy (19.3%) followed by people with mobility/dexterity and visual impairments.

By region, those most likely to travel to work as passenger are in North east (13.6%) followed by Wales (11, 1%) and Scotland (10.6%). Those most likely to travel to work by car as a driver appear to be in Wales (this is the case for both disabled and non-disabled people and may reflect the geography and social demographic of Wales as opposed to any clear disability issues).

There are no clear differences by ethnicity for those travelling as passengers in a car to work, however disabled people classified as 'white' make up 95.9% with 'Asian /Asian British' making the next largest group at only 2.3% (N=187) with other groups such as 'white mixed', 'Black British', 'Chinese' and 'other' accounting for less than 1% (although the numbers are very small, it is interesting that a higher proportion of non-white groups travel to work as drivers than as passengers).

### **Taking the bus to work**

The largest proportion of disabled people to use bus to work are those labelled as having learning difficulties (21.1%) but the classification of 'bus' includes private as well as public buses, therefore not always relating to public transport. It is worth remembering that Data from the Adults with Learning Difficulties survey suggested that the most common reported form of transport for that sample was 'special bus'.

Disabled people using a bus to travel to work are again predominantly 'white' (89.5%), with 'Black British' and 'Asian/Asian British' both at around 4%. Again the numbers are very small making it difficult to draw conclusions, yet it is notable that the proportion of non-white disabled people relying on a bus to travel to work appears greater than those who

use a car. But a higher proportion of disabled 'white' people are also using the bus to work compared to white non-disabled people. In essence, the data suggests that disability and ethnicity are interacting to create a greater reliance on buses for disabled BME people than for non-disabled people or for white disabled people.

### **Regional differences in using bus to work**

When asked main mode of travel to work (in the Omnibus Survey 2004) disabled people appeared most likely to travel to work by bus in London and least likely to travel by car compared to all other regions. Disabled people in London are most likely to use bus to work (16.3%) followed by Scotland (13.4%) and the North East (10.3%). Disabled people least likely to use bus to work in the East of England (3.2%), the South East (4.5%) and the East Midlands (5.0%). However, in these areas the differences between disabled and non-disabled people's mode of travel modes are slight.

### **Disabled people are twice as likely to turn down a job because of travel difficulties**

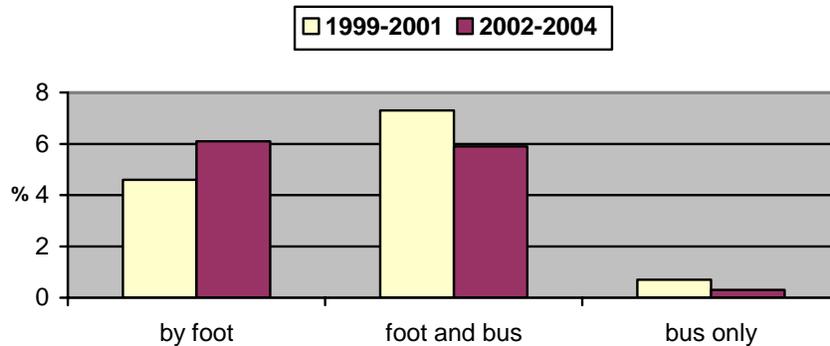
Although only a very small percentage claim to have turned down jobs because of travel difficulties this is twice as high for disabled people (4.1%) compared to non-disabled people (1.8%) in the NTS 2004 data.

### **Evidence of change over time**

It is difficult to find definitive evidence of improvement over time in the accessibility public transport for disabled people in Britain. However, there is some indicative data that may indicate improvement. For example, the most recent figures from the National Travel Survey (2002-2004) suggest that the proportion of people reporting difficulties in using buses has declined compared to the same study 1999-2001. The proportion of people reporting no difficulties in travelling either by bus or on foot remained constant (at just over 66%, with a further 21% not answering or not applicable). People who reporting some difficulty in travelling also remained constant at around 12.5%, and we can think of this group as representing travel-disabled people. These are divided into three groups - people who reported that they had difficulty travelling by either 'foot and bus', by 'foot' (but not by bus), or by 'bus' (but not by foot).

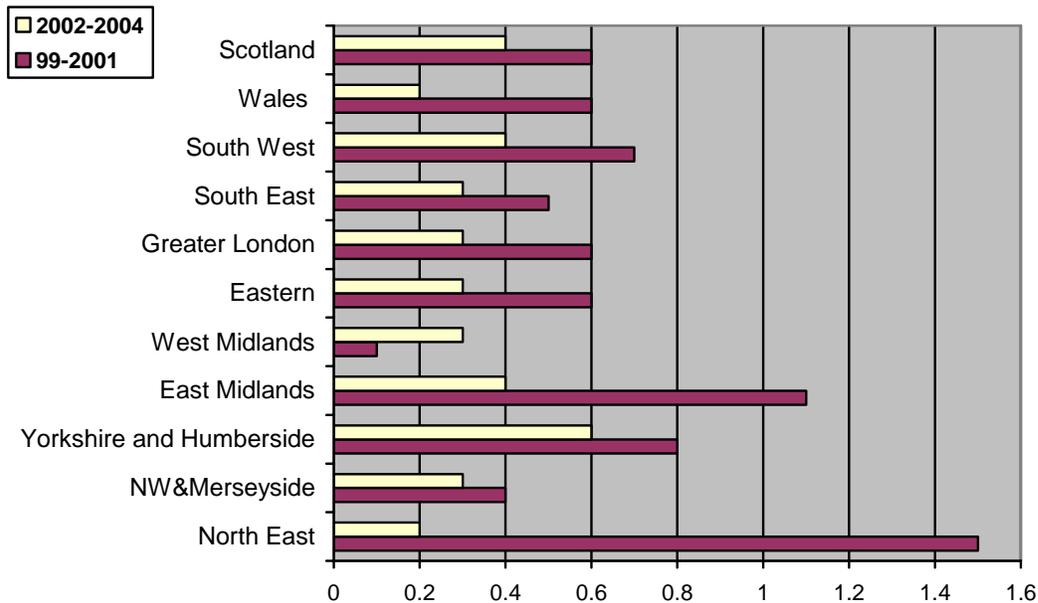
In the time between the surveys (1999-2004) the number of people reporting difficulty remained the same (suggesting that it is a fairly reliable measure of difficulty or impairment). However, the proportion of these who said they had difficulty involving buses declined (from 8% to 6.2% if we combine difficulties with 'bus' and 'foot and bus' together). The implication is that although a similar sized group expressed difficulty in travelling, fewer of them reported difficulty in travelling by bus (suggesting that there may have been some improvement). The following figure illustrates this.

Figure 5: reported difficulties in travelling by foot and bus (source NTS)



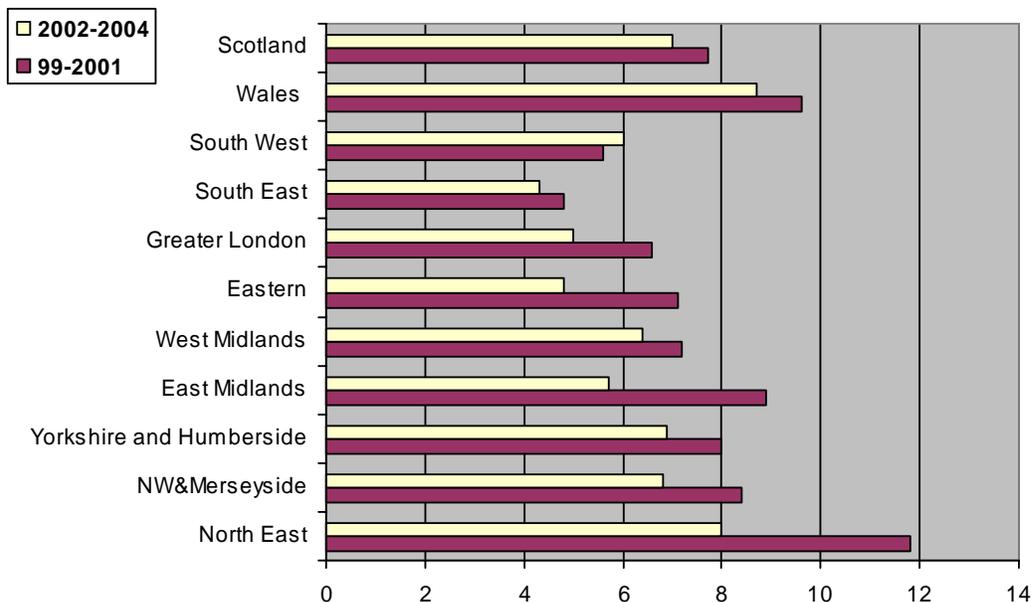
It is possible that such changes could be related to improvements in the design of new buses and bus waiting areas, and/or to increased accommodation from staff or members of the public but more specific research would be required to test this in any detail. As shown in the following figures, the data suggests some marked regional differences (these should be treated with some caution but the trends appear to be fairly consistent). We can see that the proportion of people reporting difficulties in travelling by 'bus' (but not by foot) has fallen. The most dramatic shifts appear to be in the North East of England and the East Midlands but the actual numbers involved are so small as to be unreliable on their own.

Figure 6: Reported difficulties in travelling by bus (not by foot) by region (source NTS)



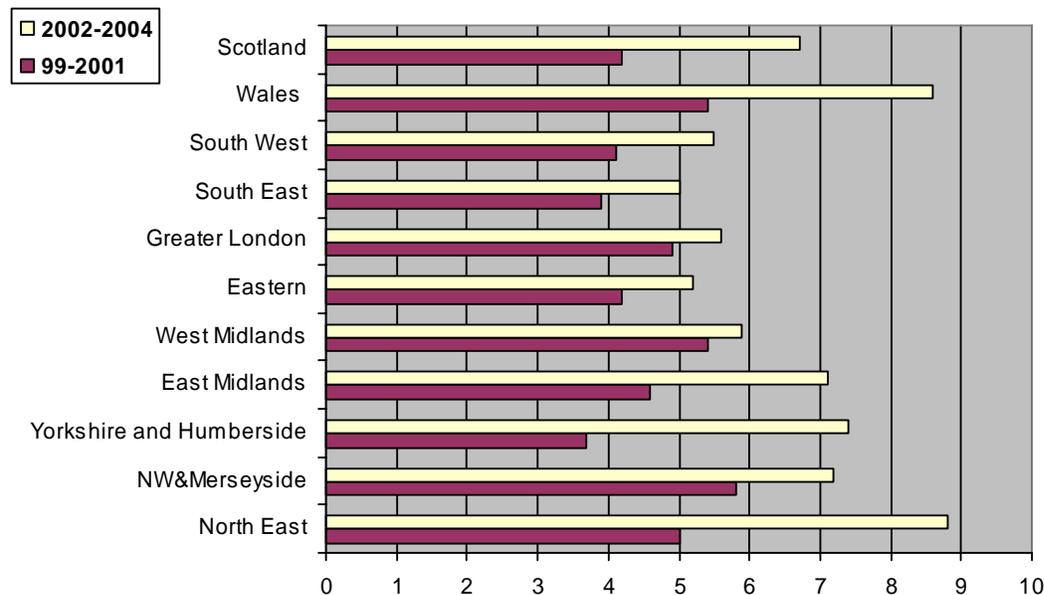
However, more reliable data is available by looking at the decrease in those reporting difficulty in travelling by 'foot and bus' against the decrease in those who say they only have difficulty travelling by 'foot' but not by 'bus'.

Figure 7: Reported difficulties in travelling by 'foot and bus' by region (source NTS)



The data suggests that the decrease in reported difficulty with buses in the North East of England and in the East Midlands is reflected here too (despite increased sample size in the later survey). All regions show both a decrease in the proportion reporting difficulty with buses and an increase in the proportion with 'foot' difficulties not reporting 'bus' difficulties.

Figure 8: Reported difficulties in travelling by 'foot' (not bus) by region (source NTS)



A similar picture appears from more specific items in the NTS data, for example difficulty reported in waiting at bus stops, getting on and off buses, and getting to and from a seat.

Figure 9: Reported difficulties in waiting at bus stops by region (source NTS)

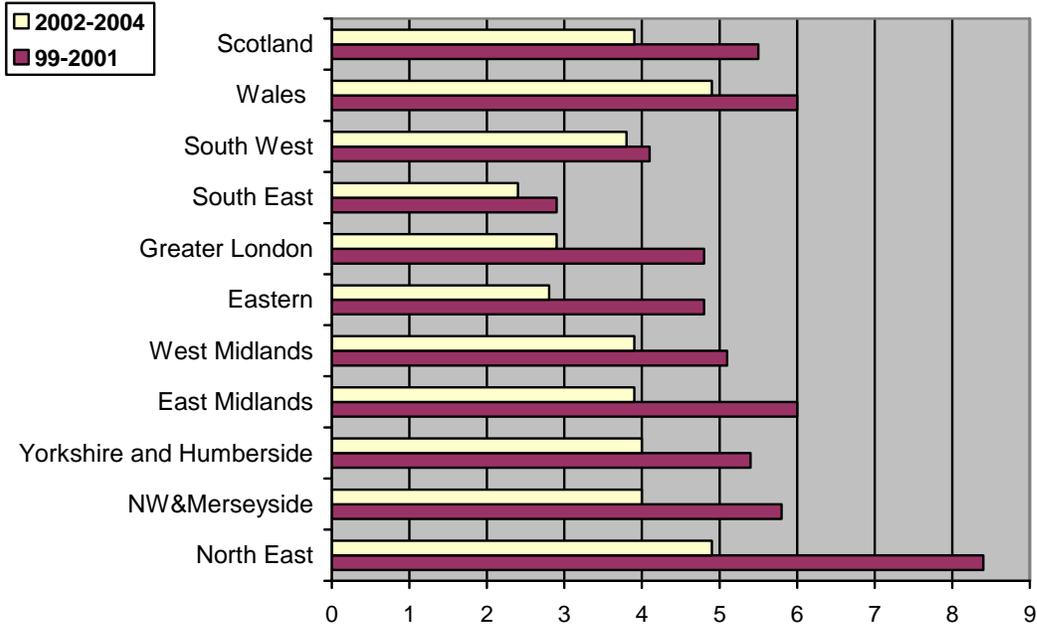


Figure 10: Reported difficulties in getting on and off buses by region (source NTS)

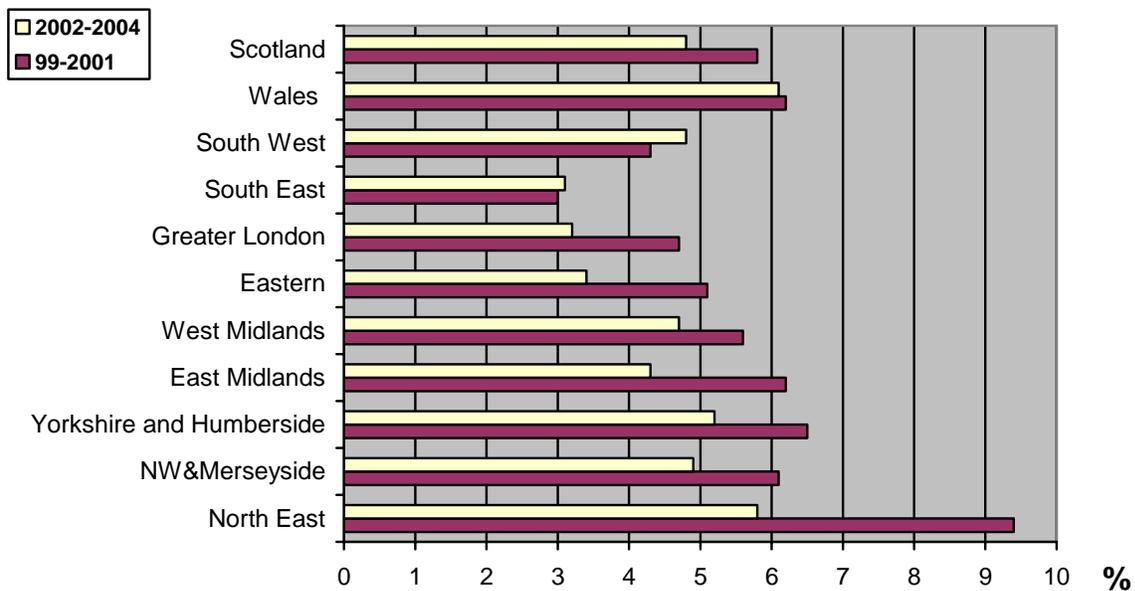
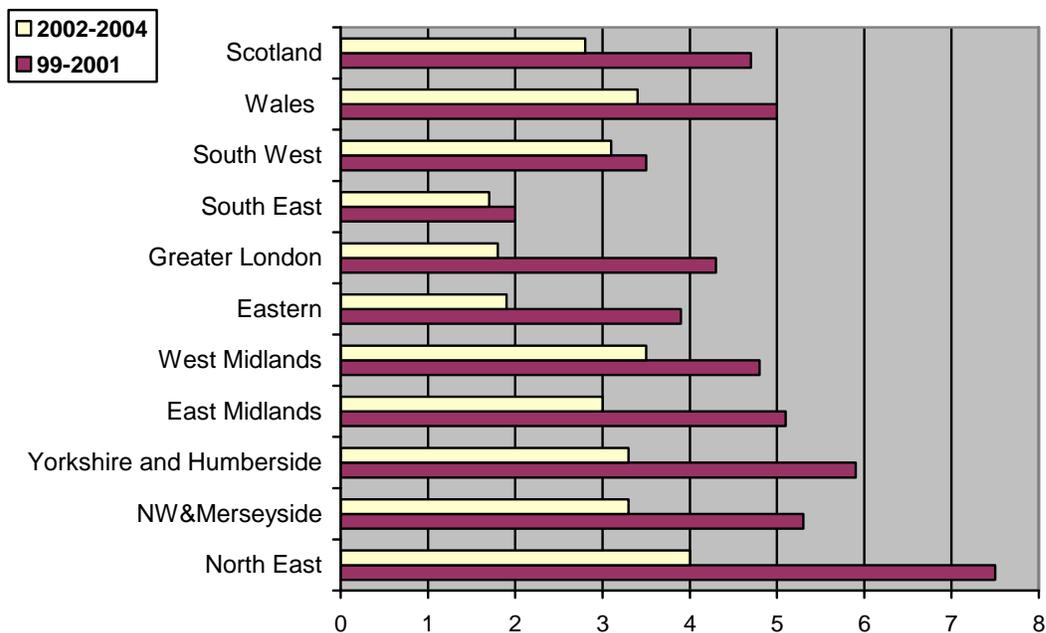


Figure 11: difficulties in getting to and from seat by region (source NTS)



it is difficult to precise about the changes over time but there does appear to be some evidence that fewer people who have difficulty travelling on foot report difficulties in using buses than they used to, and that this effect is more evident in some regions. It is worth noting that the apparently dramatic decreases in the North East of England are from a baseline of many more reported difficulties than other regions in 1999-2001 and may therefore reflect a return to the normal range (i.e. the North East still has the highest proportion reporting bus difficulties, but it has fallen closer into line with other regions). Fewest difficulties are reported in the South East and there have been fewer improvements here. In general terms, where the situation was worst there have been the most improvements (but some caution should be attached to this finding, allowing for sampling effects in the two waves of the study). The exception is Wales, where there have been higher levels of reported difficulty in getting on and off buses and where very little has changed in the responses. Reports of this difficulty have actually increased in the South West.

**Case study area: Tyne and Wear**

- Tyne and Wear region encompasses urban areas of Newcastle, Gateshead, North and South Tyneside and Sunderland, plus a hinterland stretching into County Durham and Northumberland.
- Tyne and Wear area has 600 low floor buses in 2005/06. Twenty-eight percent of all journeys were journeys to work 14% of the population had no car available and 21% used public transport. The greatest use of public transport overall was the bus for work with

1.7% taking the train to work. However, here as elsewhere the car is the preferred mode of travel, only 9% of the population who have a choice between car and public transport favour public transport. People with a choice are more than twice as likely to use public transport for work journeys than for other purposes. Thus travel to work by public transport makes up 16% of journeys ( for those with a choice) , while for other types of journeys the percentage is just 7%

- The Tyne and Wear Local Transport Plan (LTP) places strong emphasis on public transport accessibility for disabled people and in terms of access to locations. The area already has a very high proportion of fully accessible low-floor buses, delivered through Quality Partnerships with the operators, as part of the extensive network of accessible bus routes.

- A key objective of the LTP is to ensure that jobs, shopping, leisure facilities and services are accessible by all forms of public transport. Tyne and Wear have developed computer systems to allow analysis of their public transport timetables and property databases. This has provided a means to measure accessibility to key locations in Tyne and Wear. Indicators have been developed to help monitor the implications of changes to public transport routes and land use planning proposals.

**Source [www.Newcastle.gov.uk](http://www.Newcastle.gov.uk)**

### **Bus Improvements: Costs and Additional Revenue**

- Costs to improve buses are estimated at 74 million a year.
- The estimated additional revenue generated by fully accessible buses will be between 100 and 126 million pounds per year.
- The scale of additional continuing annual costs for regulated coaches will be much smaller, approximately 4 million per year, with a more limited increase in revenue between 1 and 1.5 million.
- Several thousand fully accessible buses are in operation on local bus services. Passenger increases of 12% have been recorded on these services.
- The additional revenue has come not only from disabled people but other mobility limited and socially excluded groups.

*Source: Proposed PSV Accessibility Regulations: Regulatory Impact Assessment DfT*

## 5. Satisfaction and awareness

The Transport and Ageing Survey (2001) suggests that disabled people are more likely to report problems in being able to travel when they want to (62%) when compared to non-disabled people (47%), and three times more likely to perceive public transport as unreliable compared to non-disabled people. When asked about satisfaction with local transport services over one third (35.04%) of those who considered themselves disabled, in the British Household Panel Survey 2004, saw the question as inapplicable to them or did not know about their local transport services. This was almost a third higher than the corresponding figure for non-disabled people.

This data shows around 28% of disabled people rating local transport services as either 'Excellent' or 'Very good' and around a third rating them as 'Poor' or only 'Fair'. The figures were roughly equal for disabled women and men. There were insufficiently small numbers to analyse this data by regions or other factors (e.g. in Inner London there were just 14 disabled respondents).

*Table 3: Satisfaction with local transport services by impairment (source BHS04)*

	Inapplicable	Proxy	Don't Know	Excellent	Very Good	Fair	Poor	Totals
Problems arms/legs	253 20.1%	27 2.1%	209 16.6%	38 3.0%	322 25.6%	235 18.7%	173 13.8%	1257 100%
Sight	54 17%	1 0.3%	58 18.3%	9 2.8%	82 25.9%	63 19.9%	50 15.8%	317 100%
Hearing	72 19.8%	1 0.3%	68 18.7%	14 3.9%	93 25.6%	61 16.8%	54 14.9%	363 100%
Depression /Anxiety	102 27.1%	5 1.3%	48 12.8%	10 2.7%	91 24.2%	69 18.4%	51 13.6%	376 100%

*Table 4: Satisfaction with local transport services by gender (source BHS04)*

	Inapplicable	Proxy	Don't Know	Excellent	Very Good	Fair	Poor	Totals
Disabled men	159 20.2%	16 2%	109 13.9%	23 2.9%	216 27.4%	154 19.6%	110 14%	787 100%
Disabled women	194 19.8%	21 2.1%	163 16.6%	30 3%	257 26.2%	197 20.1%	118 12%	981 100%

*Source: Adapted from the British Household Survey 2004*

We know from background data that buses tend to have a poorer image among non-users and infrequent users than amongst those who can be persuaded to use them more regularly. As highlighted earlier, both disabled and non-disabled people are most likely to use a car as their main mode of transport (either as driver or as passenger). Yet both bus and train travel have increased in recent years. Since disabled people are clearly more reliant on public transport and on buses in particular, bridging the confidence gap in using

them is essential to narrowing the 'travel gap'. For this reason, data on disabled people's perceptions and experiences of using public transport is important.

### **Perceptions of public transport**

In the Transport and Aging survey there was widespread dissatisfaction with local public transport but this was more marked amongst disabled people. Fifty-five per cent of non-disabled people were either unsatisfied or had mixed views about their local public transport compared to 74% of disabled people (of these, the data suggests that many had multiple impairments). Dissatisfaction with local transport services also increased with self-reported severity of impairment. However, there was very little difference between disabled and non-disabled people when asked more specifically about bus services (69.2% of disabled people were unsatisfied or had mixed views on the service compared to 65% of non-disabled people). Levels of satisfaction with rail services between disabled and non-disabled people were the same (with only 30% being dissatisfied or having mixed feelings). Such high levels of dissatisfaction are cause for concern but small differences between disabled and non-disabled people could be seen as a positive.

However, when we look in more detail at the data there are differences and concerns. Data from the National Travel Survey (2002-2004) indicates that disabled people who experienced problems were three times more likely to perceive public transport as unreliable than non-disabled people. In the Omnibus Survey(2001), although disabled people were more than twice as likely to complain if they had problems with access or services than non-disabled people, 65% said they were most likely to do nothing (a higher percentage than non-disabled people). The reason for not complaining most cited by disabled people was 'these things are to be expected'. Where disabled people did make complaints 81% were dissatisfied with the response.

Almost three quarters of disabled people surveyed in the Transport and Aging survey (2001) or 72.9% felt that their needs were not considered by bus companies with nearly a third (29.7%) believing that their needs were not considered at all, compared to 15.5% of non-disabled people. Half of disabled people (50%) believed that their needs were not considered by train operators compared to 30% of non-disabled people.

In the Adults with Learning Difficulties Survey just over 10% of respondents described staff on public transport as not helpful. Seventy-one percent of people with learning difficulties had not had training in using public transport, although of these only one in seven said they would like training.

Perceptions were also significant in terms of personal safety, with double the proportion of disabled people identifying concerns about personal safety as a barrier to using public transport (10%) than non-disabled people (5%). This rose dramatically for travel during the evening or at night, with three quarters of disabled people (76%) identifying concerns about personal safety as a barrier, compared to 58% of non-disabled people (TAA01).

## Access to travel information

Access to information before and during journey was an area of some concern in the data and one highlighted in other specific studies (e.g. *Disabled People's Transport Needs*, Elaine Bowyer, September 2005). Knowledge of local transport routes and frequency appeared low amongst disabled people and there were additional problems in understanding the 'travel chain' (i.e. the different routes and modes, connections and timing of journey stages to a specific destination). There were also fears and perceived barriers. Lack of knowledge would appear to have a negative effect on public transport use for many disabled people. Although there was little difference in perceived problems associated with the time spent planning journeys, the Transport and Ageing Survey (2001) suggests that disabled people were more likely to perceive problems in getting information about journeys than non-disabled people (48% compared to 33%).

### Information access issues

Access issues included the size of text on timetables at bus stops and the information format and placing of train information at railway stations, for example the old style television screen is more problematic than the newer style orange text format for information monitors. The placing of the screens in a reasonable space neither too low or too high is an additional issue affecting those with visual impairments and wheelchair users. Information for those with learning difficulties should also be clear and in pictorial format where possible. In addition, almost half perceived specific problems with inaudible announcements (46.9%)(TAA01). The National Travel survey (2002-2004) suggests that disabled people are twice as likely as non-disabled people to have a route planned for them.

### Sensory impairments and disabling impacts

There is some evidence that people with visual impairments are more concerned about travelling at night when visual information is more difficult to see. As there can be fewer people around to assist at night they may also perceive a greater risk to their personal safety, although this is also true for many people, regardless of impairment. Public transport appears to pose the fewest barriers for people with hearing impairments and they make more social trips using public transport, the main requirement being reliable visual information (*Disabled People's Transport Needs: Summary of existing Research 2005*).

### Low levels of satisfaction with travel information

Data from the Transport and Ageing Survey suggests that disabled people were more likely to perceive problems in obtaining information about journeys than non-disabled people (48% compared to 33%). In the NTS (2002-2004), disabled people were up to three times less likely to be aware of travel information services and more than twice as likely to be unsatisfied with travel information given on bus and train journeys than non-disabled people. According to the Omnibus Survey (2004), disabled people were almost twice as likely to say that they were unsatisfied or totally unsatisfied with travel information

given during train and bus journeys. The satisfaction with travel information prior to journeys was similar for disabled and non-disabled people.

Breakdowns by region involve very small sample numbers and results that should be treated with caution. However, those experiencing most dissatisfaction with information on bus journeys appeared to be the West Midlands, Yorkshire and the Humber and in Wales. London had the lowest rating for dissatisfaction of all regions. Numbers for dissatisfaction with train information during the journey were too low to offer any robust outputs but in this case the South East rated the lowest levels of dissatisfaction (OB04).

### **Disabled people less likely to know about information providers**

According to the information travel module in the Omnibus survey 2004 disabled people were considerably less likely to be aware of the existence of telephone or web-based travel information services than non-disabled people. Where there was awareness, both disabled and non-disabled people were more likely to use telephone information lines than web-sites. However, when web-sites were used, disabled people tended to use them less than non-disabled people.

Disabled people were up to three times less likely to be aware of the existence of travel services by telephone or web compared to non-disabled people. However, they were most aware of the RAC and AA telephone and web services with a slightly higher percentage being aware of these telephone services than non-disabled people. Where there was an awareness of telephone information centres slightly more disabled women than disabled men were likely to be aware of them.

### **Travel information web-sites**

When web-sites were used, disabled people used them less on average than non-disabled people. Where there was knowledge of travel information web-sites disabled men were more likely to be aware of these than disabled women. Younger disabled people and those under 45 were more likely to be aware of travel web-sites. Breakdowns by ethnic group were not possible and impairment breakdowns were not included in the Omnibus survey 2004.

### **Technology use as an aid to travel**

According to the National Travel Survey 2002-2004 disabled people were half as likely to have access to the internet and far less likely to use devices such as satellite navigation systems, web-sites or other computer based media compared to non-disabled people.

### **Staff attitudes and behaviour**

Some studies have drawn attention to the willingness or availability of transport staff to assist disabled people (e.g. *Disabled People's transport Needs*, Elaine Bowyer, September 2005) but here were no specific questions on staff behaviour in the major surveys, with the exception of the Adults with Learning Disabilities Survey 2004. Within this study 10.6% of the sample reported transport staff to be unhelpful or not at all helpful

(although they were much more likely to perceive staff as very helpful). Men were slightly more likely to cite unhelpfulness than women. There were no clear differences by ethnicity due to the small sample size. Breakdowns by age indicated that the younger groups (16-24) were most likely to state that staff had been unhelpful followed by those in the 35-54 age group,

Despite the lack of quantitative data there are some examples of qualitative statements on staff behaviour in research (e.g. the Transport and Aging studies). These included bus drivers moving off too fast before allowing people to get to their seat, the non arrival of pre-booked train assistance, and so on. However, special mentions were given to Manchester station staff, staff at Kings Cross, Stevenage and Loughborough as well as the operating company Virgin trains on good practice (Transport and Aging 2001 and Easing the Trip 2001/02). Although the numbers were not large (N=119), responses reported in *Easing the Trip* appeared to suggest more reported problems with service provision at stations than on trains.

Examples responses from older disabled people (source: TAA01)

- *Drivers should allow time for disabled people to sit down before starting the engine or taking off.*
- *Bus drivers ensure passengers are seated before starting the vehicle. I have two relatives who have fallen flat on their backs. Actually my elderly sister's head was on the bus steps*
- *That drivers of buses take more care of the elderly when alighting and leaving buses. They tend to start too fast, before we get to the seat.*
- *But the drivers don't give you time to get on and off. Some drivers don't give enough time to the elderly. Some people have sticks, or shopping. What would help would be: ...let you get seated, or press the bell to get off...*
- *They're quite good to people like me who are partially sighted. You get assistance on the train, and to and from the waiting room if you have to wait*
- *I think they think about us, but there is not much done. When you see the services. More could be done. But the staff are helpful. They'll get out ramps, help with wheelchairs*
- *They might think they do [help] but underneath it all they don't. In my experience, they don't provide assistance for the disabled even when you have phoned up and booked it.*
- *more attention by rail guards to make sure the disabled person is safely on the train.*
- *I can go from Paisley to Glasgow [on the train], but I need sighted assistance to go from Glasgow to London*
- *Just the announcements. I wear a hearing aid, and I'm always a bit worried about getting the wrong platform.*

### **Case study**

One lady who was registered blind made trips by taxi virtually every day. Her sight had been failing over a number of years, during which time she had continued to travel by bus. An injury sustained on a bus, when the driver had pulled away before she was seated had removed her confidence to continue travelling alone in that way.

Source: *Caerphilly Community Transport Study 2003*

Many complaints about bus and rail travel are related to structural and design issues or to lack of infrastructure or cohesion in public transport systems overall (rather than necessarily to specific instances of discrimination or poor service).

### **Meeting the needs of rail users**

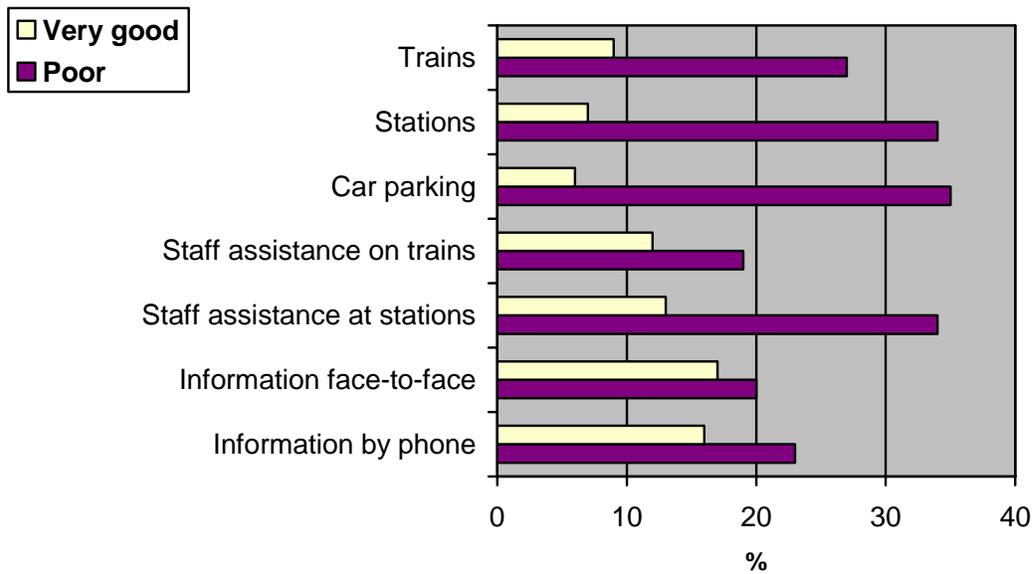
For example, a sample of disabled passengers were asked about a number of quality and assistance issues in the specific study *Easing the Trip: Meeting the Needs of Disabled Rail Users 2001/02*. In this study, staff assistance at stations was judged more negatively, with more than a third (35%) rating this as 'poor'. Staff assistance at stations was also rated as more problematic than staff assistance on trains (19% rated this as 'poor'). Less than half the respondents rated information given by phone or in person as 'good' or 'very good' (with information by phone rated much lower). However, physical barriers remained more of a problem, with car parking, station and train quality receiving the most negative ratings.

The sample included people with mobility impairments, wheelchair users, people with visual or hearing impairments and those with reduced manual dexterity. All were aged over 35 and were railcard users, with almost half (45%) travelling by train once a month or less, 24% between once a month and once a week, 14% once a week and 8% travelling more than twice a week. There was no breakdown by ethnicity.

Table 5: percentage satisfaction with quality and assistance on trains (source: 'Easing the Trip' 2001-2005)

	Information by phone	Information face-to-face	Staff assistance at stations	Staff assistance on trains	Car parking	Stations	Trains
Poor	23	20	34	19	35	34	27
Adequate	33	31	22	35	37	45	42
Good	28	33	31	34	22	14	22
Very good	16	17	13	12	6	7	9
Poor or adequate	56	50	56	54	72	79	69
Good or very good	44	50	44	46	28	21	31

Figure 12: satisfaction with quality and assistance on trains (source: Easing the Trip)



## 6. Examples of specific barriers

### Perceived physical access barriers are commonplace

In research involving people with impairments that affect walking, there are numerous examples of perceived barriers in the built environment or with the design of transport stock. For example, getting to stations or stops, moving about within stations, getting on and off buses and trains (e.g. *Disabled People's Transport Needs and Aspirations Study*, NOP, April 2004, *Disabled People's Transport Needs*, Elaine Bowyer, September 2005). For example, the Transport and Ageing Survey (2001) suggests that disabled people were almost twice as likely to perceive lack of grab rails as a problem compared to non-disabled people (50% compared to 27%). The inconsistency of design standards within and between modes of public transport increases uncertainty and causes people to avoid journeys with multiple interchanges – for example inconsistencies in design of vehicles and stations, wheelchair access, availability of ramps, or information formats (*Understanding TfL Customer Perceptions*, TRBI, December 2003).

#### Examples of comments from older disabled people (source TAA04)

- *Would like an easy walk on walk-off bus with no steps going down my road instead of the bus with steps up which is more difficult to board.*
- *More space in buses. At present, seats are quite cramped and the aisle very narrow*
- *a place to put down wheel-chairs... Steps which can be lowered to make access to the bus easier.*
- *More buses with low-floor access, more places for fold-up wheelchairs to go. These things would make a big difference*
- *the new low-access buses have no grab-rails to hold on to*
- *In Vienna we found lifts in train stations and platforms level with trains allowed us access for first time to public transport.*
- *It's been tremendously improved since ARRIVA. I'd stopped going on buses because of the high steps. Now with the low-floor buses, you can just walk on and it's wonderful.*
- *I find it hard to get on some of the buses with sometimes 2 or 3 steps. I'm lucky if there's a handle to pull me. My legs deteriorate when on a bus or sitting. It takes a wee while to get up. I wouldn't go in any of the wee ones if I can help it. The new ones are great, like walking on the pavement.*
- *Easy access to trains e.g. lifts*
- *I can just use a train, using a wheelchair, which my husband might push. I could possibly use a train if access was just a bit easier. If the train could be lowered a bit. At present, my husband has to lift in the wheelchair, and I would have to stand - I would hold onto the grab rail outside and then inside while he lifts the chair in. If I could stay in the chair and ride on, I would use the train much more*

- *Getting out, getting up from the seat, there are no grab rails and the handles on the seat tops are infrequent. There are no straphangers. We need more time to get up and get to the door.*

### **Physical barriers need to be seen in the broader context of whole journeys**

However it is important to look beyond the purely physical barriers and to see these in the broader context of describe in this report. The following examples illustrate the range of issues raised by disabled people in previous research.

### **Summary of comments from the London *Transport for all? Dial a Ride and Taxi-card users speaking* study 2003**

#### **Trains**

It was agreed that train including (and especially underground) was the least accessible of all transport modes. The degree of inaccessibility depends on the user and their impairment for example a guide dog users needs stairs as opposed to escalators and escalators and stairs or difficult for a mobility impaired person. Problems were identified with the physical environment and the trains themselves.

#### **Physical environment:**

- Poor accessibility and inconsistency from station to station in the provision of lifts, stairs, escalators.
- Inadequate and difficult to read signage.
- Lack of ticket offices that are accessible to wheelchair users
- Inconsistency (and lack of) platform announcements
- Inconsistency in providing tactile safety features on platforms for example (e.g. tactile edges found on some platforms but not all).

#### **Trains**

- The gap between trains and platforms can be difficult or impossible for some to negotiate
- Those with visual impairments can experience difficulty in finding and operating the doors.
- The positioning and colour contrast of interior grab rails is inconsistent
- There is often no specifically allocated seating for wheelchair users
- When seating is allocated for disabled people is not always vacated.
- Several people had used the national phone-ahead system where a member of staff meets the disabled person at the station, but this service was not always available because of lack of staff. In addition, staff shortages at some stations made it difficult to get reliable assistance on a regular basis and reliance had to be placed on members of the public.

#### **Buses**

- Despite recent improvements in bus design inconsistencies remain in vehicle design, plus facilities such as retractable ramps and 'kneeling suspension' are not used automatically.
- There are particular problems in getting on and off e.g. in using different doors at either end of a vehicle.
- Wheelchair users continue to have difficulties in entering and exiting buses and even 'accessible' buses will only take one wheelchair user at a time.
- Information on the front of buses is not always easy to read.
- Buses regularly fail to stop at or near the kerb
- Drivers only have a limited awareness of disability issues and are not always particularly helpful.
- Buses often move away from stops before people are seated
- Visually impaired passengers have problems in finding seats because of inconsistencies in their layout and often have to ask other passengers to identify stops.
- Priority seating is often taken up by other passengers and the disabled/elderly priority seating policy is not always enforced by the driver.

### **Case study: *Caerphilly Community Transport Study 2003***

Nine participants took part in a focus group. All but two relied on their own cars, one rarely went out and the other used taxis. Scheduled public transport was not considered by any in the focus group. Buses were believed to be unreliable and did not cater for wheelchairs. In addition, carers might only be available for two hours at a time providing additional time constraints for any travel with aid needs.

As one participant said: *'Even though you've got those kneeling buses and things, its of no benefit if there's nobody there to help you.'* For another: *'If I had to depend on public transport to get me from A to B, and then to return back home again, there'd be no time left for me to do whatever I went there for anyway'*. The groups views suggested the travel options in this part of South Wales were less than satisfactory.

The travel chain, that is the stages and different modes in one journey were also a problem as were the starting points of journeys for some:

*'People with disabilities are just totally knackered, you know, I mean Bargoed is all hills for a start, so you'd have to get a taxi to the train station, or if you can't walk very far a taxi to the bus station, you know and then you can't get on the bus because of the steps.'*

### **Poor connections inhibiting travel for disabled people**

Previous research studies identify a range of specific barriers to public transport usage amongst disabled people many of which extend beyond the immediate transport environment. For example, people with visual impairments may avoid journeys involving multiple road crossings (*Bus Usage and the Barriers for People with Learning Disabilities*, Andrew Irving Associates, 2002). Disabled people are up to 3 times more likely to cite poor connections as an inhibiting factor in both bus and rail travel signifying potentially greater

problems with public transport that does not offer a direct route to their destination, fears of access at unknown stations and the intensified problems associated with missing a connection are felt more keenly by disabled than other types of passengers inducing a higher lack of travel confidence (NTS04).

*Quote: Sometimes at the destination station you still have a public transport problem, there's no integrated transport. You still have to think about how to get to the destination. There have been a lot of problems. (source TAA01)*

As these brief examples show, physical, attitudinal and wider infrastructure or system barriers all interact in complex ways within whole journeys and the 'travel chain'. It is therefore difficult to predict the impact gain of building greater confidence in any one particular area in isolation.

## 7. Accessibility at rail stations in England, Scotland and Wales

The national survey data suggests a comparative lack of train travel by disabled adults in England, Scotland and Wales. Key issues such as the fragmented travel chain and the unknowns around multi-modal journeys contribute to a lack of travel confidence. This is compounded by the fear of either missing connections or lack of confidence that the connecting station will be accessible. In addition, safety issues are more pronounced for disabled people than non-disabled people. While a great deal is being done to improve accessibility on the railways, there remain many gaps in gaining full accessibility to stations and trains. The summary developed here looks specifically at train stations and the options for accessibility provided by those that are wholly step-free and offering staff assistance.

The data presented here was taken from the national rail enquiries website lists on accessibility options for disabled passengers. The criteria for accessibility have been filtered to include stations where staff assistance is available and where stations are fully step-free (many stations may be step-free or partially step-free but do not have staff assistance available).

If a station's managing company has not provided information on staff availability, but is wholly step-free it would not be counted to ensure that only stations that provide guaranteed staff assistance are included in the breakdown. Management companies with fewer than three stations that are wholly step-free and provide staff assistance are also excluded (the companies excluded on these criteria include GNER, Heathrow Express, C2C, Silverlink and Eurostar).

Stations meeting the filtering criteria were also measured for additional access options. These included:

- Hearing loop
- Accessible departure boards
- Tactile edging on platforms
- All doors wide enough for wheelchairs
- Accessible toilets
- Accessible taxis
- Mobility impaired set down and pick up points
- Ramps for train access from platforms
- Provision of disabled parking

These were taken to be the amenities most likely to affect travellers with different or multiple impairments. These criteria were also chosen as those which would maximise the potential of independent travelling for the majority of disabled people. Appendix F provides a list of stations meeting the step-free with staff assistance criteria, and includes those

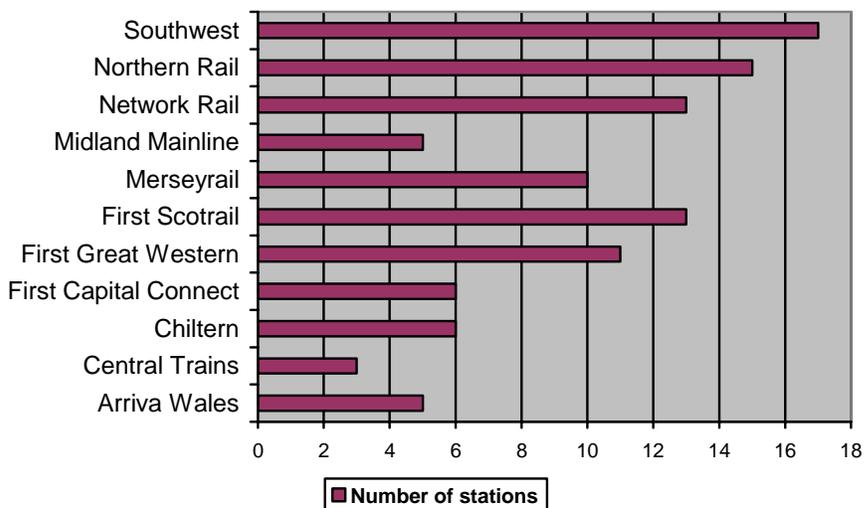
management companies with fewer than three stations meeting the initial criteria. Many stations met one or more of the criteria outlined above, but only one rated positively on all criteria. This was Birmingham International managed by Virgin trains. Those stations that did not provide information on staff availability were excluded from the data (these included London Euston, London St Pancras and Edinburgh Waverley). While many stations may be undergoing improvements the database and the findings here represent only those areas on which information was provided on the national rail website at 1 August 2006.

**Background**

There are an estimated 1,896 train stations in England, Scotland and Wales. Of these 334 are listed as accessible by the national network rail web-site. These are either partially step free or wholly step free. However, not all wholly step free stations have staff available to assist individuals. When stations are filtered by wholly step –free and staff assistance, the numbers of accessible stations are fewer. In total there are 124 stations that are fully step free and that have staff to assist. This represents very few stations within the overall network, amounting to just under 7% of all train stations. In all just 51 of these stations provided information in different formats for disabled passengers, top companies were Virgin and Northern Rail.

The number of stations listed by the different train companies as meeting the wholly step-free with staff assistance criteria are shown in the following Table. Of these, Southwest trains show the largest number meeting the initial criteria (17 stations) followed Northern Rail and Virgin (with 15 stations each).

*Figure 13: number of stations reporting step-free access and staff to assist*



Source: adapted from [www.nationalrail.co.uk](http://www.nationalrail.co.uk)

However, as there was no data to indicate the size of stations the impact of inaccessibility on numbers of passengers is unclear (e.g. the impact of accessibility at larger main stations would be greater than for smaller stations but all rank equally in terms of the numbers reported). In addition, although all of these stations reported staff 'available' to assist, this can be affected by staff shortages at particular stations or particular times.

### Accessibility against specific criteria

The following table shows the proportion of stations meeting the additional accessibility options for disabled people identified earlier.

Table 6: *proportion of stations meeting specific criteria*

Accessibility options	Total %
Accessible ticket counter	25%
Accessible ticket machines	28%
All doors wide enough for wheelchairs	41%
Ramp for trains	93%
Mobility impaired set down and pick up	58%
Accessible toilets	53%
Accessible taxis	52%
Hearing loop	79%
Accessible departure boards	80%
Full tactile edging on platforms	33%
Partial tactile edging on platforms	7%
Without any recorded disabled parking	24%

Source: adapted from [www.nationalrail.co.uk](http://www.nationalrail.co.uk)

### Ramps to board trains

The most common accessibility option was for the provision of a ramp to board the train. First Scotrail and Northern trains carry ramps on all their trains. For other operating companies ramps may be available but often need to be booked in advance. This was more often the case for Central trains and for First Capital Connect. The information for some stations suggested that there were no ramps available and it was not clear how a wheelchair user might board a train unless they were manually lifted onto it. Companies with such stations included GNER, Heathrow Express, Chiltern and most of Southwest trains. However 93% of stations meeting the initial step-free and assistance criteria provided ramps either at stations or onboard trains.

### Accessible departure boards

Accessible departure boards were reported in 80% of stations meeting the initial criteria, with some companies providing 100% accessibility in the stations that they managed. 'Accessible' departure boards are defined as those with orange matrix dot lettering and numbering on a black background as opposed to television screen type displays which show platforms, times and train destinations. Those providing accessible departure boards throughout all the stations included Southern, Southwest, Network rail, Midland Mainline,

First Great Western, First Capital Connect and Chiltern with Virgin providing accessible departure boards in 93% of its accessible stations.

### **Hearing Loops**

Seventy-nine percent of all stations provided a hearing loop, either in part of the station such as the booking office or throughout. Merseyrail, Arriva Wales and Virgin provided hearing loops at all of their stations. Those providing 80-85% in their stations were First Capital Connect, Great Western, First Scotrail, Network Rail and Southern Railways while the lowest at 26% of stations was Northern rail with just 6 of its 15 stations providing accessible departure boards. However, accessible departure boards were the third most frequent provided accessibility option offered by all train companies meeting the initial criteria.

### **Mobility impaired set down and pick up areas**

More than half (58%) of the accessible stations reported areas for set down and pick up close to the entrance or exit of the station. While this may have been part of the station's existing infrastructure, prior any thinking about disability issues, there are notable differences, with Central, Chiltern, Great Western, Midland Mainline, Network rail and Virgin providing such areas throughout all their accessible stations. Conversely, Northern Rail had only 2 of its 15 stations (13%) with designated set down and pick up areas, First Scotrail had only 2 of its 13 stations (15%), and Merseyrail 2 of its 10 accessible stations (20%).

### **Accessible toilets**

Only 53% of all stations had accessible toilets; these could be either National key toilets, RADAR key toilets or toilets that had been made accessible for disabled people. Those companies with accessible toilets in all of their accessible stations included: Great Western and Midland Mainline. Merseyrail did not have any accessible toilets on their 10 accessible stations. First Scotrail had accessible toilets at 4 of its 13 stations, and Northern Rail at 5 of its 15 stations.

### **All doors wide enough for wheelchairs**

Just 41% of all 'accessible' stations had all their doors wide enough for wheelchairs. The only company with all 15 of its stations meeting this criterion was Virgin (Network Rail had 12 of its 13 stations meeting the measure or 92%). By contrast Central trains did not have any of their three stations meeting this criterion.

### **Full Tactile Edging on Platforms**

Just 33% of accessible stations had full tactile edging on platforms with only 7% having partial edging. First Capital Connect had no stations with either full or partial tactile edging on their platforms, while Southern had no stations with full tactile edging, but 40% of stations with partial tactile edging. Arriva Wales rated the highest in proportional terms (but only with 3 of its 5 stations). Northern Rail and Network Rail had just over half of stations

with full tactile edging. Eight stations recorded 'unknown' in response to the information request sheet asking about tactile edging on their station platforms.

### **Accessible Ticket machines**

Thirty five of the 124 stations had accessible ticket machines (28%). Many companies noted that ticket machines were too high for wheelchair users, but it was unclear whether the machines had accommodations for other impairments such as partial sight. The Great Western company had 9 of its 11 stations providing accessible ticket machines and rated the highest of all companies (with 81% of stations). The second highest was Southern with 3 of its five accessible stations. Those without any accessible ticket machines were Central, Merseyrail and Northern trains.

### **Accessible ticket counters**

Just 25% of all stations meeting the initial accessibility criteria (step-free and staff assistance) offered accessible ticket counters. However, as all stations had staff 'available', their information often stated that staff assistance was available for those attempting to use the ticket counter. While this is welcomed full independence is more likely to be gained through accessible counters than special assistance. Those companies offering most accessible ticket counters were Arriva Wales (with 4 of its 5 stations), Midland Mainline (with 3 of its 5 stations) and Network Rail (with 8 of its 13 stations meeting the criterion). Those without any accessible booking counters in any stations included Central, Chiltern, FirstScotrail and Southern companies.

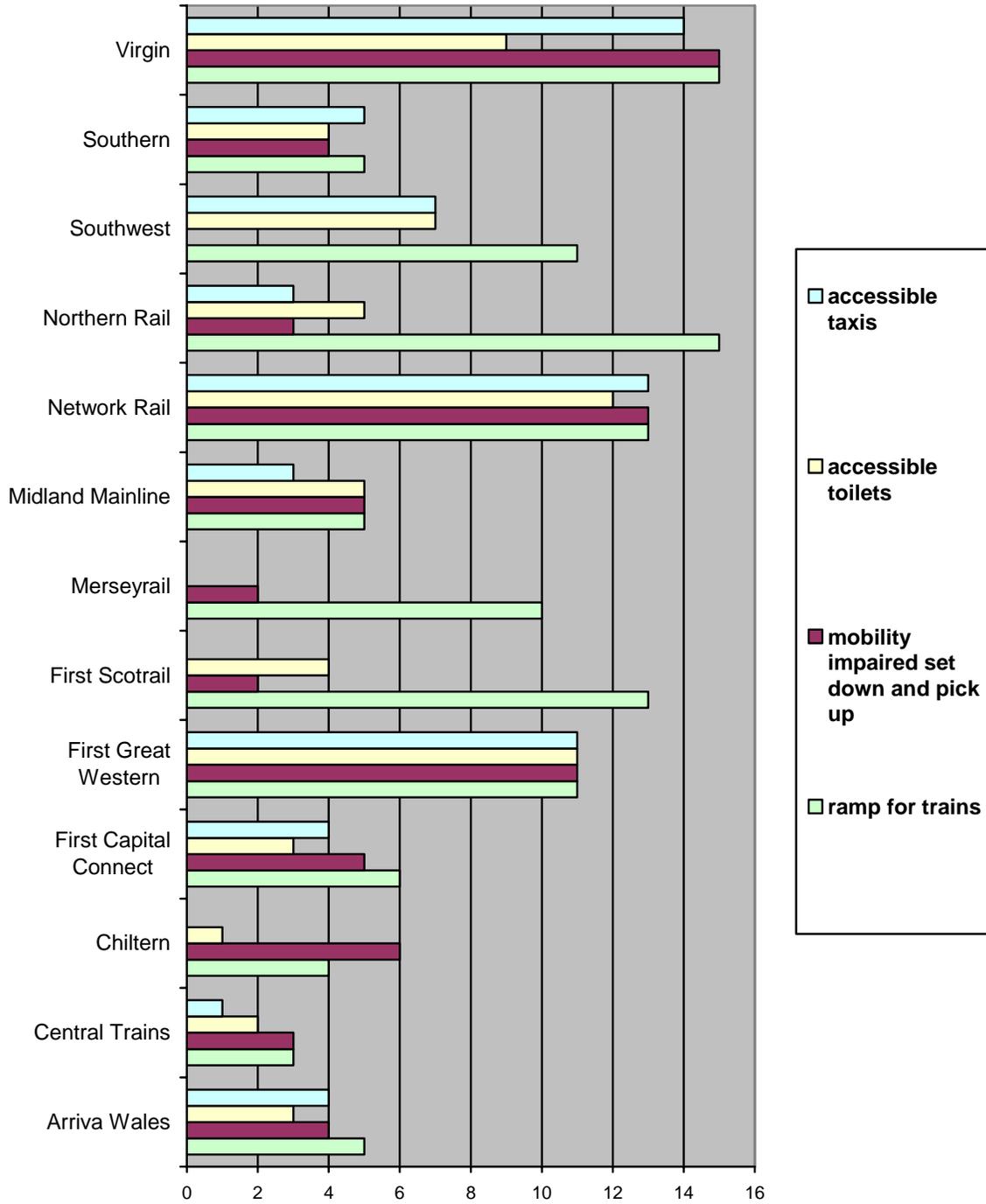
### **Disabled parking spaces**

The number of disabled parking spaces per station and by company varied enormously. For example, Eurostar offered 40 disabled parking spaces at Ashford International, but scored badly on other accessibility options for this station, First Great Western manages 28 disabled parking spaces at its Bristol Parkway and Reading stations, Southern manages 27 parking spaces at its Brighton station and Network Rail manages 25 at Manchester Piccadilly station. However, in the main, disabled parking were absent or limited to one or two spots.

Data on stations without any disabled parking were analysed from the original 124 meeting the wholly step free and staff assistance criteria, some of these stations scored poorly in their lack of disabled parking. For example, 2 of the three stations managed by Chiltern had no disabled parking, seven of the 10 Merseyrail stations did not supply any information on disabled parking. Ten of the fifteen stations managed by Northern Rail had no disabled parking (66%). Those who provided disabled parking at all their accessible stations included Virgin, Great Western, Midland Mainline and Southwest trains.

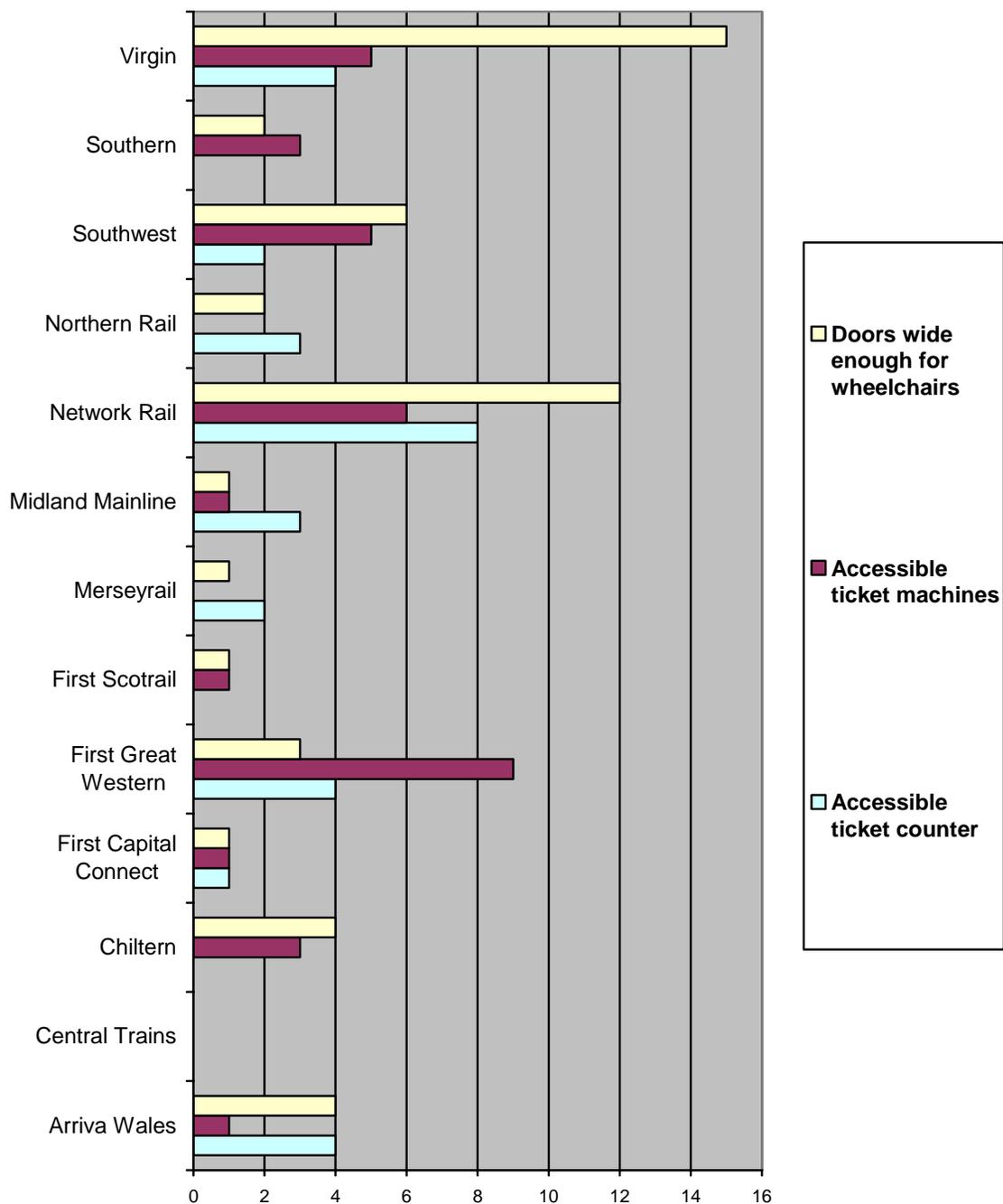
The following Tables summarise the data presented above accessible stations.

Figure 14: stations with access, toilets and parking by company



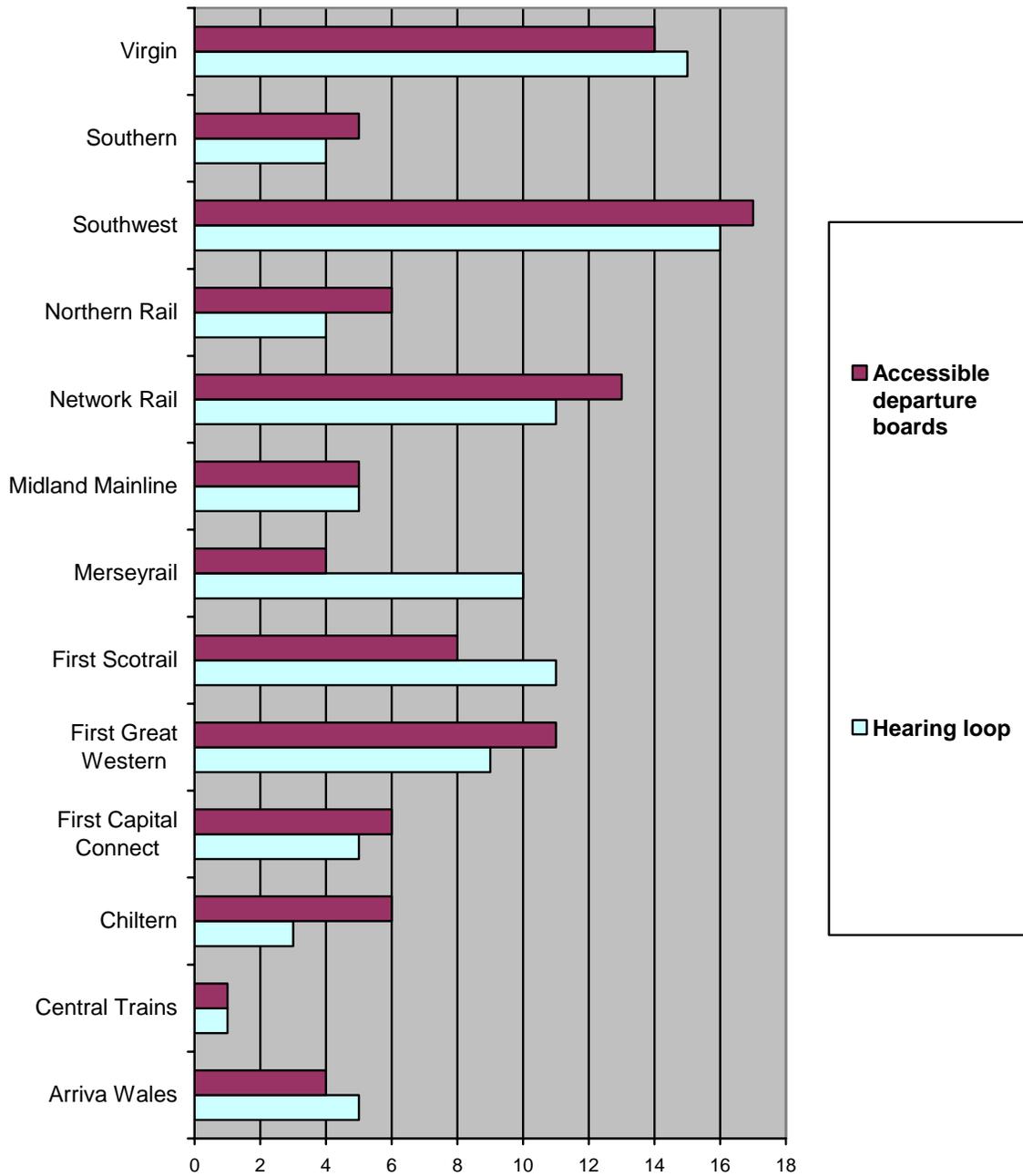
Source: adapted from [www.nationalrail.co.uk](http://www.nationalrail.co.uk)

Figure 15: stations with wide doors and accessible ticket sales by company



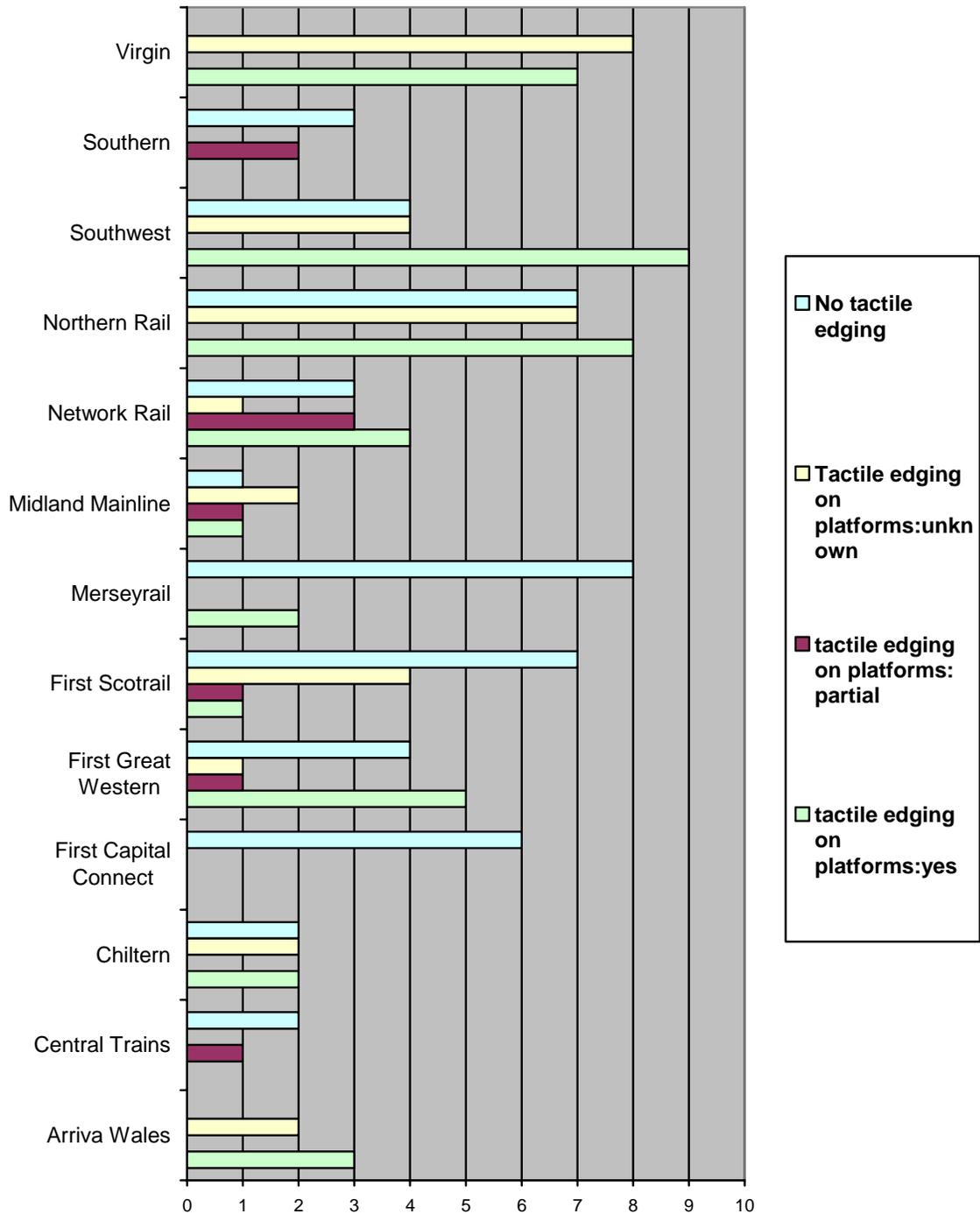
Source: adapted from [www.nationalrail.co.uk](http://www.nationalrail.co.uk)

Figure 16: stations with hearing loops and accessible departure boards by company



Source: adapted from [www.nationalrail.co.uk](http://www.nationalrail.co.uk)

Figure 17: stations with tactile platform edging by company



Source: adapted from [www.nationalrail.co.uk](http://www.nationalrail.co.uk)

## 8. Costs and resources

Poverty of income is a factor in access to travel and transport, affecting access to private transport, the number of trips people make and the distance travelled. Adults in households with two or three cars travel almost three times further than those in households without a car and, on average, men travel a third further than women (Transport Trends December 2004). Disabled people are more likely to live in low income households without a car. In the National Travel Survey 2002-2004 three quarters of disabled people reported incomes under £10,000 per annum, compared to less than half of non-disabled respondents (44%). Similarly, the Omnibus Survey (2004) indicates that 60% of disabled people were living in jobless households compared to just 18% of non-disabled people. In addition there is some evidence that disabled people pay more per journey than non-disabled people for using public transport.

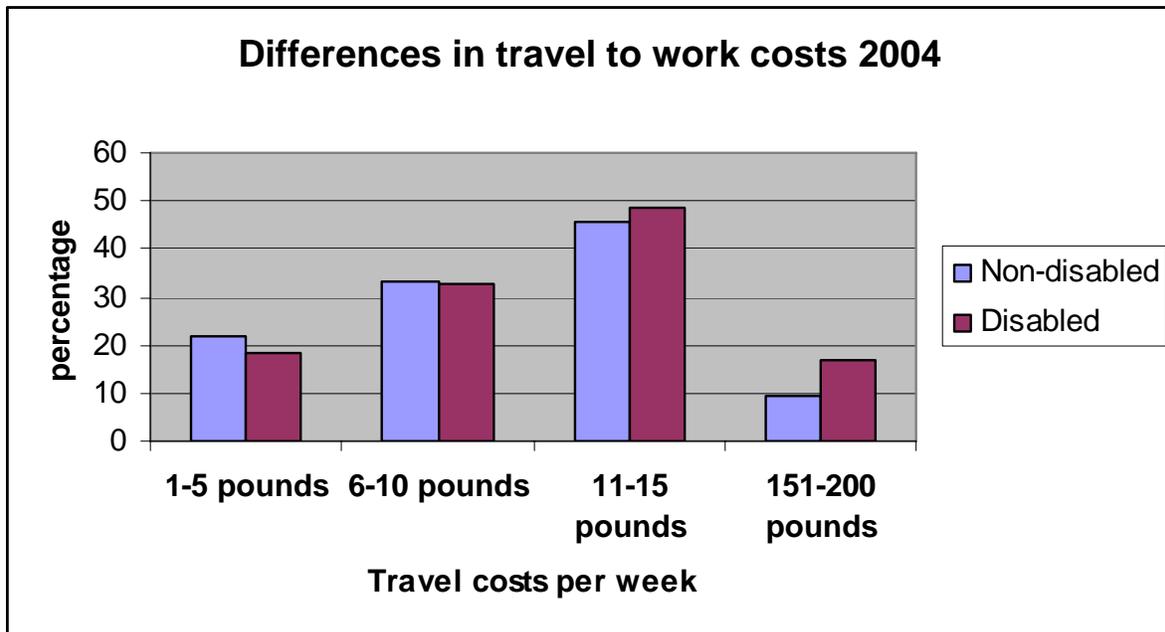
### Travel to work costs

#### Travel to work costs and differences between disabled and non-disabled people

There appears to be only slight differences between the travel to work costs of disabled and non-disabled people when the range is between one and one hundred pounds per week (based on the definition of people with 'health problems' or 'disability' in the Family Resources Survey 2004).

The largest proportion of non-disabled and disabled people within this band pay 1-15 pounds per week in travel costs. Over half of disabled people are within this range (55.4%) compared with 49.5% of those who classified as non-disabled. The second largest grouping pay between 26 and 35 pounds per week (with approximately 24% of both disabled people and non-disabled people spending this amount). However, disabled people are almost twice as likely to pay 151-200 pounds per week on travel to work, although the numbers for this are low the percentage differences are 16.7% for disabled people and 9.4% for non-disabled people. Thus while surface differences appear minimal in travel to work costs by disabled and non-disabled groups, further analysis shows that there are differences within tighter bandings of costs that indicate that disabled people in general are paying more for their travel to work costs compared to non-disabled people. This may be related to different modes of travel, although this survey does not offer comparable information on mode of travel to work

Figure 18 travel to work costs for disabled and non-disabled people (source: FRS04)



**Age breakdowns of those paying higher amounts for travel to work costs**

Those most likely to pay the higher amounts of travel costs are between the ages of 34 and 42 with the 61-65 age groups the least likely to do so followed by the 16-24 age group. This appears to be the same for non-disabled groups. Impairment breakdown classified as communication (for sight hearing and speech impairments) and mobility show that those most likely to pay higher costs are those with mobility impairments with 18.2% paying up to 151 pounds a week for travel to work compared to 9.2% of non-disabled people. However, once again numbers are low. Numbers for ethnic grouping by disability were again too low to offer reliable summaries with many cells registering zero by ethnic group (or less than five responses).

**Public Transport costs per journey**

Public transport costs per journey were tested from data in the National Travel Survey, however due to the structure of the coding frame used for this particular variable and the amount of missing data, analysis was difficult. Just 9.2% of 'retired and disabled' people recorded the cost of their journeys by public transport in their travel diaries. The banding used by the NTS ranged from less than 50p to more than 10 pounds (these figures were for single trips and not the total travel over the week). Total public transport travel costs are not available in the National travel Survey or in other surveys by disability. As a result it was possible to identify only that 'disabled and retired' people are more likely to take trips at the lower end of the scale of costs. For example, almost one third of journeys were made at less than 50p and almost a third between 50 and 99 pence. Due to the structuring of output and the pre-banding of costs it was impossible to draw any firm conclusions from

the data regarding comparisons with other groups or to re-band the output through recoding, as was possible with the family resource survey data for travel to work costs.

### **Rail cards and passes**

There appear to be no available figures on the overall numbers of concessionary bus fare journeys for disabled people. However, in 2001 there were 54,000 disabled railcards in use in England. They generated direct income of 750,000 per year and were used to make 1.4 million journeys annually producing ticket revenue of around 7 million pounds (source: Easing the Trip (2001/2002)). The National Travel Survey 2002-2004 shows that women with a disabled person's pass are the most likely to use buses 'three or more times per week'. Ten per cent of those with a pass are classified as 'non-white' or from a minority ethnic background. Men were slightly more likely to hold a disabled pass than women. The largest groupings by age holding a disabled pass were those in the 40-59 age group.

Scotland has the highest proportion of disabled passes when comparisons are made by Government Office Regions (20.9%) followed by the North West and Merseyside (16.7%), Greater London (13.7%) and Yorkshire and the Humber (8.2%). The lowest percentages appear to be in the South West (4.4%) according to the National Travel Survey 2002-2004.

## 9. Conclusions and recommendations

The short term project has uncovered many issues related to disabled people and their travel options. It has identified key areas in which improvements need to be made and offered a snapshot of the current situation in relation to many intersecting factors concerned with travel and transport for disabled people. Our conclusion is divided into two parts, the first outlining the key findings and the second dealing with research issues connected with large scale surveys and the potential and problems in using them. We supplement this with suggested recommendations for longer term changes that could reliably improve the process of secondary research of this type and the wider aspects of measuring disabled peoples social inclusion.

### Key Findings

#### **The travel gap and the initial barriers related to disabled people's travel and transport needs**

- Data from the British Crime Survey (2004-2005) suggests that one quarter of disabled people (25.6%) do not go out compared with 1.5% of non-disabled people. There were no follow-up questions to provide reasons for not going out. However, many surveys and research overviews suggest that disabled people would like to go out more as evidenced in the Scottish Executive study (2006), the Transport and Aging Survey and Disabled peoples Transport Needs (2005).
- The Omnibus Survey data (2004) shows differences between the types of transport used by disabled and non-disabled people over a six month period. In this survey, 49.3% of disabled people reported travelling as the driver of a car as their main mode of travel, followed by car as a passenger at 36.2%, bus at 9.3% and train at 3.6%. It is worth noting that 'Car as driver' was the most commonly reported mode of transport for both disabled and non-disabled people, followed by 'car as passenger' but that disabled people were more likely to travel as passengers and non-disabled people as drivers. However, disabled people are comparatively more likely than non-disabled people to use public transport due to a higher incidence of lack of access to a car.
- Lack of access to a car and fears for personal safety would appear high for disabled people according to several surveys and earlier research overviews. Key issues are also linked with lower incomes on average for disabled people compared with non-disabled people.
- Fears of anti-social behaviour, crime, slow journey times and lack of proximity to rail stations appear to be additional factors in the monetary, perceived and physical barriers to going out for disabled people resulting in certain journey times and areas being avoided (e.g. night-time, school opening and closing times, rush hour periods and the avoidance of town centres and built up areas).

- The National Travel Survey data indicates that disabled people are up to three times more likely to be non-drivers without access to a household car when compared to non-disabled people. One third of disabled people in the Transport and Aging Survey said that they would find it difficult or impossible to drive.
- Lack of access to a car is one of the main reasons that disabled people are more dependent on public transport than non-disabled groups are. In addition, they are more likely to be embarrassed about asking for lifts, and tend to use public transport more because they are likely to have fewer transport options than non-disabled people.
- Poverty of income is a factor in access to travel and transport, affecting access to private transport, the number of trips people make and the distance travelled. Adults in households with two or three cars travel almost three times further than those in households without a car
- As a result, public transport was very important to disabled people through the different surveys and within national and local research projects, with a large majority saying that improvements in public transport would significantly improve their quality of life and 71% of those in the Transport and Aging Survey (2001) saying that they would use public transport more if it were improved.

### **Use of different forms of public transport**

- Where public transport was used and accessed, disabled people were more likely to use buses than trains. This may be because of the shorter distances overall that disabled people might travel, the access issues associated with many railway stations, cost or the lower propensity of disabled people to be commuting to the workplace.
- Disabled people were more likely than non-disabled people to use buses in rural and slightly more disabled people using buses in inner city areas. More women than men travel by bus overall.
- Taxi usage is higher amongst disabled people with twice as many disabled people using taxis two or three times a week compared to non-disabled people. There were no differences in use by gender. Data from the Labour Force Survey (2005) identified that disabled people were twice as likely as non-disabled people to use a taxi as their main travel to work mode. In the order of most use impairment groups included: mental health users, those with visual impairments, those with learning difficulties and those with mobility/dexterity impairments.
- Another mode of travel used by disabled people is community transport and free buses. The NTS 2002-2004 data shows that up to 42% of disabled people have used a dial-a-ride service, and up to 30% a supermarket bus service (this compares to 0.2% of non-disabled people for supermarket buses). In addition, hospital transport services,

including car transport, was used by up to 43.3% of disabled people. This data along with taxi use data suggests a greater reliance on door-to-door services. However, a number of research overviews show that there are also problems with this form of specialised transport.

### **Trips taken and travel to work issues**

- Disabled people are also much less likely to make long-distance journeys than non-disabled people. Those who were car owners were more likely to record no mileage compared to non-disabled car owners according to the National Travel Survey data of 2002-2004 signifying a clear travel gap between disabled and non-disabled groups.
- Trips for food shopping and for visiting friends formed the largest proportion of total journeys for disabled and retired groups (while commuting to work was the most frequent trip purpose for those in full-time employment). Food shopping made up more than 41% of trips for disabled/retired people. Rates of commuting to work were low overall compared to non-disabled groups identifying the lower likelihood of disabled people being in employment. This factor may account for some of the travel gap but it is clear that disabled people are also taking fewer journeys to social and family events than they would like.
- When considering those that are in employment the National Travel Survey 2002-2004 indicates that the most common mode of travel to work for both disabled and non disabled people was 'car as a driver' (although non-disabled people are almost four times as likely to use this mode). Disabled people were more likely than non-disabled people to travel to work as a passenger in a car, particularly where they had identified specific difficulties using buses.
- In general terms, the Labour Force Survey 2005 shows that 80% of disabled people in work take between 5 and 30 minutes to travel to work (also the most likely time taken for non-disabled people) Women tend to have slightly quicker/shorter journeys than men, with men often working further away from home. There may be some indication that BME groups, both disabled and non-disabled, are more likely to have longer lasting journeys to work.
- There is very little difference in the overall gender profile of travelling to work between disabled and non-disabled people. More disabled men than women drive to work (with 56.3% of disabled men using this method). More disabled women use buses or taxis to travel to work than disabled men.
- Breakdown by age groupings show that disabled people under 45 years of age are more likely to use the bus while those over 45 years are more likely to use the 'car as driver' and the train as the main modes of travel to work. With those aged 46-55 being the biggest car users and those 36-45 being the biggest bus users. For non-disabled people those from 16-25 appear to be the biggest bus users overall.

- When travelling to work as a passenger in a car is broken down by impairment (using data from the Labour Force Survey 2005) the most likely groups are (in order of most use) those with learning difficulties (32.5%), mental health users (20.9%), epilepsy (19.3%) followed by mobility/dexterity and visual impairments.
- However, disabled people are almost twice as likely to pay 151-200 pounds per week on travel to work, although the numbers for this are low the percentage differences are 16.7% for disabled people and 9.4% for non-disabled people. Thus while surface differences appear minimal in travel to work costs by disabled and non-disabled groups, further analysis shows that there are differences within tighter bandings of costs that indicate that disabled people in general are paying more for their travel to work costs compared to non-disabled people.

### **Satisfaction and Perceived key barriers relating to transport and travel information**

- The Transport and Ageing Survey (2001) suggests that disabled people are more likely to report problems in being able to travel when they want to (62%) when compared to non-disabled people (47%), and three times more likely to perceive public transport as unreliable compared to non-disabled people. Dissatisfaction with local transport services also increased with self-reported severity of impairment.
- In the Omnibus Survey(2001), although disabled people were more than twice as likely to complain if they had problems with access or services than non-disabled people. The reason for not complaining most cited by disabled people was 'these things are to be expected'. Where disabled people did make complaints 81% were dissatisfied with the response.
- Almost three quarters of disabled people surveyed in the Transport and Aging survey (2001) or 72.9% felt that their needs were not considered by bus companies with nearly a third (29.7%) believing that their needs were not considered at all, compared to 15.5% of non-disabled people.
- In the Adults with Learning Difficulties Survey just over 10% of respondents described staff on public transport as not helpful. There were no clear comparisons with other impairment types.
- As noted, perceptions were also significant in terms of personal safety, with double the proportion of disabled people identifying concerns about personal safety as a barrier to using public transport (10%) than non-disabled people (5%). This increased dramatically for travel during the evening or at night, with three quarters of disabled people (76%) identifying concerns about personal safety as a barrier, compared to 58% of non-disabled people (TAA01).
- Despite the lack of quantitative data there are some examples of qualitative statements on staff behaviour in research (e.g. the Transport and Aging studies). These included

bus drivers moving off too fast before allowing people to get to their seat, the non arrival of pre-booked train assistance, and so on.

- Dissatisfaction with access issues included the size of text on timetables at bus stops and on the front of some buses, the information format and placing of train information at railway stations, for example the old style television screen is more problematic than the newer style orange text format for information monitors.
- There is some evidence that people with visual impairments are more concerned about travelling at night when visual information is more difficult to see. As there can be fewer people around to assist at night they may also perceive a greater risk to their personal safety, although this is also true for many people, regardless of impairment.
- The National Travel survey (2002-2004) suggests that disabled people are twice as likely as non-disabled people to have a travel route planned for them.
- According to the Omnibus Survey (2004), disabled people were almost twice as likely to say that they were unsatisfied or totally unsatisfied with travel information given during train and bus journeys. The satisfaction with travel information prior to journeys was similar for disabled and non-disabled people.
- In *Easing the Trip: Meeting the Needs of Disabled Rail Users 2001/02*, staff assistance at stations was judged more negatively, with more than a third (35%) rating this as 'poor'. Staff assistance at stations was also rated as more problematic than staff assistance on trains (19% rated this as 'poor'). Less than half the respondents rated information given by phone or in person as 'good' or 'very good' (with information by phone rated much lower). However, physical barriers remained more of a problem, with car parking, station and train quality receiving the most negative ratings
- Previous research studies identify a range of specific barriers to public transport usage amongst disabled people many of which extend beyond the immediate transport environment. For example, people with visual impairments may avoid journeys involving multiple road crossings (*Bus Usage and the Barriers for People with Learning Disabilities*, Andrew Irving Associates, 2002). Disabled people are up to 3 times more likely to cite poor connections as an inhibiting factor in both bus and rail travel signifying potentially greater problems with public transport that does not offer a direct route to their destination, fears of access at unknown stations and the intensified problems associated with missing a connection are felt more keenly by disabled than other types of passengers inducing a more significant lack of travel confidence (NTS04).

### **Information awareness and use**

- Disabled people were up to three times less likely to be aware of the existence of travel services by telephone or web compared to non-disabled people. However, they were

most aware of the RAC and AA telephone and web services with a slightly higher percentage being aware of these telephone services than non-disabled people. Where there was an awareness of telephone information centres slightly more disabled women than disabled men were likely to be aware of them.

- According to the National Travel Survey 2002-2004 disabled people were half as likely to have access to the internet and far less likely to use devices such as satellite navigation systems, web-sites or other computer based media compared to non-disabled people.
- Where there was knowledge of travel information web-sites disabled men were more likely to be aware of these than disabled women. Younger disabled people and those under 45 were more likely to be aware of travel web-sites. Breakdowns by ethnic group were not possible and impairment breakdowns were not included in the Omnibus survey 2004.

## Improvements

- There remain a multitude of barriers to travel, transportation and the social inclusion of disabled people. However, there appeared to be a decrease in the numbers from the national travel survey (1999-2004) citing bus difficulties, these were particularly concerned with issues such as getting on and off buses, waiting for buses and related to bus use more generally. This would suggest that the expansion of the use of low-level buses, improved waiting areas and possibly the attitudes of staff have reduced some previous problems connected with bus travel.
- At present there are clear moves to improve rail stations and access for disabled people. However, disabled people appear less likely to use the train in comparison with bus. A number of stations are wholly step free with staff assistance and these provided a useful measure on which to judge additional accessibility criteria such as tactile edging on platforms, accessible booking counters and visual and audio information at stations. The overview provided indicates that improvements still need to be made but also show that key access issues are being acknowledged to different degrees, this bodes well for future train travellers and indicates a future in which train travel for disabled people looks more optimistic than in previous years.
- The additional research undertaken by local authorities and independent transport bodies identifies an awareness of the importance of travel inclusion, dealing with issues such as infrastructure and information. It shows that while improvements are still needed, the awareness of transport and travel issues for disabled people is increasing. By implication, the greater awareness, monitoring, and optimism around transport and disabled peoples travel needs bears witness to a measured success of transport policies and to combined efforts resulting from the DDA (1995). The more recent requirements and duties on public authorities are likely to add to this arena while

ensuring effective monitoring and awareness of disabled peoples' use and experience of public transport.

## **Project potential and problems in using large datasets**

The small scale project has allowed both existing and new knowledge about disabled peoples' travel and transport issues to be sourced with national and UK large scale surveys, rather than small localised qualitative samples of focus or interview groups. It has also introduced new findings in relation to travel information and disabled peoples use of it, new knowledge around perceived barriers and in some respects staff attitudes and impairment differences. This project has therefore identified new areas of research that could be enriched through further qualitative routes or smaller scale focused surveys.

The exercise has indicated several improvements to the public transport system which have benefited disabled people by identifying changes over time. It has also provided a reference base for common problems that go beyond the design of the bus or the accessibility of the station by highlighting infrastructure issues, issues of travel confidence, the travel gap and the real and perceived barriers that disabled people face concerned with 'going out' and travel and transport. In the short time scale the project has uncovered a wealth of information on disabled peoples use and experiences of public transport suggesting clear implications for social inclusion. It has illustrated some of the ways that this form of secondary research can benefit and improve the knowledge and scope of the possibilities offered by large scale datasets.

This form of critical scoping exercise could productively be applied to many key areas of importance such as education, employment, family, housing and so on to measure and assess baseline statistics producing additional critical analyses of disabled peoples' inclusion and relevance to survey designers. At the same time, it is clear that problems with this form of analysis and with the inclusion of disabled people in large scale surveys are factors that have inhibited the coverage we would have liked to give this important topic. It may have been possible to overcome some of these within a longer time scale for the project. The project has also allowed a critical analysis of this mode of research involving the potentials and problems that surveys incur when looking at issues of disability. Although survey frameworks can impose limitations for all forms of secondary research regardless of subject matter, several key issues arise for studies of disability, travel and transport. These are outlined below and followed by brief recommendations on constructive routes to overcoming these problems in the short and longer term.

### **Sample size and focus**

Travel surveys such as the National Travel Survey do not offer a robust sample of disabled people, nor any impairment breakdown. As a result of small numbers of disabled people within the overall samples, it is impossible to report accurate breakdowns for regions or localities in many cases. The likelihood of a disabled person filling in the detailed travel diaries component of the NTS may be lowered compared to non-disabled people if appropriate support is not offered or if the NTS do not ensure the representation of

disabled people in sample. The structure of the data files in the NTS is also limiting. Ethnicity variables were only introduced in 2001 and classifications offer only a poor comparison of 'white' and 'non-white' groupings. In spite of this the NTS still provides the best breakdown of travel variables and it may be useful for the sponsors to introduce a booster sample of disabled people (and 'non-white' groups) every two years or so in order to monitor change over time and between localities.

Very few surveys are focused exclusively on disability issues; those that are tend to be measures of ill-health and their impacts as opposed to the process of disability itself. Research on travel and transport issues for disabled people can be hindered by small sample sizes or inadequate measures of impairment. This can be exacerbated by the inability to cross reference particular characteristic variables such as ethnicity, or other identifiers such as locality.

### **Definitions and impacts**

It is clear that the form of definition used for disability (or proxy measurements such as those used in the National Travel Survey for 'foot', 'foot and bus' and 'bus') can impact on the findings and on individual responses to questions asked by survey interviewers (see appendix A for detailed definitions used by dataset). Large scale datasets are often constructed with the aim of informing government policy, long term economic forecasting or trends over time. Key surveys were slow to include any form of disability in the 1970s and early eighties, this situation has improved, but inclusion of disability (in its various forms) can still present problems for analysis and interviewees. Surveys are unlikely to recognize multiple impairments or even impairment types in the way that social model philosophy ascribes. However, restrictions apply to a lesser extent to all forms of secondary analysis on large scale datasets, regardless of the subject area.

The use of one definition of disability attuned to the DDA (or more optimistically the social model) would be a useful tool for social surveys to use. For example the Labour Force Survey uses the DDA definition (along with others) and allows a clear identification of trends regarding employment, which is aided by having a full impairment breakdown grouping.

There are few comparative definitions of disability which exclude ill-health with the exception of the British Crime Survey, Labour Force Survey and General Scottish Household Survey. Definitions vary and often do not allow the cross referencing of impairment groups.

Those surveys using proxy measures based on ability to climb stairs or walk unaided for ten minutes may lack the necessary focus of others who qualify by impairments rather than perceived abilities to undertake physical tasks. In addition, the perception of physical or any other tasks may vary from day-to-day as might the progress of a task itself vary on any given day. This form of assessment is also individualising and would benefit from a greater focus on disabling barriers themselves. This has been possible to a certain extent in the travel analysis by adopting radical reflexive methods, for example the ability to get

on or off buses is unlikely to be wholly individual, but affected by design issues which pose disabling barriers for those with particular impairment types.

Occasionally impairments are included but limited to mobility issues, or may include mobility, visual and hearing impairments such as in the British Household Panel Survey. A fuller breakdown of impairments would help to identify what the specific disabling barriers were and how they might be addressed.

As noted the proportions of ethnic respondents are inadequate overall, this situation is exacerbated when groupings are again split by disability and figures can become unreliable when breakdowns by impairment (where available) are attempted. The impact of definitional inadequacies can often be a source of a frustration for the researcher. It impacts on the findings in terms of reducing what is available from particular studies. Yet, it can also point the way towards a useful critique and potential dialogue with survey planners.

### **Style of questions**

As with all forms of survey analysis, the style of questions can inhibit attitudinal assessments and experiences. For example although the British Crime Survey asks whether or not a respondent goes out, there are few follow up questions to understand why or to offer options which would allow individuals or disabled people go out more. Conversely other surveys may ask questions on whether disabled (or other groups) would like to go out more, but do not identify what might need to be put in place to allow this to happen. In this way surveys are capable of providing base-lines that lead to questions for further research, opening up new research areas and new lines of inquiry.

### **Focus on work and travel to work**

While most major surveys contain questions on work and travel to work, these do not always apply to disabled people many of whom are less likely to be in employment (either because of discrimination or because of age, at both ends of the life course). Major surveys beyond the National Travel Survey should also include questions relating to other types of trips, for example visiting friends and entertainment, this would provide a better measure and monitoring of disabled peoples inclusion and identify other needs beside transport needs.

### **Types of transport**

Few surveys go beyond the use of buses, trains or cars as a travel mode in any detail or are discounted because of the low sample sizes for disabled people. The major modes of public transport are important, but travel for disabled people might also include Dial a Ride, taxi voucher or share schemes, there are few references to these forms of transport in the major surveys with the exception of the National Travel Survey 2002-2004.

### **Concessionary fares and passes**

It is very difficult to obtain figures on concessionary fares and passes, but at the same time crucial that schemes such as concessionary fares and passes are monitored and available to assess trends in particular areas. It may be useful for surveys to begin to incorporate baseline figures to trace trends or for local authority areas to publish figures. The national rail card would also benefit from being more transparent with regard to sales and revenue generated.

### **Future issues**

It may also be useful in the longer term, to enter into dialogue with key survey producers and designers

The proposed ODI longitudinal survey of disabled people is to be welcomed in that it may begin to address some of these issues, however, until that time it may be useful to incorporate disability elements within the NTS as suggested above or to develop a module on transport and disabled people within the Omnibus Survey to test and expand on the findings presented here.

Longer term issues also present a number of wider opportunities for the exploitation of large scale datasets and discussion with key survey designers such as the ONS in respect of different surveys and possible outcomes.

### **Key Recommendations**

- It is clear that further exploratory research is needed to identify initial baseline figures for different areas of social exclusion, and identify the extent of key barriers for disabled people.
- Further the potential of the existence of this type of work for non-government organisations and disability organisations should not be underestimated in terms of the baseline information that it can provide and its worth as a potential 'route' to obtaining funding on specific disability issues.
- This form of research can significantly reduce the costs involved in more time consuming forms of qualitative research, but can also act as a focusing tool to highlight areas where further research might be needed.
- Future projects of this type should develop further critical analysis of existing surveys.
- Issues associated with disability representation through sample sizes should be highlighted and where possible feedback should be given to the main body responsible for the survey design

- Best practice in the use of disability definitions and questions should be drawn up from existing surveys as a potential guideline for the basis of critiques in different subject areas and as an aid to potential smaller scale modules (e.g. in the Omnibus survey) or small survey work by relevant bodies. .
- Problem areas, in particular cross referencing issues in key surveys such as those concerning ethnicity and disability should be recorded and monitored if possible, with a view to alerting survey and sample designers.
- Where possible any form of future research in this field should go to bodies with a clearly defined social model agenda and experience of critical secondary research in the field of disability.
- A central network or working group for the identification and feedback of pertinent disability issues in survey representation could be established to act as a critical working group.

A reasonable national overview of disabled people's use of public transport can be obtained from existing data (and with more detailed analysis it could be strengthened) but this cannot be reliably broken down by locality, by impairment, by ethnicity, or provide really robust policy evidence of change over time. There may therefore be a case for collecting such data periodically on a larger scale if this is important to DRC policy development.

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# Appendix A: Key datasets and their characteristics

## National Travel Survey 1999-2004

**Context:** The National Travel Survey (NTS) is the major annual survey looking at travel and transport trends commissioned by the DfT and carried out by the National Centre for Social Research. Figures were analysed between the years 1999-2004 (the most recent release of data) to assess differences and improvements in disabled peoples' travel activities. The NTS uses a random sampling frame from the 'small users' postcode address file (PAF represents those households receiving less than 25 items of mail per day). For example in 2003 /2004 15,048 private households were selected to ensure that households were representative of the total GB population for each quarter.

The potential interviewees for the survey are first contacted by letter explaining the purpose of the survey, an interviewer then arranges a date for a first call to explain procedures and take information regarding vehicle ownership, individual and household characteristics. This is followed by a follow-up call before the start of the travel week in which individuals within the household keep a travel diary for seven days. The NTS does not code for impairments.

**Strengths:** Contains the best and most wide ranging questions in relation to transport trends which can be matched by year to provide a continuous data stream. However, changing questions and variables can be a problem.

**Limitations:** no impairment breakdown 2002-2004, flat file structure makes it difficult and time-consuming to cross reference many variables, poor ethnic breakdowns (no breakdown at all in '99-2001), disabled by bus and foot difficulties or retired/disabled' definitions by household respondent produce the best output numbers but are lacking as definitions. Regional breakdowns by disability or proxy low in comparison to non-disabled. The costs element for public transport refers to cost per journey and ranges from 0-49 pence to the highest pre-banded cost code of £10 and over, there are up to 80-90 percent missing cases for all groups which make cost issues difficult if not impossible to decipher.

**Definitions used:** 1 'foot', 'foot and bus' and 'bus' difficulties; 2 retired and permanently sick 3 retired and disabled

## Transport and Aging: extending the quality of life for older people via public and private transport 2001

**Context:** A discrete survey to assess the transport needs of the future and the quality of life issues created and inhibited by transport options. There are two files for this survey: a postal questionnaire and a main questionnaire. Respondents for the main questionnaire were selected from the postal questionnaire.

The Transport and Aging Survey was carried out to assess future transport issues and current problems with transport in inner and outer London and in Paisley and rural Renfrewshire. It had a base of 300.

**Strengths:** contains good transport and travel questions which ask about a range of transport options, attitudes and opinions.

**Limitations:** small sample size for the main questionnaire and limited geographical coverage. As the survey is a discrete survey there are no opportunities to judge improvements or trends over time. It is dated and contains limited coverage and linking on impairment variables. The title of the survey is slightly misleading as 45% of the respondents are of working age.

**Definitions used:** 1 presence of disability affects transport use; 2 disability makes it difficult to use public transport

## **The Family Resources Survey 2004**

**Context:** The Family Resources Survey is a continuous survey launched in 1992. It collects data on income and expenditure. The Great Britain FRS sample uses a stratified probability cluster sample drawn from the small users postcode address file. The survey selects 1,847 postcode sectors, each sector is known as a primary sampling unit (PSU).

**Strengths:** large representative data set.

**Limitations:** no impairment breakdown, while this survey looks at expenditure patterns none but travel to work identifies costs associated with travel. Issues relating to disability and ethnicity, that understanding patterns related to disabled ethnic groups are difficult because of the low numbers involved. Again this dataset has a flat file structure which makes cross variables analysis difficult and time consuming and demands recoding of some variables.

**Definitions used:** illness/disability limits activities

## **The British Crime Survey 2004-2005**

**Context:** The British Crime survey has been a major annual survey from 2001. It consists of two data files: the victim and non-victim file, all figures used were taken from the non-victim file. The 2004-2005 survey was designed to provide representative populations for England and Wales. The small user postcode address file is used as a sample frame and compared with the 2001 census to check adequate clusters have been achieved. As with all major surveys the British Crime survey contacts potential interviewees by letter to arrange a potential interview time.

**Strengths:** large representative dataset

**Limitations:** although notes at the UK Data archive say that this survey has impairment variables, it does not (refers to learning difficulty only in the context of people labelled with learning difficulties as being perpetrators of crimes). The survey does include questions on those that do not go out, but does not go beyond this by asking if this is related specifically to transport issues.

**Definitions used:** 1. illness or disability limit activities; 2 derived recoded 'disability' only

### **The Labour Force Survey Sept-Nov 2005**

**Context:** The design of the Labour Force Survey enables estimates of levels such as the numbers of people in employment which are representative of the population. The sampling frame is taken from the small users sub file of the postcode address file. All first interviews are carried out on a face-to-face basis after the potential respondent has received a letter explaining the survey remit and process. In some cases recall interviews are conducted by telephone.

**Strengths:** representative sample has a good impairment breakdown with includes mental health, learning difficulty, mobility, epilepsy, visual and hearing impairments. However, these impairment types are mixed with categories such as skin conditions and heart disease. A range of key disability variables such as DDA disabled, disability lasting more than a year.

**Limitations:** Issues restricted to travel to work modes, time taken to travel to work, new questions appearing in September 2006 will ask whether individual has turned down a job because of transport difficulties ( currently this is asked by NTS but would benefit from the larger sample size of the LFS).

**Definitions used:** 1 main health problem; 2 Current Disability 3 DDA disabled

### **The British Household Panel Survey Wave 13 2004**

**Context:** The British Household Panel Survey is a longitudinal (i.e. the same individuals within the households are surveyed at each wave or year). The British Household Panel survey is a representative survey asking many attitudinal questions and quality of life questions. The survey began in 1991.

**Strengths:** The longitudinal aspect of following households over a period of years is the strength of the survey. From 2004 the survey asks if the individual considers themselves to be disabled as opposed to a health/disability /infirmity screening question.

**Limitations:** The sample size number is lower than in many major surveys. The survey does include impairment based questions but these relate to mobility, visual and hearing impairments and include a number of ability questions such as whether individuals have the ability to cut their own toenails which appears bizarre. A satisfaction with local

transport question is included, but only from 2004 making the longitudinal option inadequate for tracing trends until future waves are released.

**Definitions used:** considers self disabled

### **The Omnibus Survey March 2001**

**Context:** A Monthly survey with core and rotating modules which can be used when survey module questioners are being used as a feasibility study in testing the questions or where it is not practical to develop a separate survey. Samples come from the small users postcode address files and the process of contacted respondents is the same as in other major surveys with a letter of explanation and first contact in the home by a trained interviewer.

Module 272: Disability Discrimination Act, module 251:access to services

**Strengths:** representative sample, useful for examining one off short surveys containing questions and variable options which are unlikely to be in the larger scale surveys.

**Limitations:** small sample size, no impairment breakdown unless specified by those commissioning a particular module, low ethnic grouping percentages.

**Definitions used:** long term sick or disabled

### **The Omnibus Survey April 2004**

**Context:** Module 357: transport direct

Interviews are conducted with approximately 1,800 adults (16 or over) in private households in Great Britain each month. As stated above modules represent various objectives. Module 571 was asked on behalf of the Department for Transport to assess travel information services.

**Strengths:** reviews transport modes used overall during the six months prior to the survey, good overview of transport and travel information services and their use/non-use.

**Limitations:** small sample size, no impairment breakdown, low ethnicity base

**Definitions used:** health problems limiting activity or work

### **Adults with Learning Difficulties Survey 2003-2004**

**Context:** The adults with learning difficulties survey interviewed 3,000 adults with a view to finding out about their everyday lives and opinions. Samples were collected from three main sources: individuals from a previous BMRB survey, individuals in private households identified through social services departments (19 social service departments in all) and those in the support people schemes (134 schemes).

**Strengths:** The only large survey to look at the lives of people with learning difficulties.

**Limitations:** Non-representative survey, limited information on travel and attitudes, low ethnic base.

**Definitions used:** all sample categorised as 'learning difficulties'

## Appendix B: Key to abbreviations and disability coverage of different datasets

Abbrev	Full title	Sample size disabled	All Valid cases in sample*	Impairment breakdown	Longitudinal
<b>ALD04</b>	Adults with Learning Difficulties 2004	LD N2898=100%	N=2898	N	N
<b>BHPS04</b>	British Household Panel (wave 13) 2004	Health limits type/amount of work N1676=17.0% Health limits some kinds of work N1340=14.0% Health limits daily activities N1380 =14.0%	N=9845	Y	N
		Self complete Consider self disabled N1768=10.9%	N=15848	Y	N
<b>BSA04</b>	British Social Attitudes Survey 2004	<ul style="list-style-type: none"> <li>▪Permanently sick and disabled N 167=5.2%</li> <li>▪DLA Benefit N 73=3.4%</li> <li>▪Incapacity Benefit N 102=4.8%</li> <li>▪Attendance Allowance N 39=1.8%</li> <li>▪SDA Benefit N 9=0.4%</li> <li>▪Incapacity benefit/sickness as main source of income N110=5.1%</li> </ul>	N=3199	N	Y

Abbrev	Full title	Sample size disabled	All Valid cases in sample*	Impairment breakdown	Longitudinal
<b>BCS04</b>	British Crime Survey 2004-2005	<ul style="list-style-type: none"> <li>•Long standing infirmity/illness (main reason not looking for job) N 2027= 10.7%</li> <li>•Long standing infirmity/illness(LSII) N 12603= 28.0%</li> <li>•Does illness/disability limit activities Yes N 8905= 70.7% prop of LSII above</li> </ul>	N=45120	Y LD only	Y
<b>FES01</b>	Family Expenditure Survey	NB expenditure diary completed by all members of household DLA mobility N175=1.4% DLA care N 380= 3.4% Attendance allow N243=2.0% None N 11444=93.5%	N=Households=6639	N	Y
<b>FRS04</b>	Family Resources Survey 2003-04	Of all benefit types (83 listed) DLA self care N 1905=3.7% DLA mobility N 2007=3.9% War disablement N 170=0.03% SDA N 229=0.04% Attendance Allow N 1183=2.3% Incapacity Ben N 1748=3.4% Dis persons tax credit N 51=0.01%	Total N for this variable =52091	N	Y
<b>GHS04</b>	General Household Survey 2003-04	Long standing illness or disability <b>N 7368=30.8%</b>	N=24489	Too many variables, too dependent on illness	Y

Abbrev	Full title	Sample size disabled	All Valid cases in sample*	Impairment breakdown	Longitudinal
LFS05	Labour Force Survey Quarterly Sept-Nov 2005	Health problem lasting more than a year N 36115= 37.8% <ul style="list-style-type: none"> <li>▪ DDA disabled and work limiting disabled N 9124= 9.5%</li> <li>▪ DDA disabled N 13305=13.9%</li> <li>▪ Work limiting disabled only N 2476= 2.6%</li> <li>▪ Current disabled only N 21840=22.8%</li> </ul>	N=95498	Y	Not for 'turned down/left job because of transport difficulties' BUT available for travel to work
NTS04	National Travel Survey 2002-2004	Travel Difficulties N=7089=12.8%	N=55552	N	Y
OB01	Omnibus Survey March 2001	M 271 DDA Long standing illness/disability (LSID) N 707=39.5%	N=1790	Y	N
		M 251 Access to services Long term sickness/disability N92=11.7%	N=1794	N	N
OB04	Omnibus Survey April 2004	M 351 Transport Direct/DoT Health problems which limits your daily activities or the work you do' N 429=25.5%	N=1686	N	N

Abbrev	Full title	Sample size disabled	All Valid cases in sample*	Impairment breakdown	Longitudinal
<b>NTS01</b>	National Travel Survey 1999-01	Disabled 16+ in household Household respondent person (HRP) only  N 1123=11.3%  Spouse/cohab N 334=3.4% Child only N 22=0.02% Parent only N 49=0.05 Other person only N 10=0.01% HRP+Spouse/cohab N 183=1.8% Other 2+ N 34= 0.03% None disabled N 5029=50.7% Pre 1999 N 3140=31.6% NB all members of household fill in travel diary of 14days duration	N=9924	N	Y
<b>SHS04</b>	Scottish Household Survey 2003-04	•Main Q N 1546=5.6%  •Diary  DLA recipients 2.9% Incapacity recipients 4.7%	•N=28746.	Y	Y
<b>TAA01</b>	Transport and Aging 2000-01	Presence of disability that affects the use of transport N97=32% Disability makes it difficult to use transport N61=20.1%	N=303	Y	N
		PO Survey Presence of a disability that affects use of transport N127=11.6%	N=1092	Y	N

## Appendix C: data on car ownership and access to private transport

<b>Ownership of</b>	FRS04 NTS01 OB01 GHS04		
<b>Age of</b>	FRS04		
<b>Access to</b>		BHPS04 FRS04 TAA01 ALD04	BHPS04 FRS04 TAA01 ALD04
<b>No access to</b>	LFS05	BHPS04 TAA01 ALD04	BHPS04 TAA01 ALD04
<b>Use of</b>	GHS04	BHPS04	BHPS04
<b>Freq of use of</b>	TAA01		TAA01
<b>Regularly receive lifts from others outside household</b>			BHPS04
<b>Cost of (diary)</b>		FES01	
<b>Cost of (general)</b>	FRS04	LFS05 NTS01	
<b>Parking issues/cost</b>	LFS05	FES01	
<b>Main mode of travel</b>	LFS05	BHPS04	BHPS04
<b>Travel to work</b>		BHPS04 FRS04 LFS05 NTS01	BHPS04 LFS05
<b>Importance of</b>	TAA01	LFS05 TAA01	TAA01
<b>Problems of</b>	LFS05	TAA01 NTS01	TAA01
<b>Do not drive/reasons</b>	TAA01 LFS05 SHS04		

## Appendix D: Qualitative statements from the Transport and Aging survey

### *Public transport*

- Just that, if you're disabled in any way, public transport is very difficult to use. Also, I'm thinking in terms of possibly getting a car again. It is expensive to run. But I do dislike the state of public transport - dirty, anti-social behaviour - and feel that a car gives you comfort.
- Better public transport in my area for those elderly people without a car, and for those requiring to attend hospital - this necessitates two buses
- A balance must be struck between commercial viability and social obligation to provide public transport
- Special or increased transport for disabled people. Dial-a-bus service not easily available
- I would love to have a bus service in our area. At the moment we only have one bus per hour. We have a train service but I have a 20 minute walk to the train station which is hard for me as I have just had surgery on my two knees.
- \*Integrated public transport. \*Improved route /timetable info. \*Public ownership of railways. \*Target French standards.
- More public transport - particularly buses and particularly in rural areas. My family live in Hampshire. There is no bus service to their home!
- Daughter in wheelchair therefore bus, train, underground not suitable. In Vienna we found lifts in train stations and platforms level with trains allowed us access for first time to public transport.
- I would like to see transport competition in this area, and I would like to see a wider use of the small 'Dial-a-bus', which travels more or less with few passengers or sits empty at the side of the road.
- A balance must be struck between commercial viability and social obligation to provide public transport
- Several years ago ASDA put on a bus to take us shopping - we had 1 1/2 hours in store, then returned home more or less to the end of our road. Another company,

DART I think, ran a bus from Houston to Braehead every hour. This was not advertised, and so few used it. The company discontinued the service. This would be excellent, even just once a week to Braehead.

- We need a properly integrated and coordinated public transport system. To start this process bus transport should be re-regulated and the rail system should be nationalised. Until this happens the problems of rural transport will get worse.

### **Buses**

- Companies to re-regulate their buses by 2 or 3 minutes not to come all to the bus stop at once. If a person is short-sighted, then it becomes awkward to distinguish the numbers of the buses, two buses stop and two buses run past leaving a person another long wait. 2 Orange and black discs to near hand side of windscreen easier to see in the sun showing route number. 3. Labels to frame head illustrating emergency door of minibus. 4. Protect glass partition behind driver, cover over for front seat passengers 5. Driver's number, time, etc on the rear of bus ticket where lacking. 6. Passengers to have fares ready, save a lot of time. 7. If drivers sit at the bus stop to kill time, let it be the next one along from the main stop. 8. Drivers should allow time for disabled people to sit down before starting the engine or taking off.
- Bus - a place to put down wheel-chairs. 2. Steps which can be lowered to make access to the bus easier.
- Bus drivers ensure passengers are seated before starting the vehicle. I have two relatives who have fallen flat on their backs. Actually my elderly sister's head was on the bus steps
- Reopen local bus garage and bring back bus conductors
- Would like an easy walk on walk-off bus with no steps going down my road instead of the bus with steps up which is more difficult to board.
- That drivers of buses take more care of the elderly when alighting and leaving buses. They tend to start too fast, before we get to the seat.
- More space in buses. At present, seats are quite cramped and the aisle very narrow to manoeuvre with bags, children etc. (this relates to the small traveller buses).
- I would use the bus more often if the service was more predictable and frequent.
- Difficulties: Yes, when you've got heavy bags to carry. Second, the new low-access buses have no grab-rails to hold on to. And drivers pull away before you're seated.

- I'm partially sighted, I can't see where the bus is going. And I need help to get on and off.
- It's been tremendously improved since ARRIVA. I'd stopped going on buses because of the high steps. Now with the low-floor buses, you can just walk on and it's wonderful. Conductors were a help, but those days are gone. But it was nice - they gave you a hand.
- I find it hard to get on some of the buses with sometimes 2 or 3 steps. I'm lucky if there's a handle to pull me. My legs deteriorate when on a bus or sitting. It takes a wee while to get up. I wouldn't go in any of the wee ones if I can help it. The new ones are great, like walking on the pavement.
- [problems are..]The fact that I'm disabled and the nearest bus stop is down the road.
- But the drivers don't give you time to get on and off. Some drivers don't give enough time to the elderly. Some people have sticks, or shopping. What would help would be: 1 let you get seated, or press the bell to get off, and 2. Shorter distances between stops.
- More buses with low-floor access, more places for fold-up wheelchairs to go. These things would make a big difference

### ***Trains***

- Trains - more attention by rail guards to make sure the disabled person is safely on the train.
- Easy access to trains e.g lifts
- Better car parking security at unmanned stations. Definite platforms at Glasgow central for all trains, grab handles on local trains, litter bins (in floors?). Better advice on where trains are not stopping
- More frequent trains, more staff on the trains and at stations and cleaner trains. The above applies to buses as well
- Yes my eyesight. I can go from Paisley to Glasgow, but I need sighted assistance to go from Glasgow to London
- I can - just - use a train, using a wheelchair, which my husband might push. I could possibly use a train if access was just a bit easier. If the train could be lowered a

bit. At present, my husband has to lift in the wheelchair, and I would have to stand - I would hold onto the grab rail outside and then inside while he lifts the chair in. If I could stay in the chair and ride on, I would use the train much more, because of parking difficulties in Glasgow.

- Very occasionally a high step. And then I can't get on or off, I need help.
- Sometimes at the destination station you still have a public transport problem, there's no integrated transport. You still have to think about how to get to the destination. There have been a lot of problems.
- No. Just the announcements. I wear a hearing aid, and I'm always a bit worried about getting the wrong platform.
- getting on and off, the gap at Paisley Gilmour Street
- Getting out, getting up from the seat, there are no grab rails and the handles on the seat tops are infrequent. There are no straphangers. We need more time to get up and get to the door. Sharp braking makes getting up difficult. You get thrown onto the person opposite. They don't need to brake when they're going at 1 or 2 mph. Also when you're at Central station and looking at the board, the train is three down from the top before the platform is announced. you have 6 minutes to get to the train which had been there for a while. You're tied to being somewhere near the notice board. It's as though they've no interest in the customer. Also old people have to look at a small TV set up high, it's crazy. You used to be able to time journeys to thirty seconds. Difficulty getting off trains especially when in a hurry.
- They're quite good to people like me who are partially sighted. You get assistance on the train, and to and from the waiting room if you have to wait
- It's a matter of resources and disability comes quite low
- I think they think about us, but there is not much done. When you see the services. More could be done. But the staff are helpful. They'll get out ramps, help with wheelchairs
- They might think they do [help] but underneath it all they don't. In my experience, they don't provide assistance for the disabled even when you have phoned up and booked it.

## Appendix E: reference to location of data and key themes in the surveys

	Public transport general	bus service	train	underground	taxis	Car as driver	Car as passenger	Other	Infrastructure
<b>Satisfaction with/difficulty using</b>	BHPS04 TAA01 NTS01/04 SHS04 ALD04	BHPS04 TAA01 NTS01 SHS04 NTS04	BHPS04 TAA01 NTS01 SHS04 NTS04	TAA01	TAA01 SHS04	TAA01 SHS04	TAA01 ADL04	TAA01	TAA01
<b>Satisfaction with info, service, staff</b>	OB04 ALD04 ALD04	OB04 TAA01 ALD04	OB04 TAA01 ALD04	TAA01	TAA01	OB04 TAA01	OB04 TAA01	TAA01	
<b>Satisfaction with info during journey</b>		OB04	OB04			OB04	OB04		
<b>What travel info used tel/web</b>	OB04	OB04	OB04			OB04	OB04		
<b>No Knowledge of</b>	BCS05 BHPS04 TAA01	BCS05 BHPS04 TAA01							
<b>Mode of transport in last 6 months</b>	OB04	OB04	OB04			OB04	OB04		
<b>Access to</b>	TAA01 ALD04	TAA01	TAA01	TAA01	TAA01	BHPS04 FRS04 TAA01	BHPS04 TAA01	TAA01	





## Appendix F: Station accessibility options offered

	Arriva Wales	Central Trains	Chiltern	First Capital Connect	First Great Western	First Scotrail	Merseyrail	Midland Mainline	Network Rail	Northern Rail	Southwest	Southern	Virgin
<b>Total number of stations</b>	<b>5</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>11</b>	<b>13</b>	<b>10</b>	<b>5</b>	<b>13</b>	<b>15</b>	<b>17</b>	<b>5</b>	<b>15</b>
accessible ticket counter	80%	<i>None</i>	<i>None</i>	16%	36%	<i>None</i>	20%	60%	61%	20%	11%	<i>None</i>	26%
accessible ticket machines	20%	<i>None</i>	50%	16%	81%	8%	<i>None</i>	20%	46%	<i>None</i>	29%	60%	33%
all doors wide enough for wheelchairs	80%	<i>None</i>	66%	16%	27%	8%	10%	20%	92%	13%	35%	40%	100%
ramp for trains	100%	100%	66%	100%	100%	100%	100%	100%	100%	100%	64%	100%	100%
mobility impaired set down and pick up	80%	100%	100%	83%	100%	15%	20%	100%	100%	20%	<i>None</i>	80%	100%
accessible toilets	60%	66%	16%	50%	100%	30%	<i>None</i>	100%	92%	33%	41%	80%	60%
accessible taxis	80%	33%	<i>None</i>	66%	100%	<i>None</i>	<i>None</i>	60%	100%	20%	41%	100%	93%
hearing loop	100%	33%	50%	83%	81%	84%	100%	100%	84%	26%	94%	80%	100%
accessible departure boards	80%	33%	100%	100%	100%	61%	40%	100%	100%	40%	100%	100%	93%

	<b>Arriva Wales</b>	<b>Central Trains</b>	<b>Chiltern</b>	<b>First Capital Connect</b>	<b>First Great Western</b>	<b>First Scotrail</b>	<b>Merseyrail</b>	<b>Midland Mainline</b>	<b>Network Rail</b>	<b>Northern Rail</b>	<b>Southwest</b>	<b>Southern</b>	<b>Virgin</b>
full tactile edging on platforms	60%	<i>None</i>	33%	<i>None</i>	45%	8%	20%	20%	30%	53%	52%	<i>None</i>	46%
partial tactile edging on platforms	<i>None</i>	33%	<i>None</i>	<i>None</i>	9%	8%	<i>None</i>	20%	23%	<i>None</i>	<i>None</i>	40%	<i>None</i>
without any recorded disabled parking	20%	66%	33%	33%	<i>None</i>	38%	70%	<i>None</i>	30%	66%	<i>None</i>	40%	<i>None</i>

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