

Understanding the travel needs of London's diverse communities

Disabled People

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Report prepared by SPA Future Thinking

Disabled People

Key findings

- Eleven per cent of Londoners say they are disabled – mobility disability is the most frequently mentioned disability
- Disabled people travel less frequently than non-disabled people
- Disabled people are less likely to mention overcrowded services, cost of tickets and unreliable services than non-disabled Londoners, however, they are more likely to mention concern over anti-social behaviour and fear of crime in general
- Concerns over safety and security are similar between disabled and non-disabled people
- Many disabled Londoners claim that a greater (or more obvious) provision of accessible travel information would encourage them to use public transport more

Summary

Eleven per cent of Londoners consider themselves to be disabled. Estimates of the proportion of Londoners who are disabled range up to 24% though 11% is taken from the LTDS and is used here for consistency with other data shown. Disability increases with age: 36% of disabled people in London are aged 65+, compared with 6% of non-disabled people. Due to the longer life expectancies of women, a higher proportion of disabled people are women (54%) compared to non-disabled people (51%). Disabled people are also more likely to be retired and on lower household incomes than non-disabled people. Disabled Londoners of working-age are less likely to be employed, and those that are, are more likely to be working part-time than non-disabled people [2].

Sixty-two per cent of all disabled Londoners say they are mobility impaired (compared to 7% of all Londoners). Disabled people have a variety of impairments, some of which include mental health conditions and visual/hearing impairments, and some of which are as a result of long-term illnesses. In some cases, disabled people have multiple impairments. The vast majority (93%) of disabled people say their impairments limit their ability to travel and get about [2].

Transport use

Disabled Londoners travel less frequently than non-disabled Londoners. The main transport modes used by disabled people are the same as non-disabled people – namely walking, the bus, and the car (both as a driver and a passenger). However, lower proportions of disabled people use each of these modes at least once a week [2].

- Lower proportions of disabled people travel by bike, National Rail and Tube compared to non-disabled people [2]

Disabled people

- Disabled Londoners are most likely to use public transport for the purposes of shopping, personal business and leisure. They are considerably less likely to commute than non-disabled Londoners due to lower rates of employment (partly due to the older age profile of disabled people) [2]
- Members of Dial-a-Ride (DaR) tend to be older than the average disabled Londoner – 81% of DaR members are 65 or over, compared to 39% of all disabled Londoners [25]

Barriers

The barriers to increased public transport use faced by disabled people depend somewhat on their particular impairment. For many, physical accessibility is an important driver of public transport use [55]. Issues of physical accessibility are often exacerbated at peak travel times when passenger numbers are higher. Overcrowding is therefore the second most frequently mentioned barrier by disabled people [14].

- Since 45% of disabled Londoners own a pass or card which gives them reduced fares/free travel [2], cost is mentioned by a smaller proportion (26%) of disabled people as a barrier, compared to non-disabled people (47%) [14]
- Disabled Londoners are also less likely to mention the potential barriers of unreliable services and slow journey times since they are less likely to commute than non-disabled Londoners [14]
- Instead, barriers to increased use of public transport which affect a greater proportion of disabled people include prompted concerns over anti-social behaviour (54% of disabled people vs. 38% of non-disabled people), concern over knife crime (40% of disabled people mention this vs. 26% of non-disabled people), fear of crime getting to the bus/train (40% of disabled people vs. 28% of non-disabled people), fear of crime on the bus/train (39% of disabled people vs. 27% of non-disabled people) and risk of accidents (17% vs. 8%) [14]
- However, in general, fears over personal security do not affect disabled people to a greater extent than non-disabled people. 14% of disabled Londoners say nothing makes them worry about their personal security on public transport (in line with 13% of non-disabled Londoners [14]).
- The attitudes and behaviour of staff and fellow passengers can affect the journey experience for disabled people. Helpful and supportive staff contribute positively to the journey experience though it is acknowledged that impairments can be 'hidden' and not immediately obviously to staff and other passengers [55]

Information seeking

Also important in improving the travel experience of disabled passengers is accessibility of information. For both pre-journey planning and journey completion, it seems information sources are under-used.

- Even amongst Londoners with access to the internet, disabled people are less likely to use the TfL website (46% do so) compared to non-disabled people (81%). They also visit the website less frequently than non-disabled people. This may result from the older age profile of disabled Londoners (with older people engaging less with online technology compared to younger people) [10]
- As of 2007, eight per cent of all Londoners have looked for or used travel information in an alternative format (the most common being electronic and large print) [56]
- 2002 research revealed 40% of disabled Londoners felt they would use public transport more often if it were easier to obtain travel information – 13% said they did not find it easy to obtain information on travel services [57]
- Awareness of London Underground information products (specifically designed to help disabled people) tends to be low though these products are well received [8]
- The ease of accessing information at bus stops, on platforms and using maps and signs as part of the Legible London scheme depends on the type of impairment. Disabled people acknowledge the difficulty of positioning information and ensuring it is legible across a diverse spectrum of impairments [58]

1. Introduction

Disabled people or those with a long-term health condition may face a number of barriers to travelling. Many of these involve the physical infrastructure of public transport, though they can also include less tangible barriers such as reduced confidence in travelling independently. Transport for London (TfL) continues to invest in improving transport accessibility for disabled people who live in, work in, or visit London [59].

Throughout this chapter, data for disabled Londoners are shown in comparison to data for non-disabled Londoners and all Londoners. Where London Travel Demand Survey (LTDS) data are used, disabled Londoners are defined as having answered yes to the question, ‘Do you have a long-term physical or mental disability or health issue that limits your daily activities or the work you can do (include any issues due to old age)?’

It should be noted that the differences highlighted between disabled and non-disabled people in this chapter may well be influenced by a number of factors other than impairment(s), with age, income and education all affecting perceptions towards travel in London and travel behaviour.

It is also important to be aware that disability is not homogenous and the effects of having a physical/mental impairment or health issue on the use of public transport are therefore diverse.

Any unfamiliar terminology can be found in the glossary at the end of this report.

2. Characteristics

Eleven per cent of Londoners consider themselves to be disabled¹. The vast majority (93%) of disabled Londoners say their impairments limit their ability to travel and get about [2]. Two per cent of all Londoners ever use a wheelchair [2].

The most frequently mentioned disability is that of mobility impairment (62% of disabled Londoners and seven per cent of all Londoners say they are mobility impaired). Nineteen per cent of disabled Londoners report having more than one impairment [2]. Data on the registered blind in London show that 31% have an additional impairment [60].

¹ According to the LTDS definition – other estimates range up to 24%

Disabled people

Profile of impairments in London (2010/11) [2]

%	All Londoners	All disabled Londoners
Disabled	11	-
Non-disabled	89	-
Impairment affects travel	10	93
Ever use a wheelchair	2	14
Mobility impairment	7	62
Serious long term illness	3	28
Mental health condition	1	11
Visual impairment	1	5
Hearing impairment	1	7
Learning impairment	0	4

Base size not shown as data taken from LTDS

Where percentages do not sum to 100, this is due to rounding

Note that if an individual has more than one impairment, only one impairment is captured in the data above. The type of impairment captured depends on the extent to which it poses an impediment to travel. This means some of the impairments may be under-represented in the table above.

Across data sources, the percentage of disabled Londoners varies somewhat. Some reports focus on medically derived terminology to classify disability, whilst others encompass a wider social model of disability. Data from the General Lifestyle Survey (2008) asks people if they have been/expect to be troubled over a period of time from an illness, disability or infirmity. This broader definition inevitably results in a higher proportion (24%) of Londoners with a long-standing illness or impairment. These data, whilst based on a different definition to the LTDS, show that England as a whole has higher rates of disability than London [61].

Self-reported sickness by region and gender (2008) [61]

%	London	England
Base	(1,580)	(14,570)
Long-standing illness/impairment ²	24	30
Limiting long-standing illness/impairment ³	15	18

² Q. Do you have any long-standing illness, disability or infirmity? By long-standing I mean anything that has troubled you over a period of time or that is likely to affect you over a period of time?

³ Q. Does this illness or disability (do any of these illnesses or disabilities) limit your activities in any way?

Disabled people

Women are more likely than men to be disabled. Of all disabled Londoners, 54% are women (compared to 51% of the non-disabled population). This reflects the longer life expectancy of women compared to men which increases the likelihood of experiencing infirmity as a result of old age [2].

The proportion of disabled Londoners increases with age such that 36% of disabled Londoners are aged 65 and over (compared to sixper cent of non-disabled Londoners) [2].

The correlation of disability with age is seen in the ethnic profile of disabled Londoners. Twelve per cent of white Londoners are disabled; marginally higher than black, Asian and minority ethnic (BAME) Londoners, of whom eight per cent are disabled[2]. Whilst levels of disability are similar across the ethnic groups in London, 72% of disabled Londoners are white. The lower proportion (27%) of BAME disabled Londoners results from the much younger age profile of BAME communities compared to white communities [2].

Again, the effect of age on disability is shown in the high proportion (50%) of disabled people who are retired (compared to 11% of non-disabled people).

Disabled people

Demographic profile of the disabled population in London (2010/11) [2]

%	All	Disabled	Non-disabled
Gender			
Men	49	46	49
Women	51	54	51
Age			
5-10	15	4	15
11-15	5	2	7
16-24	12	4	16
25-59	52	45	54
60-64	4	9	3
65-70	5	11	3
71-80	4	16	2
81+	3	9	<1
Ethnicity			
White	64	72	64
BAME	35	27	35
Household income			
<£9,999	23	51	19
£10,000 - £19,999	21	27	20
£20,000 - £34,999	18	10	20
£35,000 - £49,999	13	6	14
£50,000 - £74,999	12	3	13
£75,000+	13	3	14
Working status			
Working full-time	46	8	51
Working part-time	10	5	10
Student	10	3	11
Retired	16	50	11
Not working	18	34	16

Base size not shown as data taken from LTDS

Note that LTDS data on disabled people excludes under 5s

Disabled Londoners have lower rates of employment than non-disabled Londoners. Concentrating only on the working-age population of London (those aged 16-64), 45% of disabled people are in employment. This compares to 73% of the non-disabled working-age population. Disabled workers are also more likely to work part-time than non-disabled workers – 28% are employed on a part-time basis compared to 21% of non-disabled workers [62⁴].

The lower levels of employment and higher levels of retirement amongst disabled Londoners mean a higher proportion (51%) have a household income of less than

⁴ Data are taken from the 2009 Annual Population Survey with a sample that includes 5,500 disabled Londoners

Disabled people

£10,000 compared to 19% of non-disabled Londoners [2]. It should be noted that household income does not include any benefits people may receive (not all of which are paid benefits).

3. Travel behaviour

The average number of trips made per weekday by disabled Londoners is 2.09. This is below the average of 2.72 for non-disabled Londoners [2]. Disabled people tend to fall into the category of ‘travel shy’ according to the Customer Touchpoints typology [37]. This means they lack confidence when travelling and as a result like to stick to familiar routes and modes.

‘I like to know the routes which don’t have long walkways or lots of stairs, and it’s nice to know where there are places for me to sit down and take a rest if I need to.’
(Mobility impaired customer) [8]

‘You get settled in habits, so you rarely go to explore.’
(Visually impaired customer) [58]

Access to vehicles

Disabled Londoners are less likely to hold a driving licence (38%) compared to non-disabled Londoners (55%) [2].

Proportion of Londoners with a full car driving licence (2010/11) [2]

%	All	Disabled	Non-disabled
Holds a full car driving licence	54	38	55
Does not hold a full car driving licence	46	62	45

Base size not shown as data taken from LTDS

Similarly, disabled Londoners are less likely to have household access to a car than non-disabled people. Fifty-eight per cent of disabled Londoners do not have household access to a car compared to 33% of non-disabled people [2].

Proportion of Londoners in a household with access to a car (2010/11) [2]

%	All	Disabled	Non-disabled
0 cars	36	58	33
1 car	44	33	46
2+ cars	20	10	21

Base size not shown as data taken from LTDS

Use of transport modes

The main modes of transport used by disabled Londoners at least once a week are walking (78%), bus (55%), car as a passenger (44%) and car as a driver (24%). These are also the main modes of transport used by non-disabled Londoners. However, the proportions of Londoners walking, using the bus and driving (at least once a week) are lower for disabled people than for non-disabled people, suggesting a lower frequency of travel for disabled people [2].

A key reason amongst disabled Londoners for using the bus over other modes, is the shorter distances required to reach bus stops as opposed to train or Tube stations. It is also assumed that, due to the high number of bus stops, buses will take passengers closer to their end destination [63]. Wheelchair users can come into conflict with passengers travelling with buggies or pushchairs, and research has found that further clarity on the rules around priority could reduce this [90].

Similar levels of use between disabled and non-disabled Londoners are seen for the car (as a passenger), black cabs, motorbikes, the Overground and trams. The only transport mode which sees a higher proportion of disabled Londoners using it at least once a week are other taxi/minicabs (seven per cent compared to six per cent of non-disabled) [2].

Notably smaller proportions of disabled Londoners travel by bicycle (four per cent of disabled Londoners use this at least once a week in the summer compared to 14% of non-disabled Londoners), National Rail (seven per cent compared to 17%), and the Underground (18% compared to 39%) [2].

Proportion of Londoners using modes of transport at least once a week (2010/11) [2]

%	All	Disabled	Non-disabled
Bus	61	55	61
Bicycle- summer	13	4	14
Bicycle- winter	4	1	4
Car (as a driver)	40	24	42
Car (as a passenger)	46	44	47
DLR	4	2	4
London taxi/black cab	5	4	5
National Rail	16	7	17
Motorbike	1	<1	1
Other taxi/minicab (PHV)	6	7	6
Overground	5	3	6
Tram (Croydon Tramlink)	2	2	2
Underground	36	18	39
Walking	96	78	98

Base size not shown as data taken from LTDS

Disabled people

Disabled Londoners are no more or less likely to use day buses compared to night buses. The same cannot be said for other equality groups such as women [21].

Comparison of day and night bus users (2008) [21]

%	Disabled	Non-disabled
Base	-	-
Day bus users	9	91
Night bus users	8	92

The main purpose of travelling by bus during the day for non-disabled Londoners is to get to/from work (52%). For disabled Londoners, the comparative figure is lower at 29% and instead higher proportions of disabled Londoners travel by bus during the day for the purposes of shopping (20%), to visit friends and relatives (13%) and for other reasons (17%) [21].

Similar patterns are seen for the purposes of bus journeys at night although, for both disabled and non-disabled people, leisure increases to account for approximately a quarter of all journeys [21].

Purpose of bus journey by disability and time of day (2008) [21]

%	During the day		At night	
	Disabled	Non-disabled	Disabled	Non-disabled
Base	(3,288)	(33,999)	(566)	(6,474)
To/from work	29	52	31	49
To/from school/education	11	14	7	5
To/from shopping	20	10	4	1
Visiting friends/relatives	13	9	18	13
Leisure	8	7	23	25
Other purpose	17	8	17	7

Disabled people

The purpose of weekday journeys made by public transport varies for disabled and non-disabled people. Half (51%) of weekday journeys made by disabled Londoners are for the purposes of shopping/personal business. This compares to 26% of journeys made by non-disabled Londoners. A further 23% of journeys made by disabled Londoners are for the purposes of leisure (20% for non-disabled Londoners). Disabled people are less likely than non-disabled people to make journeys for the purposes of work, and education [2].

Weekday journey purpose (2010/11) [2]

%	All	Disabled	Non-disabled
Shopping/personal business	28	51	26
Usual workplace	20	5	21
Leisure	20	23	20
Education	11	4	11
Other work related	8	3	8
Other	14	14	14

Base size not shown as data taken from LTDS

Disabled people

Ticket types

Compared to non-disabled Londoners, disabled people are considerably more likely to use a Freedom Pass and less likely to use Oyster pay as you go (PAYG). This is true for buses, trains and the Underground. Similar proportions of disabled and non-disabled Londoners use cash/singles/returns to travel, whilst lower proportions of disabled people make use of Travelcards[22].

Tickets and passes used on public transport (2012) [22]

%	All	Disabled	Non-disabled
Bus			
Base (all who use the bus)	(883)	(108)	(755)
Oyster pay as you go (PAYG)	61	23	64
Freedom Pass (OAP/blind/disabled)	23	71	18
Cash/single/return	2	2	2
Any Travelcard	12	4	13
Any bus pass	5	-	6
Other	1	-	-
Train			
Base (all who use the train)	(726)	(81)	(630)
Oyster PAYG	47	19	50
Freedom Pass (OAP/blind/disabled)	21	66	17
Cash/single/return	12	8	12
Any Travelcard	24	9	26
Other	1	-	-
Underground			
Base (all who use the Underground)	(859)	(89)	(753)
Oyster PAYG	59	23	63
Freedom Pass (OAP/blind/disabled)	21	67	16
Cash/single/return	3	4	3
Any Travelcard	18	7	20
Other	1	-	-

Modes shown where base size allows sub-group comparison

Oyster card

Given the high use of Freedom Passes amongst disabled people, the majority (79%) of disabled Londoners do not possess an Oyster card (compared to 42% of non-disabled Londoners) [2].

Possession of an Oyster card (2010/11) [2]

%	All	Disabled	Non-disabled
Have an Oyster card	54	21	58
Do not have an Oyster card	46	79	42

Base size not shown as data taken from LTDS

Note that Oyster card ownership excludes Freedom Passes, Oyster photocards and Zip cards

Free travel and reduced fares

A much higher proportion of disabled Londoners (45%) possess a pass or card that entitles them to free travel or reduced fares compared to non-disabled Londoners (24%). A greater proportion of disabled people possess the older person's Freedom Pass (43%) than the disabled person's Freedom Pass (12%). In both instances, the proportion of disabled people in possession of these passes is higher than for non-disabled Londoners [2].

Possession of pass/card entitling free travel/reduced fares (2010/11) [2]

%	All	Disabled	Non-disabled
Possess a pass/card for free travel/reduced fares			
Yes	26	45	24
No	74	55	76
Pass/card			
Older person's Freedom Pass	15	43	12
Taxicard	1	11	<1
Dial-a-Ride	<1	4	<1

Base size not shown as data taken from LTDS

Disabled people

Cycling

Nine per cent of disabled Londoners sometimes use a bike to get around London (a smaller proportion than the 22% of non-disabled Londoners who do so) [13].

Proportion of Londoners who cycle (2012) [13]

%	All	Disabled	Non-disabled
Base	(1,000)	(186)	(799)
Cyclist (sometimes uses a bike to get around London)	20	9	22
Non-cyclist (never uses a bike to get around London)	80	91	78

Of those who do not ever cycle, disabled Londoners are more likely to say they cannot ride a bike (33%) compared to non-disabled Londoners (14%) [13].

Proportion of Londoners able to ride a bike (2012) [13]

%	All	Disabled	Non-disabled
Base (those who didn't mention they use a bike)	(778)	(170)	(596)
Can ride a bike	82	66	86
Cannot ride a bike	17	33	14

Disabled people

A majority (83%) of disabled Londoners are 'pre-primed' to the idea of taking up cycling according to the TfL behaviour model for non-cyclists. This means they would not consider/have never thought about taking up cycling, have given it thought but decided against it or have taken it up but couldn't stick to it. This compares to 75% of non-disabled Londoners [13].

15% of disabled Londoners (and 24% of non-disabled Londoners) are classified as 'primed' meaning they are thinking about taking up cycling/have decided to take up cycling or taken up cycling but could not stick to it [13].

Behaviour model of non-cyclists (2012) [13]

%	All	Disabled	Non-disabled
Base (all non-cyclists)	(824)	(174)	(637)
<u>Pre-primed</u>			
- 'Would not consider taking up cycling'			
- 'Have never thought about taking up cycling'	77	83	75
- 'Have given taking up cycling some thought but am not going to do so'			
- 'Had taken up cycling but couldn't stick to it'			
<u>Primed</u>			
- 'Am thinking about taking up cycling'			
- 'Have decided to take up cycling'			
- 'I took up cycling but couldn't stick to it'	22	15	24
- 'Have started to take up cycling but am finding it difficult'			
- 'Have started to take up cycling and am finding it easy'			
<u>Preparation</u>			
- 'Am setting things in place to take up cycling'	1	1	1

Cycling schemes

Awareness of Barclays Cycle Hire is relatively high with 71% of disabled Londoners aware (slightly lower than the 78% of non-disabled Londoners aware) [13].

Levels of likely future use of Barclays Cycle Hire are lower amongst disabled Londoners (13%) compared to non-disabled Londoners (34%) [13].

Expected use of Barclays Cycle Hire in future (2012) [13]

%	All	Disabled	Non-disabled
Base (all who have not hired a bicycle yet)	(950)	(186)	(750)
Yes	31	13	34
No	66	85	62
Don't know	3	2	4

Awareness of Barclays Cycle Superhighways is lower than awareness of Barclays Cycle Hire for both disabled and non-disabled Londoners. Thirty-one per cent of disabled Londoners are aware of Barclays Cycle Superhighways, compared to 45% of non-disabled Londoners [13].

Of current non-users, compared to 23% of non-disabled Londoners, 10% of disabled Londoners say they are likely to use Barclays Cycle Superhighways in the future [13].

Expected use of Barclays Cycle Superhighways (2012) [13]

%	All	Disabled	Non-disabled
Base (all who are aware of Superhighways but have not used a Superhighway)	(365)	(57)	(300)
Yes	21	10	23
No	75	89	73
Don't know	4	2	4

Disabled people

Walking

Non-disabled people are more likely to walk⁵ at least once a week (90%) compared to disabled people (82%) [24]. As seen earlier, walking is a key mode of travel for disabled people but they tend to travel less overall compared to non-disabled people.

The proportion of people who walk at least once a week for a variety of reasons is consistently lower among disabled people than non-disabled people. The difference in behaviour is particularly evident for walking at least once a week to reach work/school/college – 19% of disabled people do so compared to 55% of non-disabled people [24]. This reflects the lower proportion of disabled Londoners in employment (partly as a result of age).

Walking at least once a week by purpose of journey (2012) [24]

% who walk at least once a week	All	Disabled	Non-disabled
Base	(1,014)	(157)	(860)
Walk at least once a week	89	82	90
Walk...			
To complete small errands such as getting a newspaper or posting a letter	87	80	88
As part of a longer journey	76	62	78
To visit pubs/restaurants/cinemas and other social places	48	31	50
To visit friends and relatives	48	39	49
To get to work/school/college	51	19	55
To take a child to school	17	9	18

⁵ Defined as walking as a mode of transport for 5+ minutes or going for a walk to get exercise or fresh air

Dial-a-Ride (DaR) membership

Four per cent of all disabled Londoners are members of DaR[25]. Of all registered DaR members, 74% have actually used the service [25].

DaR members tend to be older than the average disabled Londoner – 81% of DaR members are 65 or over, compared to 39% of all disabled Londoners [25].

DaR membership by age (2010) [25]

%	All disabled Londoners	DaR members
Base	(1,028,500)	(43,758)
Under 18	6	1
18-34	11	2
35-49	18	5
50-64	25	10
65-79	26	27
80-89	11	38
90+	2	16
Unknown	-	2

DaR members are more likely to be women than the total population of disabled Londoners. Seventy-four per cent of DaR members are women compared to 56% of the disabled population in London [25].

Door-to-door services

Disabled people who are eligible for a door-to-door service but do not use one are far less likely to be aware of Taxicard compared to DaR. Eight per cent of eligible non-users claim they are unaware of DaR compared to 30% who are unaware of Taxicard[63].

Priority seating

Some public transport users (such as some disabled people, the elderly and those with children) are less able to stand than others. Passengers are expected to keep priority seats free or vacate them should other people need to seat down. Awareness of priority seating on buses is higher than awareness of priority seating on the Tube and on trams (88% of bus users are aware of priority seating on buses compared to 62% of both Tube and tram users who are aware of priority seating on Tubes and trams) [64].

Disabled people

A higher proportion of bus users are aware of the wheelchair area on buses (94% aware) compared to those aware of the priority seats [64].

It should be noted that these data were collected in 2006 and awareness levels may have changed since then.

Awareness amongst Londoners of priority seating on public transport and wheelchair area on buses (2007) [64]

%	All
Base (Londoners who use mode – in brackets below)	
Aware of wheelchair area on buses (797)	94
Aware of priority seating on buses (797)	88
Aware of priority seating on the Tube (714)	62
Aware of priority seating on trams (108)	62

Of those who consider themselves eligible to sit in priority seats, 36% always/often do so whilst on the bus. This compares to seven per cent of those who are not eligible. For the Tube, 10% of those eligible always/often sit in priority seats compared to six per cent of those not entitled to do so [64]. This suggests that those eligible to sit in priority seats are making use of the seats less frequently than they could.

However, these results are based on people who consider themselves to be eligible to sit in priority seats and are not filtered by those who use the bus and Tube to get around. Therefore these results should be considered indicative findings only.

How often people claim to sit in priority seats by eligibility to do so (2007) [64]

%	Those eligible	Those not eligible
Base	(152)	(734)
Bus		
Always	12	3
Often	24	4
Rarely	15	35
Never	6	27
Tube		
Always	3	1
Often	7	5
Rarely	17	27
Never	25	32

4. Satisfaction with public transport

Overall satisfaction with various transport modes in London is measured on an 11-point scale, with 10 representing extremely satisfied and 0 representing extremely dissatisfied (this is then scaled up to 100). Levels of satisfaction with public transport amongst disabled Londoners are relatively high with the lowest mean rating given being 78 for bus stations. Trams score particularly highly in terms of overall satisfaction, with disabled Londoners giving this service a mean rating of 88[6].

In general, the mean satisfaction ratings across various transport modes are marginally higher for disabled Londoners compared to non-disabled Londoners. This may be in part due to age, as older people are more likely to give higher satisfaction ratings.

Overall satisfaction with transport modes (2010/11) [6]

Mean rating (0-100)	All	Disabled	Non-disabled
Bus services			
Base	(9,600)	(506)	(8,590)
Mean satisfaction	80	82	80
Bus stations			
Base	(3,552)	(145)	(2,275)
Mean satisfaction	73	78	73
Dial-a-Ride			
Base	n/a	(2,562)	n/a
Mean satisfaction	n/a	91	n/a
DLR			
Base	(3,478)	(63)	(3,064)
Mean satisfaction	81	85	81
Overground			
Base	(5,239)	(139)	(4,928)
Mean satisfaction	80	84	80
Trams			
Base	(918)	(74)	(760)
Mean satisfaction	85	88	85
Underground			
Base	(14,857)	(602)	(13,257)
Mean satisfaction	79	80	79
Victoria Coach Station			
Base	(1,129)	(60)	(1,069)
Mean satisfaction	78	84	78

Satisfaction not shown for London River Services, minicabs (PHV), Night buses, Taxis and Woolwich Ferry due to small base sizes

Disabled people

Mean rating	Level of satisfaction
Under 50	Very low/weak/poor
50-54	Low/weak/poor
55-64	Fairly/relatively/quite low/weak/poor
65-69	Fair/reasonable
70-79	Fairly/relatively/quite good
80-84	Good or fairly high
85-90	Very good or high
90+	Excellent or very high

Satisfaction levels amongst disabled users are high across various aspects of the DaR service. The highest level of satisfaction is with DaR drivers (mean rating of 94). Aspects of the vehicle (such as cleanliness and ease of access) are also rated highly. Receiving a relatively lower satisfaction rating is the booking process (mean rating of 80) though this is still classed as a 'good or fairly high' rating [6].

Satisfaction with DaR (2010/11) [6]

Mean rating (0-100)	All
Base	-
Satisfaction with...	
Driver	94
Interior vehicle cleanliness	93
Exterior vehicle cleanliness	92
Ease of getting on the bus	91
Ease of getting off the bus	91
Ease of using the lift	90
Bus punctuality	89
Smoothness and freedom from jolting	87
Telephone operator	86
The booking process	80

Satisfaction with streets

Disabled Londoners are significantly less likely to be satisfied with the streets and pavements on their last walking journey than non-disabled Londoners, with 50% of disabled Londoners being satisfied compared to 70% of non-disabled Londoners. Disabled Londoners have only somewhat lower satisfaction with the streets and pavements on their last car journey compared to non-disabled Londoners (59% and 63% respectively).

Overall satisfaction with streets and pavement after last journey (2012) [88]

Net satisfaction (%)	All	Disabled	Non-disabled
Walking journey			
Base	(967)	(117)	(836)
Net satisfaction	68	50	70
Car journey			
Base	(873)	(102)	(759)
Net satisfaction	62	59	63

*Cycling base size too small (18) among disabled people to report on the data

5. Barriers

Barriers to greater public transport use

As part of the Life Opportunities Survey (a large-scale survey of disability in Great Britain undertaken by the Office for National Statistics), 74% of adults with impairments name at least one mode of transport which they ‘do not use at all’ or ‘use less than they would like’ compared to 58% of adults without impairments. This suggests that disabled people face more (or increased) barriers to public transport use [65].

In research with disabled people (all of whom claim their impairment impacts their ability to use public transport), 31% say they only make journeys they have to make, and 15% say they put off journeys because they are too difficult to complete [63]. This re-emphasises the barriers some disabled people face when contemplating using public transport.

Those saying they only complete essential journeys include a higher proportion of older respondents, those on low household incomes, and those without a car. All of these factors contribute to the barriers which prevent people from making journeys that are not strictly necessary (such as journeys for social purposes) [63].

Ability to use public transport (amongst disabled people who say their impairment affects their use of public transport) (2004) [63]

%	Disabled
Base	(372)
Make most journeys reasonably easily	29
Make most journeys with a lot of effort	25
Put off many journeys because it's too difficult	15
I only make journeys I must make	31

The extent to which perceived barriers effect travel frequency and behaviour depends somewhat on the impairment in question. Those with hearing impairments are most able to fulfil their travel aspirations (referring to the desire to complete essential journeys). People with learning impairments rely on familiarity and routine which tends to limit journeys made to those that are habitual. People with sight difficulties tend to find travel after dark more challenging. However, the group least able to fulfil their travel aspirations are those with walking impairments. Long distances to/from public transport and at interchanges, combined with the presence of stairs, can limit the journeys made by those with walking impairments [63].

Higher proportions of disabled Londoners, compared to non-disabled Londoners, cite a number of barriers to greater public transport use. These include concerns about anti-social behaviour (54% of disabled Londoners vs. 38% of non-disabled Londoners), concerns about knife crime (40% of disabled Londoners vs. 26% non-

Disabled people

disabled Londoners), fear of crime getting to the bus/train(40% of disabled Londoners vs. 28% non-disabled Londoners)fear of crime on the bus/train (39% vs. 27%), risk of accidents (17% vs. 8%) and graffiti (16% vs. 8%)[14].

For disabled Londoners, cost of tickets is cited by a smaller proportion (26%) compared to non-disabled Londoners (47%). Also considered less of a barrier are unreliable services (34% of disabled Londoners vs. 45% non-disabled Londoners) and slow journey times (27% vs. 45%). These potential barriers are also cited by smaller proportions of older Londoners compared to all Londoners [14].

Potential barriers to greater public transport use which affect similar proportions of disabled and non-disabled Londoners include overcrowded services, and concerns about dirty environment getting to the bus/train and on the bus/train [14].

Barriers to using public transport more often (prompted)(2011) [14]

%	All	Disabled	Non-disabled
Base	(1,000)	(124)	(867)
Overcrowded services	60	52	60
Cost of tickets	45	26	47
Unreliable services	44	34	45
Slow journey times	43	27	45
Concern about anti-social behaviour	40	54	38
Fear of crime getting to the bus/train	29	40	28
Fear of crime on the bus/train	29	39	27
Fear about knife crime	28	40	26
Dirty environment on the bus/train	26	26	26
Dirty environment getting to the bus/train	18	15	19
Fear of terrorist attacks	12	18	12
Lack of info on how to use public transport	11	11	11
Risk of accidents	9	17	8
Graffiti	9	16	8
Don't understand how to buy bus tickets	6	6	6
Accessibility issues/no lift	1	5	1
None of these	13	14	13

Responses shown if exceed 4% for disabled individuals

Only five per cent of disabled people mention accessibility issues as a barrier to increased public transport use. Whilst this is encouraging, it should be noted that the small base size of disabled people (124) in this study [14] had a smaller proportion of people with mobility impairments compared to the wider London average. Physical accessibility is commonly mentioned as a potential barrier to increased public transport use in other studies.

Through assessed journeys completed by disabled people who commute in London, a number of barriers to travel were identified [55]. These barriers (often intensified at peak times when passenger numbers are elevated) can be grouped as follows:

- Accessibility of information
 - Information at bus stops and on platforms is often considered to be too small and positioned too high/incorrectly angled
 - Audio announcements are considered to be of great use (when audible and clear)
- Physical accessibility
 - Greater support from bus drivers to board buses would be welcome. This involves driving closer to the kerb, routinely lowering the bus floor, and insisting other passengers allow disabled people to board the bus first
 - Any difficulties experienced when entering stations and boarding Tubes and trains are exacerbated at times of overcrowding. Disabled people can find it difficult to move around, hold onto handrails, and reach priority seats
- Staff behaviour and attitudes
 - Helpful and supportive staff make a significant difference to the travelling experience of disabled people though reports of staff behaviour and attitudes are mixed
 - Staff should act as 'champions', setting the example for other passengers on how to treat disabled people supportively and with respect
- Fellow passengers' attitudes
 - Passengers travelling at peak times tend to move through crowds purposefully, intent on reaching their destinations quickly. This means they are not always aware of other passengers, in particular those with impairments which are not immediately apparent

Factors which can have physical impacts (such as discomfort, pain or tiredness) or emotional impacts (such as lowered confidence, anxiety or frustration) are often perceived as barriers to greater public transport use amongst disabled Londoners. Barriers can affect transport use in a number of ways such as changing the modes used, the time of day journeys are made, and how journeys are planned [66].

For blind and mobility impaired Londoners, an inconsistency between (and within) modes limits the number of journeys they make which include multiple interchanges. 'Inconsistencies' refers to differences in the design of vehicles, wheelchair access, availability of ramps and information formats [67].

Barriers to travelling by bus for mobility scooter users

According to tentative estimates, there are 11,700 – 43,000 mobility scooter users in London [68]. These users face unique challenges when using public transport. Research has been conducted to develop a policy on travelling by bus for mobility scooter users. This research identified the minimum space requirements needed for a range of mobility scooters to be present on buses. It also found that users differ in their

ability to manoeuvre their scooter and therefore this may affect the amount of space required. Due to the need for users to drive into and out of the bus whilst facing forwards, it is important that enough space is available within the bus for scooters to be turned 360 degrees [68].

Barriers to greater public transport use (amongst disabled teenagers)

Research conducted with disabled teenagers identified that many of their perceived barriers to greater public transport use are also experienced by disabled adults and the wider London population [69]. However, using public transport is seen as part of 'normal' teenage life and therefore it is both practically and symbolically significant to younger disabled Londoners. It is thought that personality (more so than impairment) is important in determining attitudes and behaviour towards public transport amongst disabled teenagers [69].

As part of this research, many of the disabled teenagers acknowledged that some solutions to increase transport accessibility are harder to implement (such as ensuring the Underground is 100% accessible) than others. Solutions thought to be more achievable include staff training to ensure staff know (and enforce) policies, promotion of travel planning services, and ensuring information on accessibility is kept up to date [69].

Barriers to increased Tube usage

Those without mobility impairments are more likely to say the Underground is easily accessible to everyone (mean rating of 60 out of 100) compared to those with mobility impairments (mean rating of 46). Similarly, those without mobility impairments are more likely to think the Underground service is for everyone [28].

The Underground is given a mean rating of 67 for being simple to use by those with mobility impairments (this is marginally lower than the rating of 74 given by those without mobility impairments). There is little difference between those with and without mobility impairments in the ratings given for the Underground having well designed trains and well planned/laid out stations [28].

Opinions of London Underground (2009) [28]

Mean rating (0-100)	Have mobility impairments	Do not have mobility impairments
Base	(81)	(1,171)
London Underground...		
Is a service for everyone	54	64
Is easily accessible to everyone	46	60
Is simple to use	67	74
Has well designed trains	61	62
Has well planned and laid out stations	58	63

Physical accessibility

TfL, London boroughs, train operating companies and others are working to improve public transport accessibility for disabled people[70]. The level of step-free accessibility across the London transport network is regularly monitored, and as of 2011 [70]:

- 100% of buses are 'low floor' and have dedicated space for wheelchairs or buggies
- 52% of bus stops are considered accessible (e.g. there are no boarding/alighting impediments)
- The following are step-free from street to platform:
 - 100% of DLR stations
 - 100% of Tramlink stations
 - 45% of London Overground stations
 - 31% of National Rail stations
 - 22% of London Underground stations
- 3.7% of London Underground stations are step-free from platform to train

Wider communication of transport accessibility would be welcome amongst disabled people [71].

'I wish I knew just how many steps I will have to face at the station.'
(Mobility impaired customer) [71]

6. Safety and security

For regular daytime bus users, 94% of disabled people feel safe, in line with 95% of non-disabled people. Similar proportions of disabled and non-disabled Londoners feel safe when walking in the daytime [14]. Due to small base sizes, data are not available for disabled Londoners travelling after dark by bus or on foot, and for all other modes either during the day or after dark.

Proportion who feel safe from crime or anti-social behaviour when travelling on specific modes during the day and after dark(2011) [14]

%	All	Disabled	Non-disabled
Bus			
Base (regular users in the daytime)	(705)	(87)	(611)
Feel safe in the daytime	94	94	95
Base (regular users after dark)	(312)	(25)*	(282)
Feel safe after dark	70	-	71
Walking			
Base (regular users in the daytime)	(872)	(78)	(786)
Feel safe in the daytime	95	94	96
Base (regular users after dark)	(448)	(28)*	(417)
Feel safe after dark	63	-	63

Modes shown where base size allows sub-group comparison

* denotes small base size (percentages not shown in this report for base sizes of less than 50)

Disabled people

During the day, 44% of disabled Londoners say concerns over crime/anti-social behaviour affect their frequency of travel on the Tube/bus/train 'a lot/a little' –higher than the 31% of non-disabled Londoners who also say this.

After dark, a lower proportion of disabled people (51%) report that concerns over crime/anti-social behaviour affect their use of the Tube/bus/train 'a lot/a little' compared to non-disabled people (56%). The lower proportions of disabled people concerned about crime and anti-social behaviour after dark is seen across all three modes of transport examined except for the Underground where the proportions are equal[14].

The differences in concerns affecting travel frequency after dark between disabled and non-disabled people are lessened somewhat when those who do not use the transport modes are excluded from the base. However, the differences do persist and could be explained in part by the higher proportions of older people in the disabled London community since older people tend to express lower levels of fear regarding crime and anti-social behaviour than younger people.

Proportion of Londoners for whom concerns over crime/anti-social behaviour affect the frequency of their public transport use 'a lot/a little' (2011) [14]

%	All	Disabled	Non-disabled
Base	(1,000)	(124)	(867)
Overall: During the day/after dark			
Underground/buses/National Rail	61	63	61
During the day			
Underground/buses/National Rail	33	44	31
Underground	23	35	22
Buses	25	31	24
National Rail	18	23	18
After dark			
Underground/buses/National Rail	56	51	56
Underground	46	45	45
Buses	52	45	52
National Rail	38	34	37

There is some qualitative evidence that suggests vulnerable customers, including but not exclusively disabled Londoners, have a greater need for reassurance when using public transport, particularly in confined or underground spaces [89].

7. Access to travel information

Access to the internet

Access to the internet is lower amongst disabled people than non-disabled people. According to 2011 figures released by the Office for National Statistics, 36% of disabled people in the UK have never used the internet. This figure falls to 11% for non-disabled people [87]. Much of this can be explained by the older profile of disabled communities since access to the internet declines with age [72].

Use of the internet and the TfL website

Amongst those who do have access to the internet, 46% of disabled Londoners make use of the TfL website. This compares to a higher proportion (81%) of non-disabled Londoners [10].

Proportion of Londoners with access to the internet who use www.tfl.gov.uk (2012) [10]

%	All	Disabled	Non-disabled
Base (all who use the internet)	(912)	(102)	(794)
Uses TfL website	78	46	81
Does not use TfL website	22	54	19

Disabled users of the TfL website are slightly less likely to visit the site at least once a week (50% do so) compared to 59% of non-disabled users [34].

Frequency of visiting the TfL website (2012) [34]

%	All	Disabled	Non-disabled
Base	(43,327)	(4,392)	(38,935)
Net: At least once a week	58	50	59
Net: Less often than once a week	38	42	37
Every day/more than once a day	13	12	13
Several times a week	34	28	35
Once a week	11	10	11
Several times a month	27	27	27
Less than once a month	11	14	11
This is the first time	4	8	4

Disabled people

Frequency of visiting the TfL website is strongly affected by age. Amongst disabled users, 53% of under 16 year olds visit the website at least once a week compared to 33% of 65+ year olds [34].

The most common reason (for both disabled and non-disabled users) for visiting the TfL website is to use Journey Planner. However, compared to non-disabled users, disabled users are slightly less likely to visit the TfL website to use Journey Planner (68% of disabled users claimed this to be their main reason for visiting the website on the day of survey completion compared to 70% of non-disabled users). Instead, they are more likely to visit for the purposes of finding a map and to find out about roads or driving [34].

Main purpose of today's visit to the TfL website (2012) [34]

%	All	Disabled	Non-disabled
Base	(43,074)	(4,357)	(38,717)
Using Journey Planner to plan a route	70	68	70
Finding out live travel information	35	35	35
Finding out about planned works or closures	29	30	29
Doing something related to Oyster cards or other tickets	20	20	20
Finding a map	19	20	18
Doing something related to Congestion Charge	4	5	4
Finding out about cycling	4	4	4
Finding out about roads or driving	3	4	3
Other	4	6	4

Disabled people

When asked to rate their experience of the TfL website overall, 88% of disabled users rated it above average/very good or excellent. This compares to 91% of non-disabled users [34].

Rating of experience of TfL website overall (2012) [34]

%	All	Disabled	Non-disabled
Base	(43,327)	(4,392)	(38,935)
Net: Good	90	88	91
Net: Poor	10	12	9
Excellent	12	12	12
Very good	50	46	50
Above average	29	30	29
Below average	6	6	5
Poor	2	3	2
Very poor	2	3	1

Disabled people are less likely to use a smartphone (23% do so) compared to 62% of non-disabled Londoners [10].

Proportion of Londoners who use a smartphone (iPhone, BlackBerry, other) (2012) [10]

%	All	Disabled	Non-disabled
Base	(1,000)	(130)	(850)
Uses a smartphone	58	23	62

Disabled people

Disabled users are therefore less likely to say they access the TfL website through smartphones. Nineteen per cent of disabled users use their iPhone to access the TfL website compared to 24% of non-disabled Londoners. Similarly 11% and 17% of disabled users use their BlackBerry or Android phone respectively to access www.tfl.gov.uk compared to 13% and 19% of non-disabled people [34].

Mobile phones or mobile devices used to access www.tfl.gov.uk (2012) [34]

%	All	Disabled	Non-disabled
Base	(42,380)	(4,298)	(38,082)
Laptop or Netbook	50	45	51
iPhone	24	19	24
Android phone	19	17	19
Blackberry	13	11	13
Tablet computer (eg iPad)	12	10	12
Standard mobile phone	6	8	5
Other Smartphone (eg Windows phone)	5	5	5
Other portable device that CANNOT be used as a phone	2	3	2
None of the above	20	26	19

Information needs

In a 2002 survey, 13% of disabled Londoners did not find it easy to obtain information on travel services and nearly 40% said they would use public transport more if it were easier to obtain travel information [57]. The provision of accurate and easily accessible travel information is clearly important.

Later research in 2010 showed that a lack of awareness regarding information products is still an issue. Sources most commonly used by disabled travellers are Journey Planner, the TfL Travel Information Helpline and London Underground staff. The Interactive Tube Map and the Step Free Guide are particularly helpful for mobility or visually impaired customers, and it is suggested that more of this type of information could be included within Journey Planner [73].

Information gaps tend to relate to navigating through stations and adapting journeys when disruptions occur. These information gaps vary according to the type and severity of the impairment [73]. Research into bus diversion communications shows that problems experienced by bus passengers as a result of diversions tend to be amplified for disabled people. Such problems can include difficulties in seeing visual forms of communication and/or hearing audio announcements [85].

TfL produces a range of guides in alternative formats to assist passengers in the planning and completion of their journey. As of 2007, eight per cent of all Londoners have looked for or used travel information in an alternative format. The most common formats looked for or used are electronic and large print [56].

Use of travel information in alternative formats (2007) [56]

%	All
Base	(1,007)
Looked for or used travel information in an alternative format	8
Format(s) looked for/used	
Base (all looked for/used)	(85)
Electronic	33
Large print	32
Audio format (e.g. CD ROM)	15
Foreign language	14
Braille	9
Other	21

London Underground information products



Research conducted in 2007 showed that, overall, Londoners with accessibility needs and/or visual impairments were impressed with the suite of materials produced to help customers plan and complete their journeys on the London Underground. The information products encouraged a sense of inclusion and helped provide people with reassurance about their Tube travel. However, awareness of these information products was low and, beyond an explicit assumption that 'some accessibility information' would exist, very few knew of their availability [8].



However, there is some reluctance to fully trust the disabled symbol on Tube maps since this marker of accessibility is not thought to include transitions between platforms and therefore it does not apply to the whole journey [74]. There are also some problems when a station is advertised as being accessible but in reality navigation through the station is problematic (with, for example, it taking a long time for assistance to be available) [74].

Legible London

Feedback from disabled Londoners on the prototypes of the Legible London wayfinding system showed that the style of maps was well received and in general the wayfinding system was popular [58]. There was some acknowledgement that maps and signs cannot meet the needs of all disabled people with, for example, the maps needing to be a different height for those in wheelchairs as opposed to those with visual impairments [58].



