



**Darebin City Council – Demographic
analysis for the “Disability Access and
Inclusion Plan”**

February 2020

prepared by .id

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1.1 Introduction and Background

Darebin City Council is developing a new "Disability Access and Inclusion Plan", a roadmap to creating an accessible and inclusive Darebin. To complement information obtained via community engagement, Council has requested a range of demographic information to help better understand people with disability who reside in Darebin, and their carers. This information will also be used to provide localised data supporting grant applications under the National Disability Insurance Scheme (NDIS).

This report focuses on describing the characteristics of people with a need for assistance due to disability in Darebin from the 2016 Census, assessing how those characteristics have changed over time and how they compare to regional benchmarks. It also assesses characteristics of carers for older adults or people with disability in Darebin from the 2016 Census. Finally, this report includes estimates and forecasts of need for assistance using data modelling techniques.

2. People with a need for assistance due to disability in Darebin

Information regarding need for assistance due to disability is derived from the Australian Census of Population and Housing. This data identifies people who report a need for assistance due to a '*profound or severe core activity limitation*'. This population is defined as people who need assistance in their day to day lives with any or all of the following activities: self-care, body movements or communication – because of a disability, long-term health condition, or old age. The Census question relies on people evaluating themselves, (or their carers), as being in need of assistance. Consequently, this question provides an indication of the characteristics of people who report, or are reported as requiring, a need for assistance.

2.1 People with a need for assistance – change over time

Assessing change over time of people with disability can help with understanding macro trends in Darebin. In 2016, 8,774 people in Darebin reported needing help in their day-to-day lives due to a disability. This equates to 6.0% of the population. Both the total number and the proportion of people with disability have increased over the last ten years. The number grew from 7,143 people in 2006 to 8,050 in 2011 and 8,774 in 2016. The proportion of the total population with disability increased, from 5.6% in 2006, to 5.9% in 2011 and 6.0% in 2016. In 2016, the proportion of the population with a disability in Greater Melbourne was 4.9% - lower than in Darebin and represented an increase from 4.0% in 2006.

The representation of females and males in these numbers has remained relatively similar over the years with more females in need of assistance than males. Chart 1 illustrates the differences by sex from 2006 to 2016.

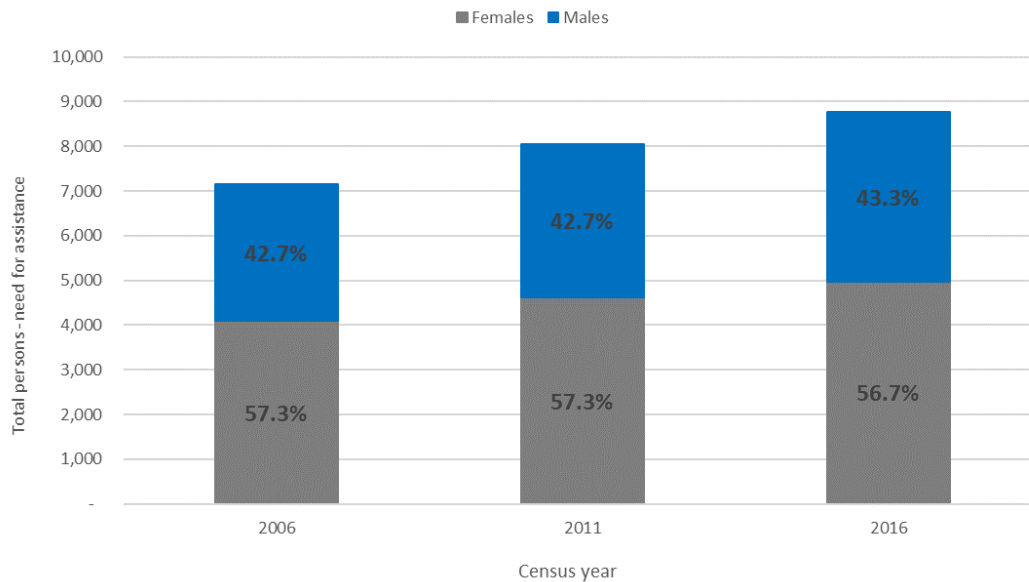


Chart 1 – Total number of people with disability split by sex, Darebin, 2006-2016.

2.2 People with a need for assistance – spatial distribution

Changes at a local level (suburbs) can reveal that some areas have experienced more significant change than others. Some changes at the local level can be due to the opening or expansion of institutions for aged care or disability service providers.

Table 1 illustrates the differences in total number of people with disability by suburb and proportion of total population.

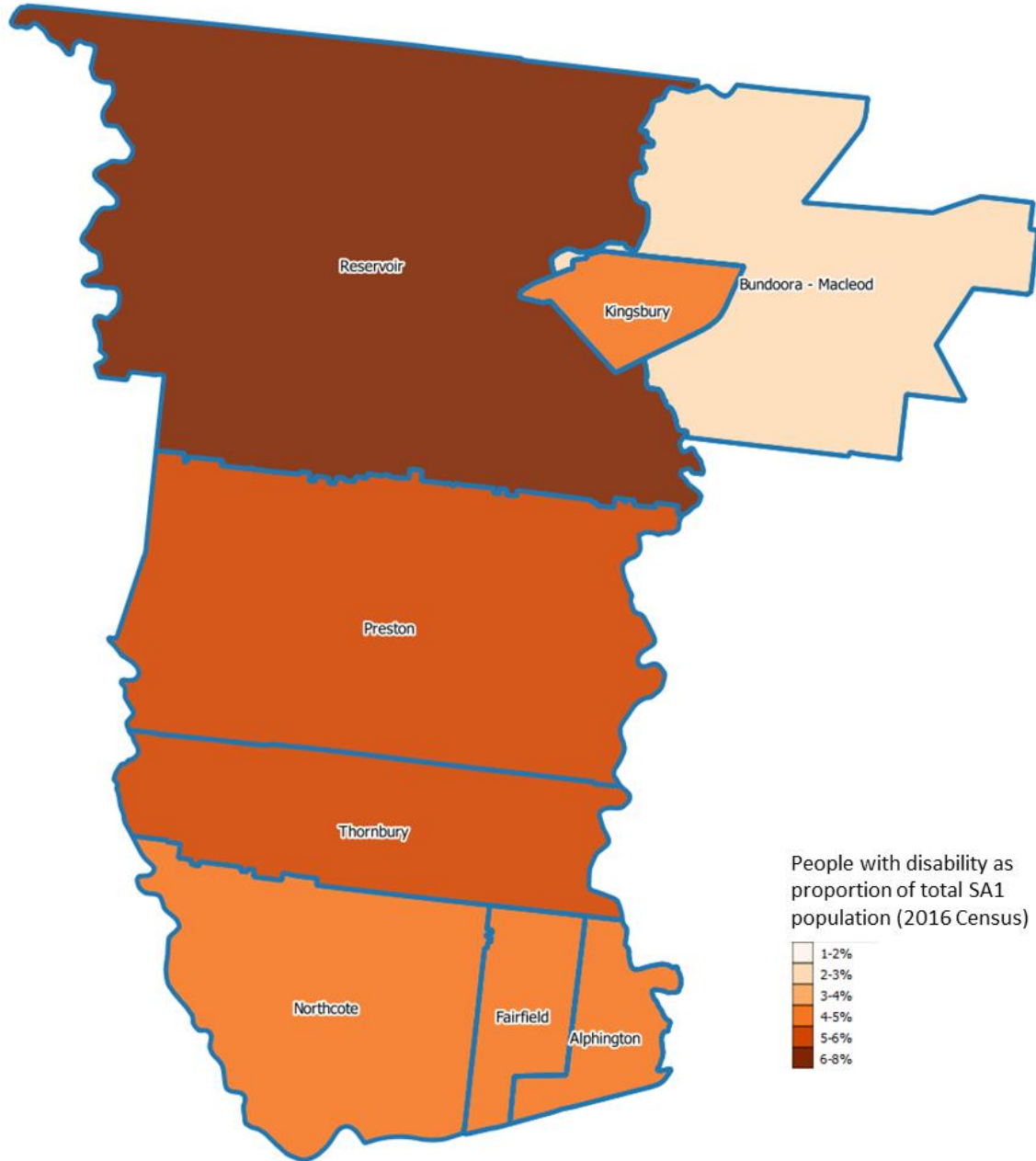
Suburb	2006 total	2006 % of pop	2016 total	2016 % of pop	Change 2006-2016	Change in % 2006-2016
Alphington	116	4.2%	129	4.1%	13	-0.1%
Bundoora and Macleod	158	3.0%	200	2.6%	42	-0.4%
Fairfield	193	3.9%	243	4.3%	50	0.4%
Kingsbury	139	4.4%	184	5.0%	45	0.6%
Northcote	1,070	5.0%	1,179	4.8%	109	-0.2%
Preston	1,648	5.7%	1,898	5.7%	250	0.0%
Reservoir	3,009	6.7%	3,814	7.6%	805	0.9%
Thornbury	828	4.9%	1,117	6.0%	289	1.1%
Total - Darebin	7,143	5.6%	8,774	6.0%	1,631	0.4%

Table 1 – Total number of people with disability by suburb, 2006 and 2016.

While no suburb in Darebin experienced a loss of people with disability, there were trend changes. Only three suburbs experienced decreases in proportion of the population with a disability in the ten years between 2006 and 2016: Alphington (-0.1%), Bundoora and Macleod (-0.4%) and Northcote. (-0.2%).

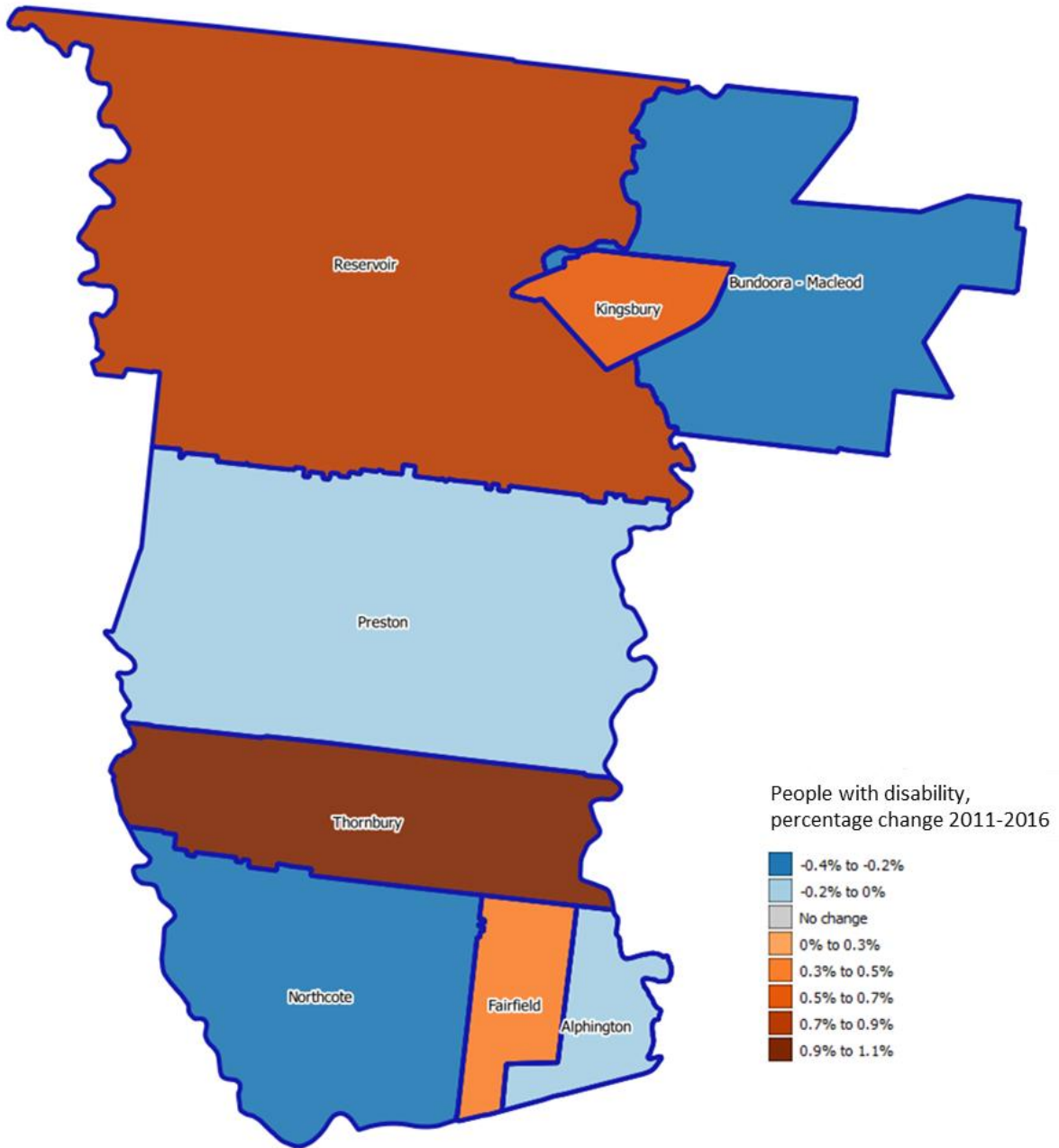
The overall Darebin proportion of people with disability grew by 0.4% between 2006 and 2016. Several suburbs grew by more than that: Kingsbury (+0.6%), Reservoir (+0.9%) and Thornbury (+1.1%).

Maps of people with disability as a proportion of total population by suburb and Statistical Area 1 (SA1) geography illustrate their spatial distribution across Darebin.



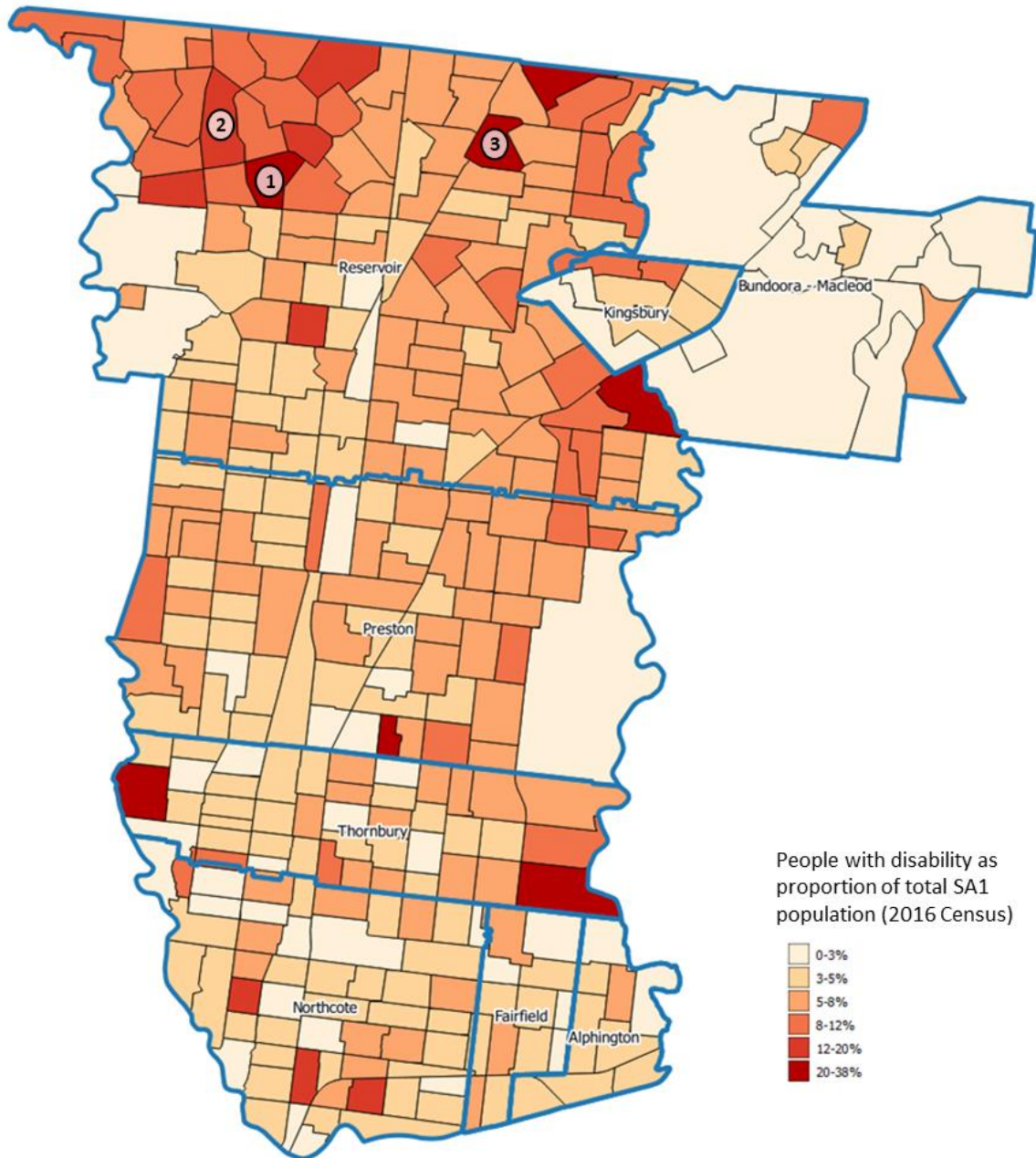
Map 1 – People with disability by suburb within Darebin, 2016.

Maps 1 and 2 spatially illustrate the content of table 1: which suburbs have the highest proportions of the population with a disability, and how has this changed over a ten-year period from 2006 to 2016. Highest proportions of people with disability (proportion of total population) are in Reservoir and Thornbury, followed by Preston, Kingsbury, Northcote, Fairfield, Alphington with Bundoora and Macleod as the lowest.



Map 2 – People with disability by suburb within Darebin, change in proportion of total population 2006-2016

The largest increases in proportion of the population with a disability between 2006 and 2016 were in Thornbury (+1.1%), Reservoir (+0.9%), Kingsbury (+0.6%) and Fairfield (+0.4). Preston retained the same proportion of the population who identified as needing assistance due to disability in 2016 as in 2006 (5.7%) and three suburbs experienced declines in the proportion of people with disability – Alphington (-0.1%), Northcote (-0.2%), Bundoora and Macleod (-0.4%).



Map 3 – People with disability by SA1 within Darebin, 2016.

While analysing disability information at a geography smaller than suburbs can provide a new level of insight, it should be noted that the figures can be skewed by location and presence of institutions which tend to have a higher proportion of people with disability living there. The 2016 SA1 distribution of people with disability shows pockets of higher proportion in the northern parts of Reservoir. The presence of Embracia Reservoir (labelled as “1” on Map 1), an aged care service on Glasgow Avenue in Reservoir is visible on the map, as are other care services such as the Vasey RSL Care Ex-Service Accommodation (2) or on the other side of Cheddar Road, Aurrum Aged Care (3). Several other SA1s across the LGA present a high proportion of residents with a disability again due to the presence of an institution.

As mentioned, various factors can influence an increase or decrease of the population in need of assistance due to disability including some institutional factors such as an expansion/opening or a reduction/closure of capacities at aged care or disability services.

2.3 People with a need for assistance – age structure

The age structure of people with disability is an important indicator of whether the disabilities highlighted are age related. Data from the Census indicates that need for assistance increases with age, so a comparison with the age structure of the same population in a benchmark area may reveal an older or younger population with significant need for assistance.

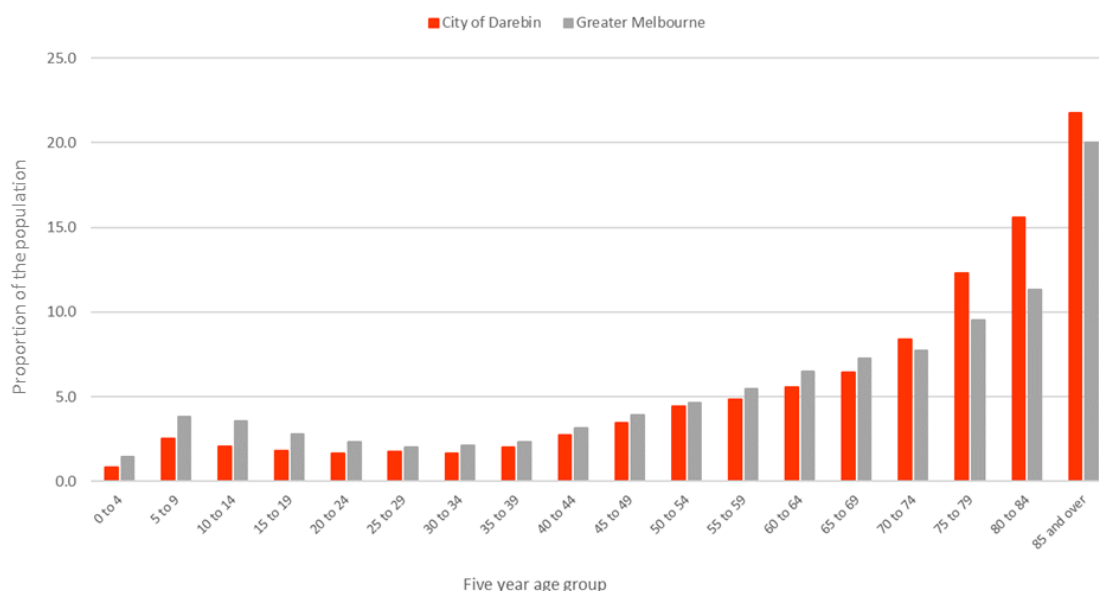


Chart 2 – Age distribution of people with disability, Darebin and Greater Melbourne, 2016.

Chart 2 illustrates the 2016 age distribution of people with disability in Darebin, compared to people with disability in Greater Melbourne. It shows a similarity which is very characteristic of this population, the prevalence of disability increases with age. While this trend of disability representation increasing with age is similar to Greater Melbourne, there are some differences in Darebin. A higher proportion of people with disability are aged over 70 years in Darebin compared to Greater Melbourne and a lower share of people with disability in Darebin are aged younger than 70 years compared to Greater Melbourne.

The change in proportion of people with disability by age group over a ten-year period from 2006 to 2016 is shown in chart 3. Here, an increase in the proportion of people with disability aged 80 years and over (+6.2% since 2011) is clear.

There has also been a slight increase in the proportion of people with disability aged 5-24 years old representing primary schoolers, secondary schoolers and tertiary education-aged residents. A similar proportion of people aged 30-49 years old with disability decreased during this ten-year period and the largest decrease in proportion of people with disability by age group were 70-79 year-olds, decreasing by 3.9%.

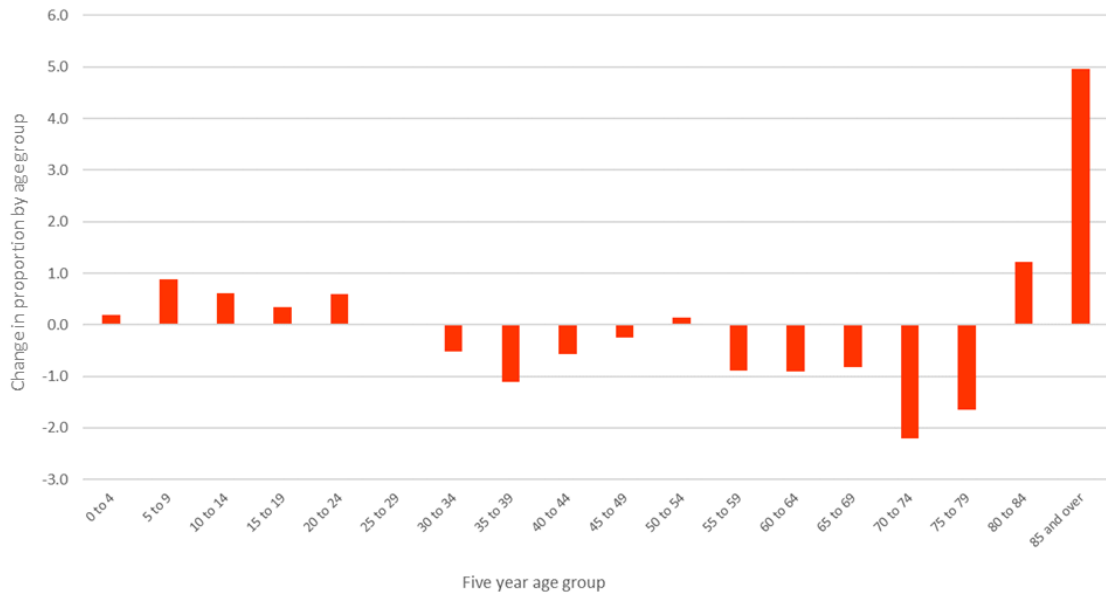


Chart 3 – Change in proportion of people with disability by five-year age group, 2006-2016, Darebin

It is beneficial to compare the age structure of people with disability to the age structure of the overall Darebin population. When creating strategies and action plans for people with disability, a point worth considering is how different the age structure of people with disability is to Darebin’s overall age structure. The figures in chart 4 show a drastically different age distribution of people with disability compared to the overall population.

Most of Darebin’s residents are aged between 20-39 years old. This represents 35.2% of the Darebin’s resident population but only 7.2% of Darebin’s population with a disability (as at 2016). Any age-related planning should take this into consideration.

On the other hand, there is a significant overrepresentation of older people in the total figures of residents with disability. Almost two thirds (64.5%) of people with disability are aged over 65 years in Darebin whereas only 14.2% of Darebin’s total population is aged 65 years and over. This is more than a five-fold difference in terms of representation. In Greater Melbourne, the proportion of people with disability aged 65 years or older in 2016 was 55.9%.

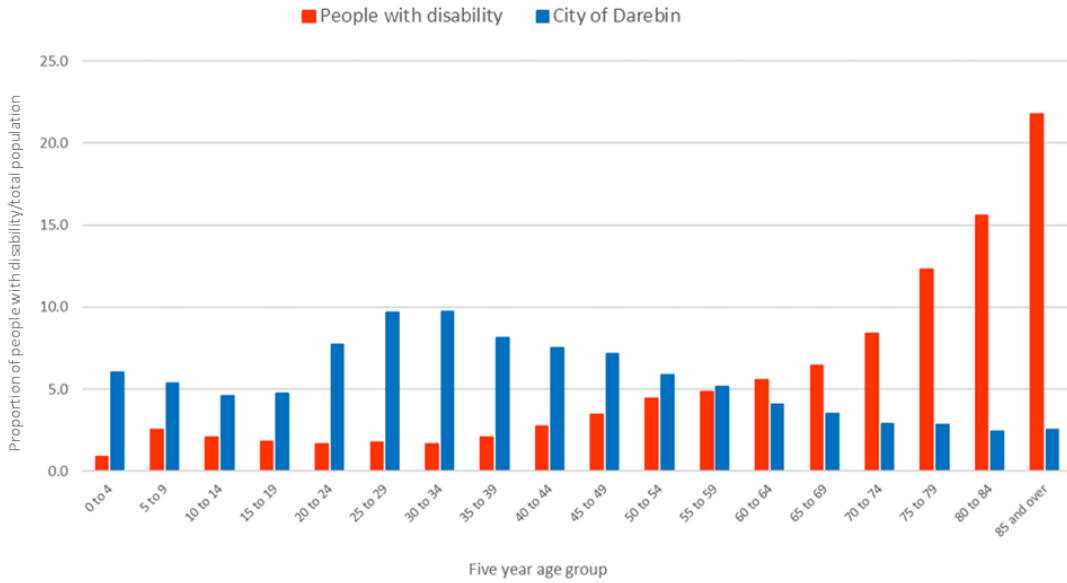


Chart 4 – Age group comparison of Darebin’s population with disability compared to Darebin’s overall resident population, 2016.

2.4 People with a need for assistance – housing and households

This section addresses the type of housing (dwelling types) that people with disability live in, their household types and housing tenure types.

In 2016, more than 75% of people with disability who lived in private dwellings lived in separate houses. This is higher than the overall proportion of the Darebin population living in separate houses (65%). Compared to 2006, the proportion of people with disability occupying separate houses remained almost the same. A separate house is defined by the ABS as including “all free-standing dwellings separated from neighbouring dwellings by a gap of at least half a metre”.

A lower proportion of people with disability lived in medium or high-density housing (22.7% compared to 33.9% for Darebin as a whole). The proportion of people with disability living in medium-density housing decreased since 2006, while the proportion living in high-density housing increased. Charts 5 and 6 illustrate these dwelling type comparisons.

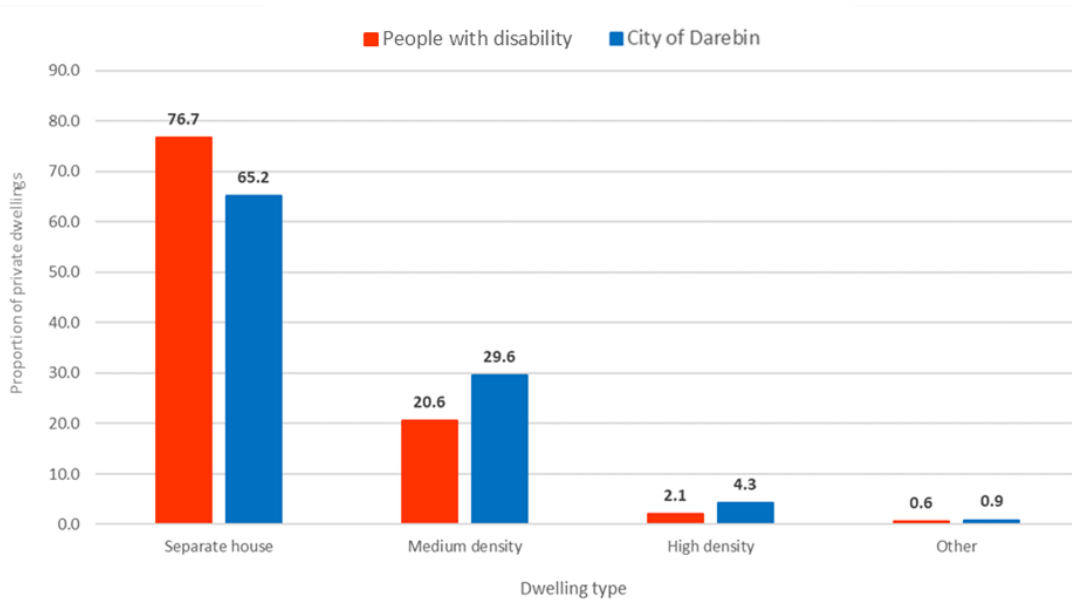


Chart 5 – Dwelling types people with disability compared to the Darebin total, 2016.

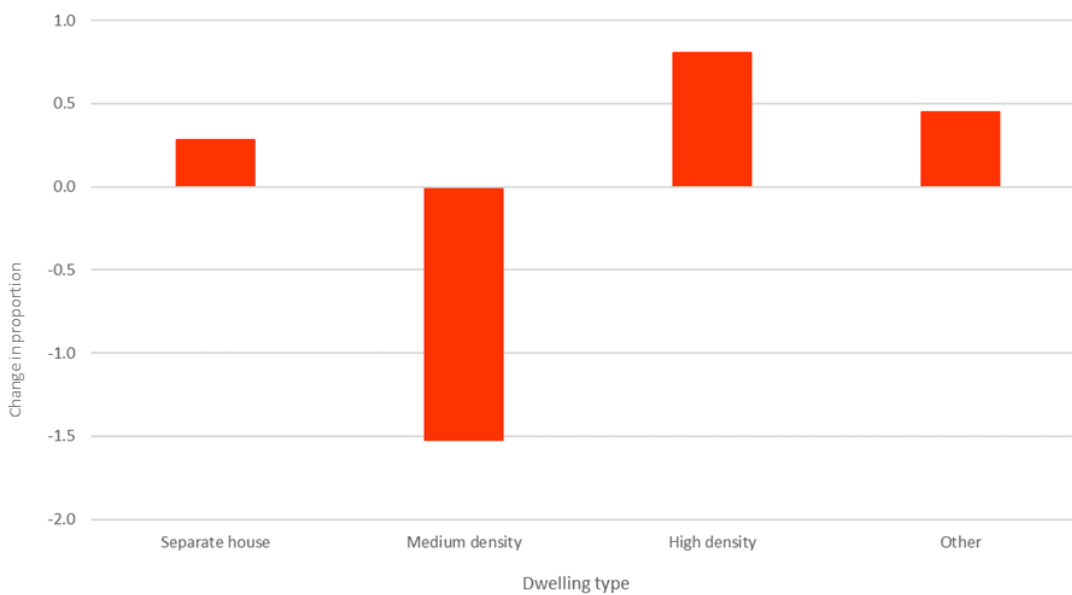


Chart 6 – Change in proportion of dwelling types occupied by people with disability, 2006-2016

Many people with disability live in non-private dwellings, so while the analysis of change in dwelling type over time is useful, it is important to remember that many people with disability obtain that assistance by living in non-private dwellings/institutions such as nursing homes/aged care accommodation. In 2016, 13.3% of all people with disability lived in non-private dwellings compared to only 2.5% of all Darebin residents.

The total number of people with disability living in non-private dwellings did not change much since 2006. In 2006 this total was 1,101 and in 2016 – 1,157. There was, however, a decrease between 2006 and 2016 in the proportion of people with disability who lived in non-private dwellings, a decline of more than 2% from 15.5% in 2006 to 13.3% in 2016.

Chart 7 illustrates the difference in the proportion of people with disability living in private and non-private dwellings compared to the Darebin population as a whole.

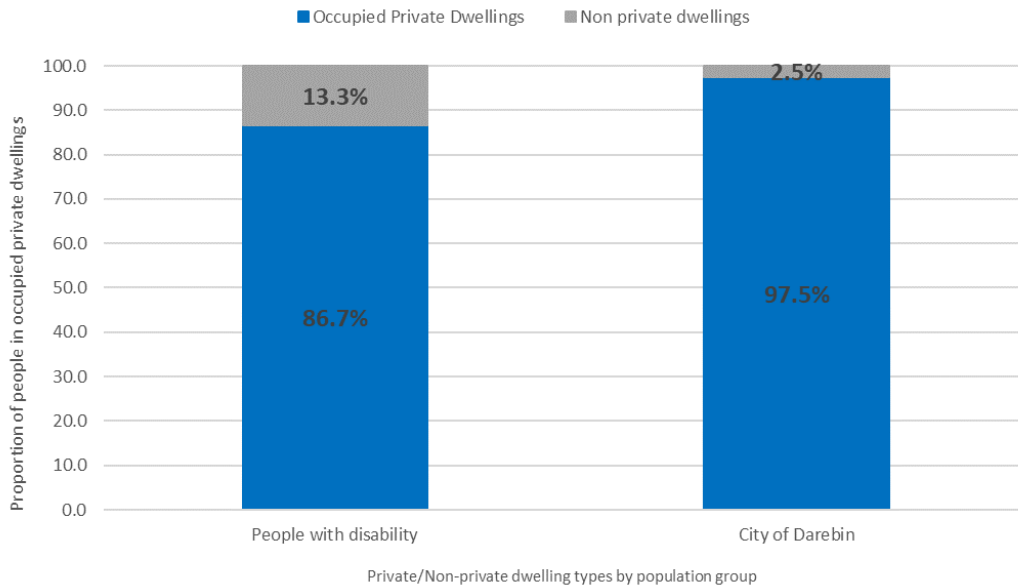


Chart 7 – Proportion of people with disability in private/non-private dwellings compared to Darebin as a whole, 2016.

Darebin’s household and family structure is one of the most important demographic indicators. It reveals Darebin’s residential role and function – what kind of a role a suburb plays within a municipality, whether it is a residential suburb, a high-density urban area, a commercial hub or an employment cluster. Household and family structure also provide key insight into the level of demand for services and facilities as most are related to age and household types. For people with disability, household types can reveal the extent to which they live alone (and therefore may require outside assistance) or have other family members available to assist. It is also likely to be correlated with age.

The 2016 household type statistics for people with disability in Darebin show that most live as “Couples with children” (26%). This proportion is much lower when compared to Darebin’s total population where 43.6% of the population live as “Couples with children”.

More people with disability live as “Couples without children” and “Lone person” households than Darebin’s overall population, see chart 8 for more detail. A smaller proportion of people with disability live in “Group households” (4.8%) than the overall Darebin population (8.0%).

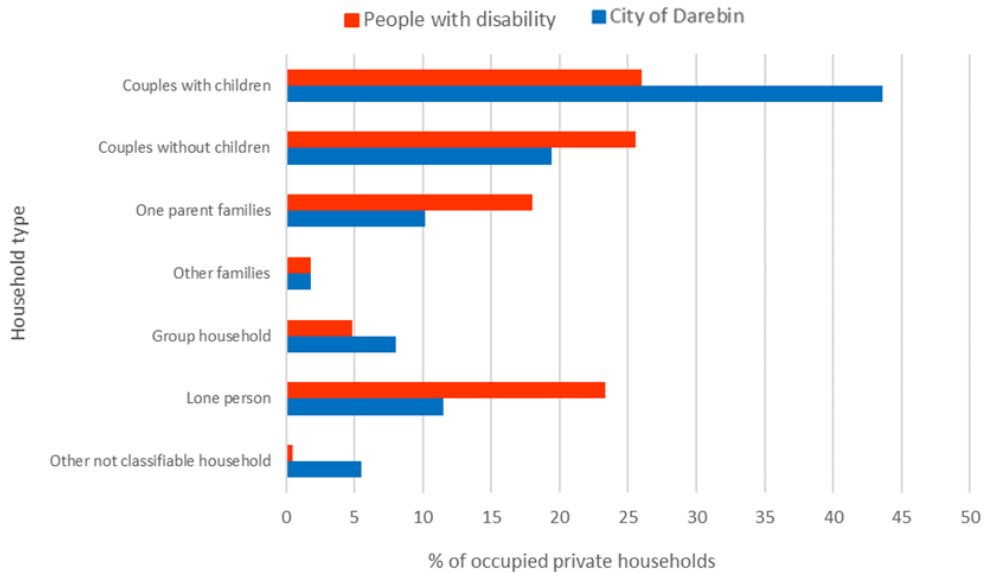


Chart 8 – Household type summary for people with disability compared to the Darebin total resident population, 2016.

A ten-year comparison shows that the largest growth in terms of proportion of households for people with disability was in “Lone person” (+1.0%) and “One parent families” households (+1.8%), with decreases in “Couple with children” (-0.6%), “Couples without children” (-1.7%) and “Group households” (-0.6%).

For all of Darebin in the same period, the largest increase was in “Group households” (+1.7%), followed by increases in proportion of residents living as “Couples without children” (+0.7%). Largest decreases were for “Lone person” (-0.4%) and “One parent family” households (-2.0%).

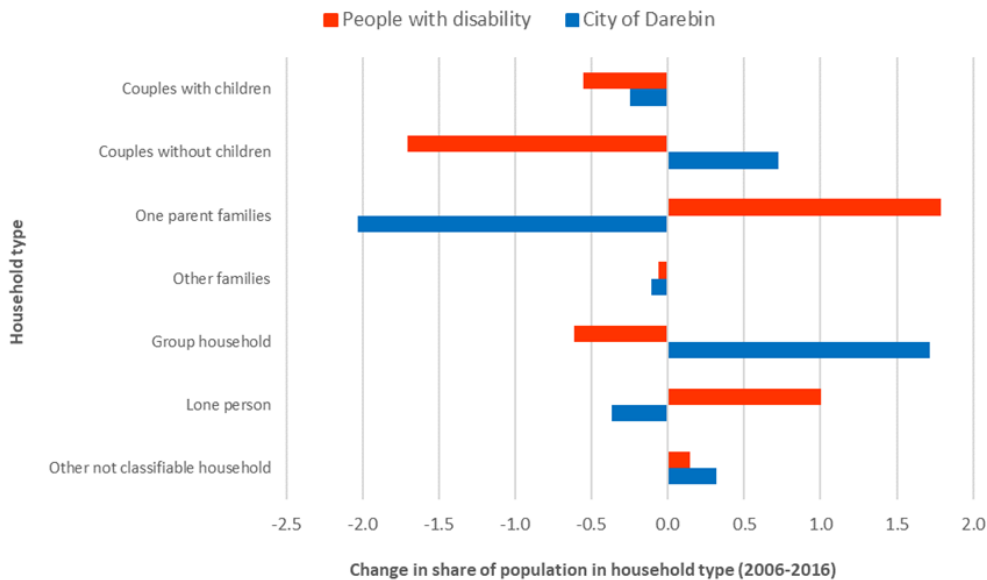


Chart 9 – Change over time by household type for people with disability and Darebin as a whole, 2006-2016

All analysis of households and housing statistics need to take into consideration housing tenure data which details whether the dwelling is owned outright, with a mortgage or being rented (and from whom it is being rented).

This information provides insight into an area's or a population's socio-economic status as well as the role it plays in the housing market. For people with disability, housing tenure may differ significantly in some areas from the general population.

When comparing tenure type for people with disability and Darebin's total resident population, some differences are clearly visible. For example, there is a much higher proportion of people with disability who fully own their dwellings (57.8% compared to 26.6% for Darebin as a whole). One reason for this could be related to the overall older age of people with disability (see chart 4) and the recorded higher rates of ownership in older persons. Younger residents tend to be mortgagees or renters.

When proportions of people with disability and their tenure type is assessed by age and compared to the overall Darebin trends, we see there being more similarities in the "Fully owned" tenure type than in the "Renting social housing" tenure type. People with disability are far more likely to be renting social housing at almost any age than the total Darebin population. Charts 10a and 10b illustrate these comparisons.

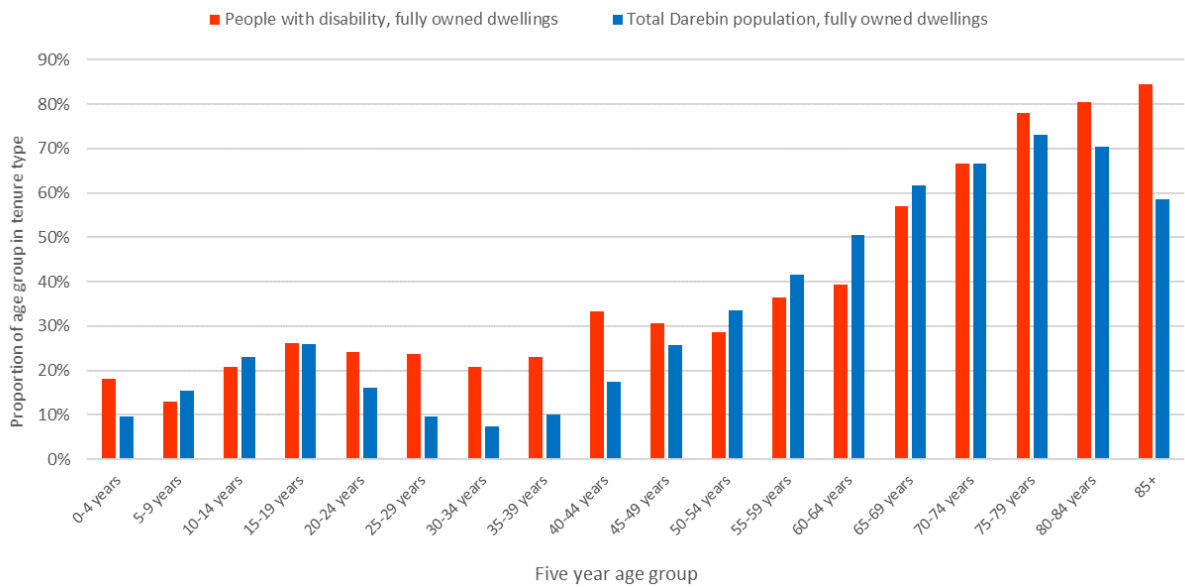


Chart 10a – Tenure type by age of people with disability and total Darebin population, for fully owned dwellings, 2016

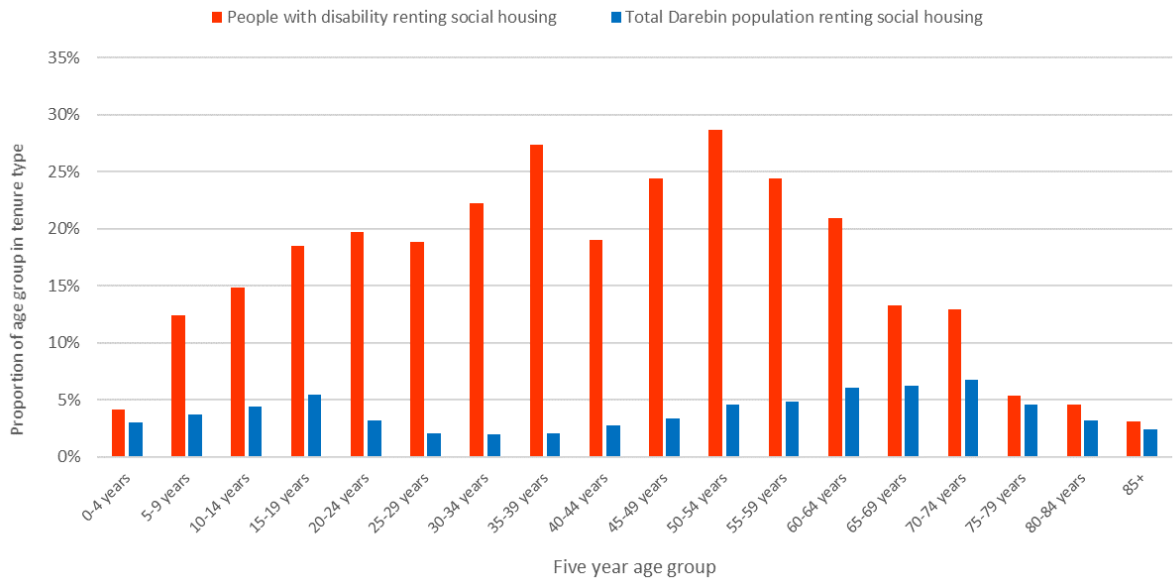


Chart 10b – Tenure type by age of people with disability and total Darebin population, for social housing renting, 2016.

A much lower proportion of people with disability have a mortgage compared to Darebin’s overall proportion (12.7% compared to 30.9%). While the variance in proportion of people with disability who rent in general is different to Darebin overall (25.3% compared to 34.4% for Darebin), it is the sub-category of renting tenure which is even more disparate. Almost four times as many people with disability rent social housing compared to Darebin as a whole, 12.1% compared to 3.6%.

However, a much higher proportion of Darebin’s overall residents (30.3%) rent private housing compared to people with disability (12.7%).

Charts 10c and 11 illustrate these differences visually and show how housing tenure changed for people with disability between 2006 and 2016.

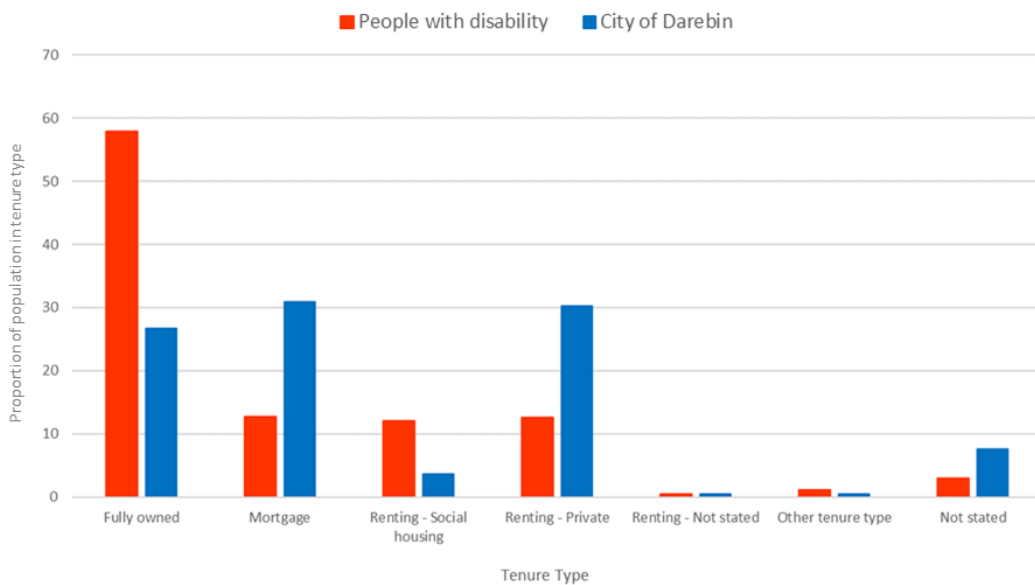


Chart 10c – Comparison of tenure type for people with disability and the Darebin total population, 2016

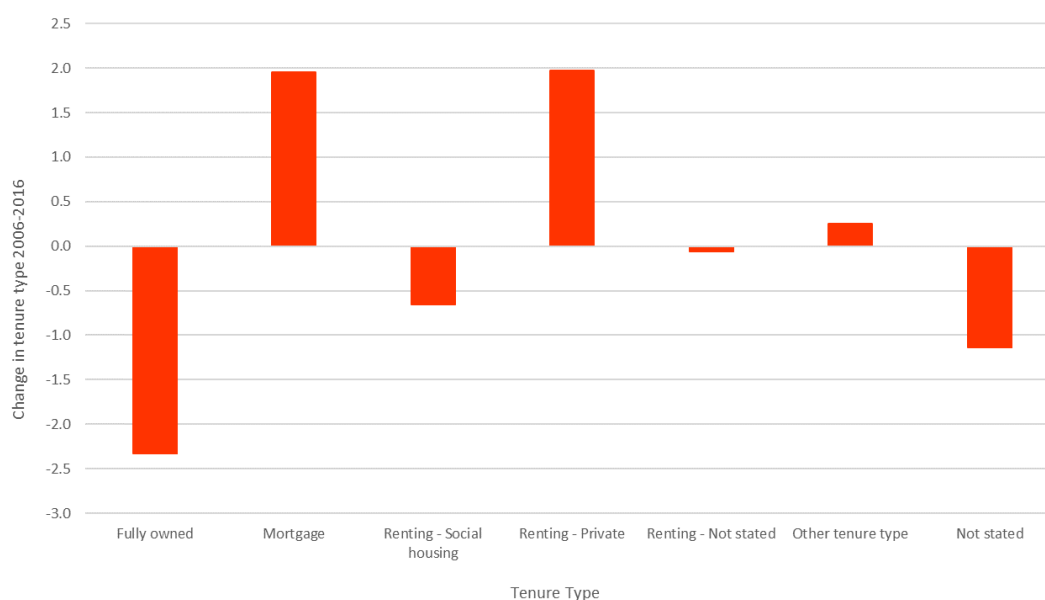


Chart 11 – Change in tenure type for people with disability, 2006-2016

In the ten years from 2006 to 2016, there has been a decrease of 2.3% in the proportion of people with disability who are in full ownership of their home. On the other hand, there has been an increase in percentage of people with disability with a mortgage (+2.0%), and those who rent privately (+2.0%). There has been a slight decrease in the proportion of people with disability who rent social housing (-0.7%).

2.5 People with a need for assistance – education

Analysis of qualifications and education institutions attended by people with disability provides another valuable demographic assessment. “Educational qualifications” relate to education outside of primary and secondary school and are one of the most important indicators of socio-economic status. For people with disability, they can reveal the level of ability to participate in tertiary education, and the success of programs to engage those people in the community.

In terms of “Education institutions attended”, this data shows the current (2016) educational attendance of people with disability in Darebin. Educational attendance and age are highly correlated, with children generally having the highest level of educational attendance. For the people with disability, this dataset can reveal demand for assistance in the school system, and the level to which people with disability are able to access tertiary education. Chart 12 shows the differences between highest qualifications achieved for people with disability compared to Darebin as a whole. Chart 13 illustrates change over time.

Looking at people aged 15 years and over, the proportion of people with disability who completed a “Bachelor or Higher degree” (6.4%) is quite low compared to Darebin as a whole (32.7%). Somewhat encouragingly, however, the proportion of people with disability who achieved a “Bachelor or Higher degree” has increased by 3.6% since 2006.

The proportion of people with disability who achieved an "Advanced Diploma or Diploma" was also lower than Darebin as a whole, 3.1% compared to 8.4%. Again, the trend for people with disability who completed this qualification was increasing, up by 1.1% since 2006. "Vocational" qualifications were lower for people with disability but close to the Darebin population as a whole: 9% compared to 11.6%. The trend showed an increase of 2.3% from 2006, when only 6.7% of people with disability achieved a "Vocational" qualification.

The proportion of people with disability who had no qualification is almost twice that of Darebin. In 2016, 72.1% had no qualification compared to 37.1% for Darebin as a whole. This proportion decreased very slightly from 2006 when 72.9% of people with disability had no qualifications.

The proportion of "Not stated" responses decreased from 15.5% in 2006 to 9.3% in 2016. This decrease can reduce assuredness of trend analysis; increases in other categories may be due to less "Not stated" responses rather than genuine increases.

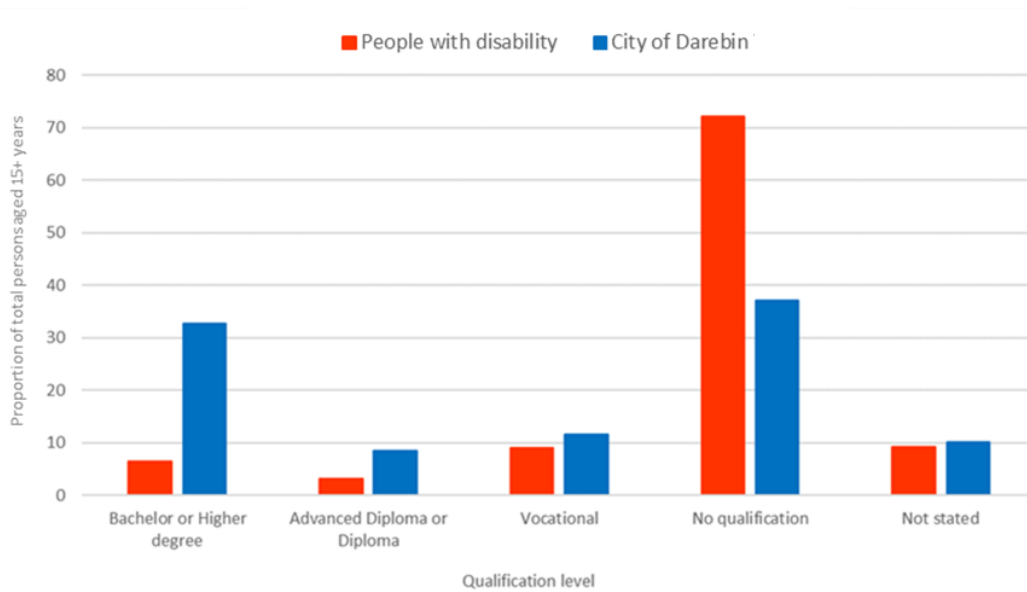


Chart 12 – Qualification levels of people with disability and Darebin total, 2016

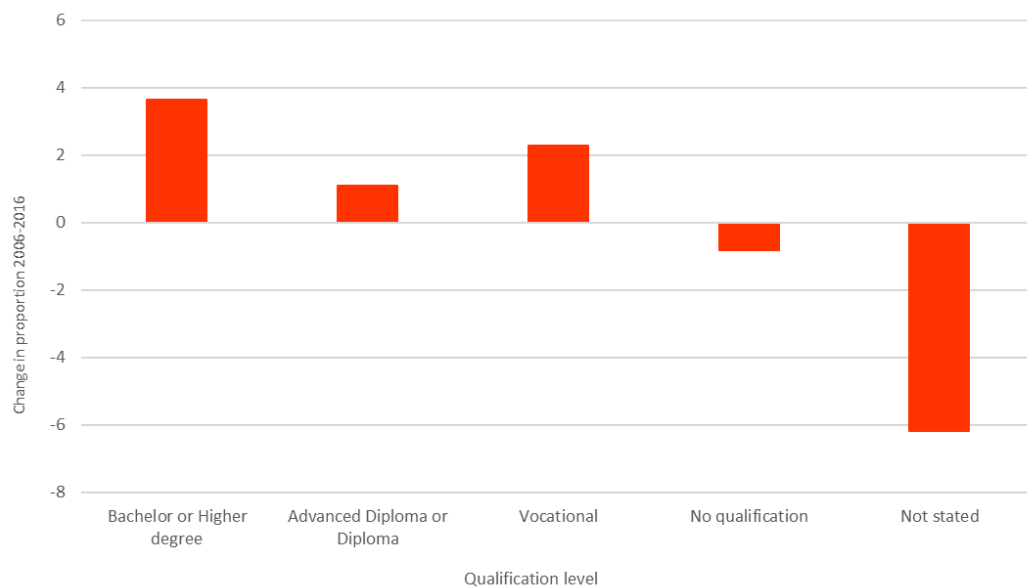


Chart 13 – Change in proportions of qualification level for people with disability, 2006-2016

Figures describing education attendance of people with disability are also different to Darebin as a whole. As mentioned, this is closely related to the overall age of people with disability who are much older than Darebin's total resident population. This is reflected in several demographic datasets, including this one.

There are lower proportions of people with disability attending pre-school, primary school or secondary school than for Darebin as a whole. The proportion of people with disability attending these three education institutions is 5.5% compared to 12.8% for Darebin as a whole. There is also a lower proportion of people with disability who are attending a University or TAFE (1.8% compared to 10.4% for Darebin's total resident population).

Again related to the age of people with disability in Darebin, the proportion of residents who are not attending any institution is much higher than for Darebin as a whole (88.3% compared to 68.2%). Chart 14 illustrates these differences between institutions being attended by people with disability and Darebin's total population. Chart 15 shows how attendance figures have changed over time.

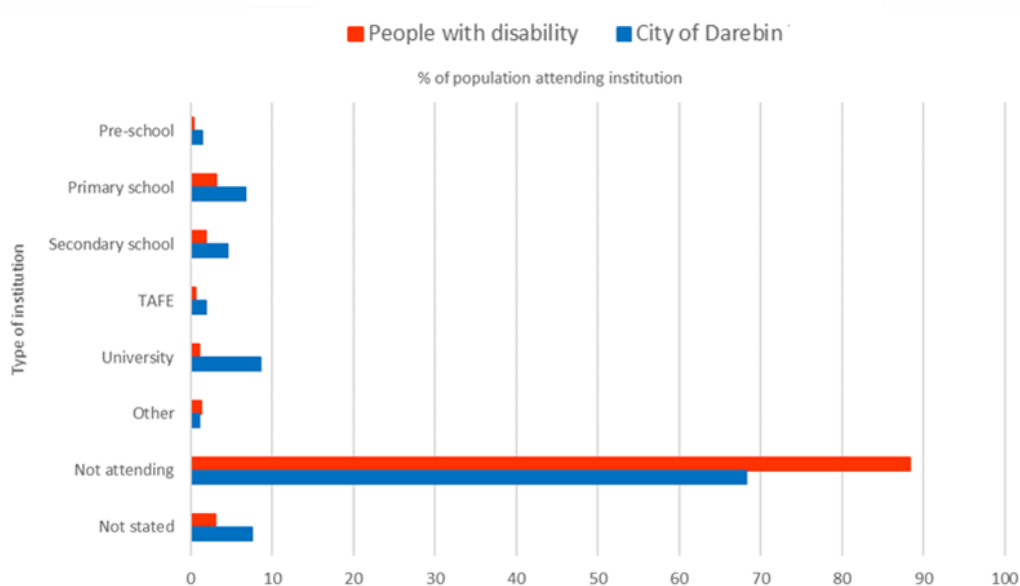


Chart 14 – Education institution attending for people with disability and the Darebin total population, 2016

As with qualifications, there has been a notable decrease in the “Not stated” category (-3%) for people with disability, which suggests that the data is more complete in 2016 than it was in 2006. There have been increases in some types of education institutions attended by people with disability such as increases in primary school attendance (2.1% to 3.2%) and secondary school attendance (1.2% to 1.9%). The proportion of people with disability attending a TAFE has decreased by 0.2% whereas the attendance of universities has increased by 0.5%.

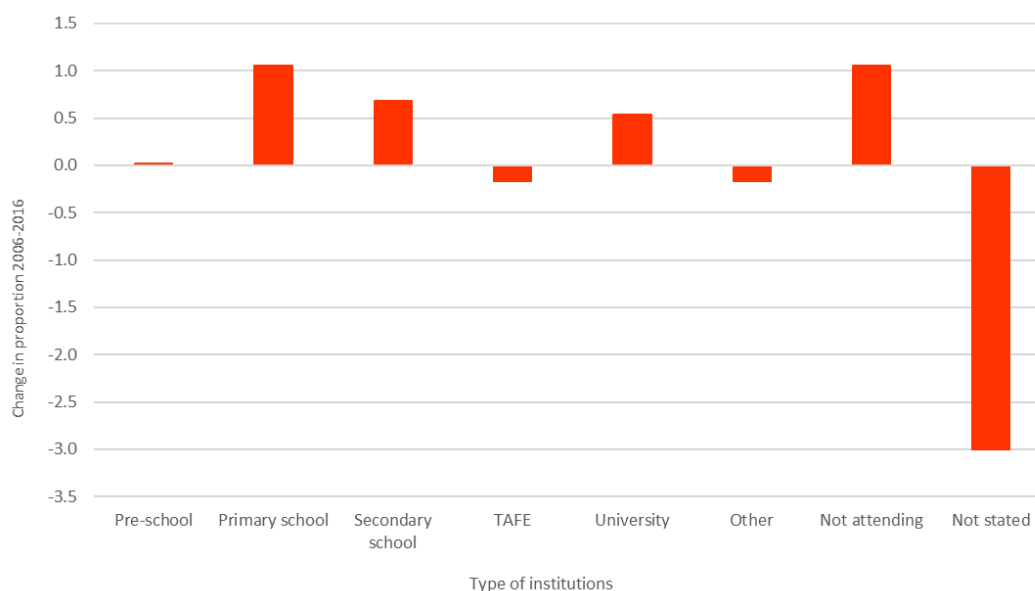


Chart 15 – Change in proportion of types of education institutions attended by people with disability, 2006-2016

2.6 People with a need for assistance – internet access

This dataset looks at the level of internet access available to people with disability living in private households. This can indicate the ability to communicate online and access services provided online within this community.

Please note that people with disability living in a non-private dwelling are not counted here, as internet access information is not collected for these dwelling types but instead only for privately owned dwellings.

Just over 57% of people with disability in Darebin had an internet connection in 2016. This is a much lower proportion than for Darebin as a whole, where the connection rate was 81.9%.

In 2011, 47.8% of people with disability had an internet connection (compared to 77.2% of Darebin as a whole). Between 2011 and 2016, this proportion increased for people with disability by 9.8% and for the city as a whole by only 4.7%, indicating that the gap is closing.

Note – change over time analysis allows for only 2011 and 2016 to be examined as the Census question regarding internet connections was different in 2006 and not comparable with later Censuses.

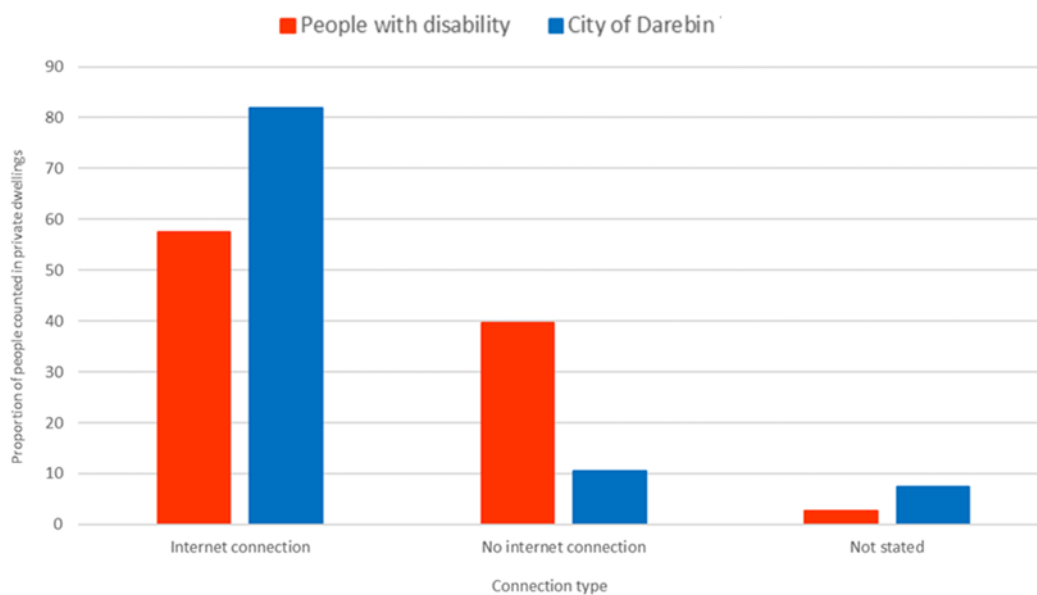


Chart 16 – Internet connection type for people with disability and Darebin as a whole, 2016

2.7 People with a need for assistance – number of cars per household

The ability to access services and employment is strongly influenced by access to transport. This section presents information about the number of motor vehicles used by household members in households where people with disability live. Many factors may influence access to vehicles for people with disability, such as the ability to drive and age. Access to vehicles may be particularly important in some areas, depending on the availability and accessibility of public transport in the area.

Note that the presence of a vehicle at the household where a person with disability lives does not necessarily imply that that person drives. This is certainly the case for young children, who do not drive.

In 2016, 24% of people with disability lived in a household with no motor vehicles compared to Darebin as a whole, where only 7.9% of people lived in a household with no motor vehicle. The proportion of households which had one vehicle is very similar for people with disability and Darebin as a whole (37.9% compared to 34.7% for Darebin) and there is a lower proportion of people with disability who lived in households with two, three or more vehicles in their household compared to the Darebin benchmark. Chart 17 shows these differences.

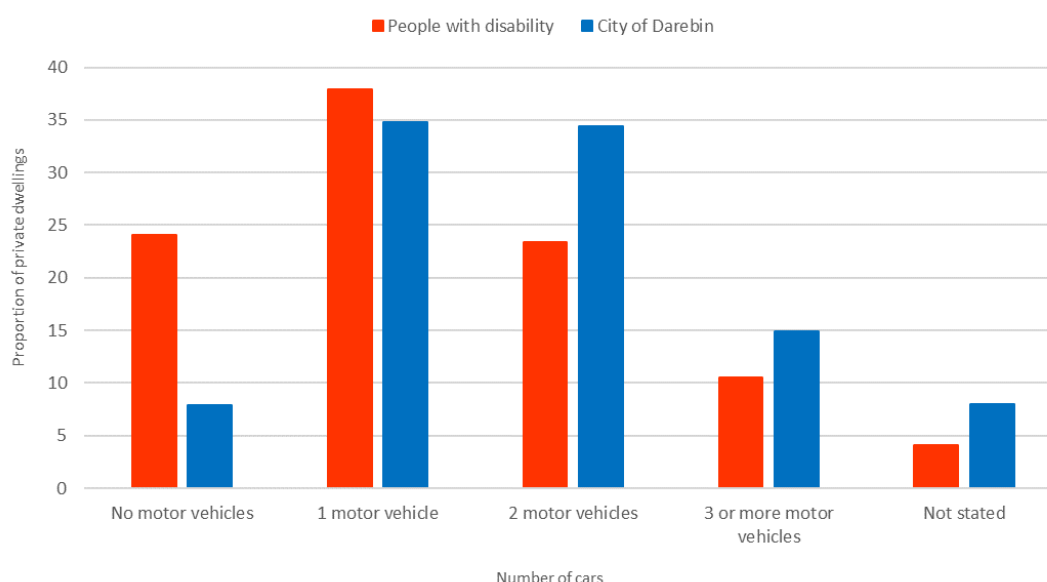


Chart 17 – Comparison of car ownership for people with disability to Darebin as a whole, 2016

Between 2006 and 2016 there has been a 4.8% decrease in the proportion of people with a disability in Darebin who had no motor vehicles in their household, from 28.8% to 24.0%. A smaller decrease in proportion was recorded for one vehicle households (-0.8%) whereas an increase occurred for two motor vehicle households (+3.7% since 2006) and three or more motor vehicle households (+2.0% since 2006). These increases in proportion are slightly higher than for the overall Darebin population which saw an increase in two motor vehicle households (+0.8% since 2006) and “three or more motor vehicle” households (+0.7%).

2.8 People with a need for assistance – individual and household income

Comparing individual and household incomes of people with disability to the total Darebin population reveals differences and trends. Individual income statistics are an indicator of socio-economic status. With other data sources, such as household income, qualifications and occupation, they help tell the story of the economic opportunities and socio-economic status of Darebin. The amount of income an individual receives is linked to a number of factors including employment status, age (for instance students and retirees often receive a lower income), qualifications and type of employment undertaken.

For people with disability, household income is an important indicator of the level of ability to participate in Australian society and economy. It is closely tied to employment status and occupation and should be viewed in conjunction with those topics.

Individual income statistics for people with disability in Darebin show that this population group earns less per week than the total population, as shown in chart 18. In 2016, the largest individual income range for people with disability was \$300-\$399 per week (\$15,600-\$20,799 per year), with 26.5% of people with disability in this range.

A slightly lower proportion (20%) received \$400-\$499 per week (\$20,800-\$25,999 per year) and the proportion of people with disability who received \$500-\$649 per week (\$26,000-\$33,799 per year) was 6%, which is similar to Darebin as a whole (5.7%).

A much lower proportion, 8.3%, of people with disability had an individual income of \$650 or higher per week compared to the same income range for Darebin as a whole, which was 38.1% in 2016. Overall, 71.2% of people with disability received less than \$500 per week in individual income compared to 32% for the Darebin total population and 3.3% received an individual weekly income of over \$1,000 compared to Darebin's overall 25.6%.

Chart 18 compares the individual income ranges for people with disability to the total Darebin population aged 15 years and over.

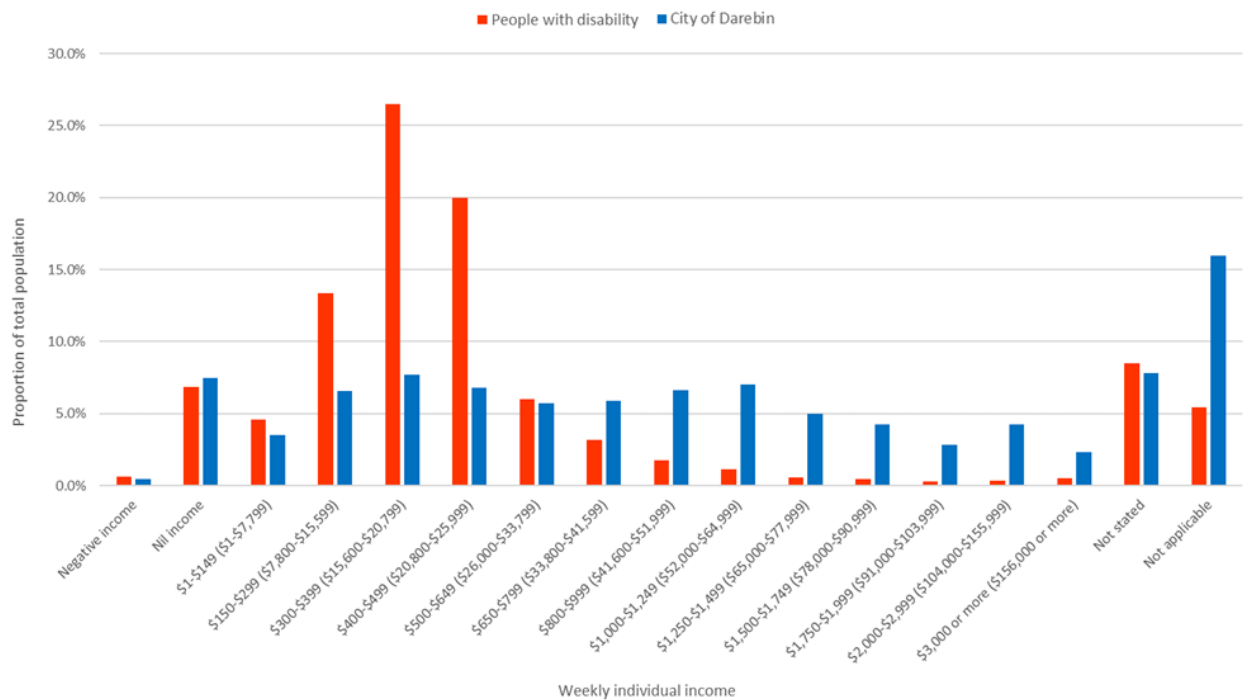


Chart 18 – Weekly individual income bands for people with disability compared to the total Darebin population aged 15 years and over, 2016.

The list below shows the annual individual income totals that the ranges in chart 18 refer to:

Weekly individual income	Annual individual income equivalent
\$1-\$149	(\$1-\$7,799 per year)
\$150-\$299	(\$7,800-\$15,599 per year)
\$300-\$399	(\$15,600-\$20,799 per year)
\$400-\$499	(\$20,800-\$25,999 per year)
\$500-\$649	(\$26,000-\$33,799 per year)
\$650-\$799	(\$33,800-\$41,599 per year)
\$800-\$999	(\$41,600-\$51,999 per year)
\$1,000-\$1,249	(\$52,000-\$64,999 per year)
\$1,250-\$1,499	(\$65,000-\$77,999 per year)
\$1,500-\$1,749	(\$78,000-\$90,999 per year)
\$1,750-\$1,999	(\$91,000-\$103,999 per year)
\$2,000-\$2,999	(\$104,000-\$155,999 per year)
\$3,000 or more	(\$156,000 or more per year)

Household income figures for people with disability in Darebin show a more balanced comparison with the rest of Darebin but still indicate that people with disability in Darebin have a generally lower household income than the overall population. One important factor to consider is that there may be other household members who do not have a disability that will be counted in this household income data.

The list below shows the annual household income totals that the ranges in chart 19 refer to:

Weekly household income	Annual household income equivalent
\$1-\$149	(\$1-\$7,799 per year)
\$150-\$299	(\$7,800-\$15,599 per year)
\$300-\$399	(\$15,600-\$20,799 per year)
\$400-\$499	(\$20,800-\$25,999 per year)
\$500-\$649	(\$26,000-\$33,799 per year)
\$650-\$799	(\$33,800-\$41,599 per year)
\$800-\$999	(\$41,600-\$51,999 per year)
\$1,000-\$1,249	(\$52,000-\$64,999 per year)
\$1,250-\$1,499	(\$65,000-\$77,999 per year)
\$1,500-\$1,749	(\$78,000-\$90,999 per year)
\$1,750-\$1,999	(\$91,000-\$103,999 per year)
\$2,000-\$2,499	(\$104,000-\$129,999 per year)
\$2,500-\$2,999	(\$130,000-\$155,999 per year)
\$3,000-\$3,499	(\$156,000-\$181,999 per year)
\$3,500-\$3,999	(\$182,000-\$207,999 per year)
\$4,000-\$4,499	(\$208,000-\$233,999 per year)
\$4,500-\$4,999	(\$234,000-\$259,999 per year)
\$5,000-\$5,999	(\$260,000-\$311,999 per year)
\$6,000-\$7,999	(\$312,000-\$415,999 per year)
\$8,000 or more	(\$416,000 or more per year)

Chart 19 illustrates the household income bands for people with disability compared to the City of Darebin benchmark.

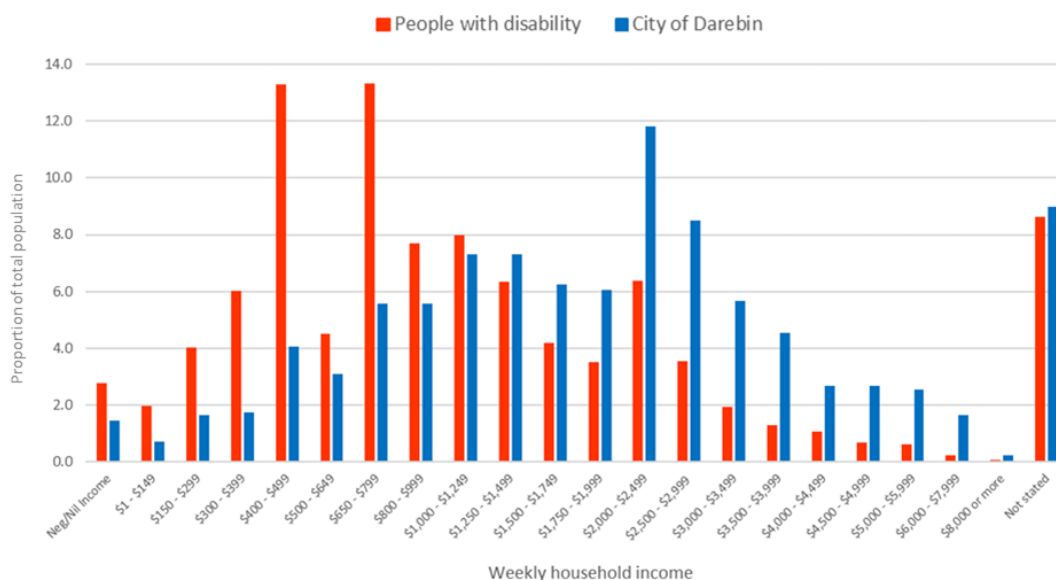


Chart 19 – Weekly household income bands for people with disability compared to Darebin, 2016.

A larger proportion of people with disability is at the lower end of household incomes compared to Darebin as a whole. This is illustrated in chart 19. Two household income ranges in particular are clearly different to Darebin’s total population, where people with disability are overrepresented: \$400-\$499 and \$650-799.

In 2016, 28.1% of people in Darebin with disability lived in households with a weekly income of \$500 or less, compared to 9.6% for Darebin’s overall population and 25.5% of people with disability had household incomes between \$500 and \$999 per week compared to 14.2% for Darebin as a whole. In terms of higher weekly household incomes, 22% of households occupied by people with disability received between \$1,000-\$1,999 compared to 27% for Darebin as a whole.

In the higher income ranges, 13.1% of people with disability received household incomes between \$2,000-\$3,999 per week, compared to 30.5% for Darebin as a whole. Only 2.6% of households occupied by people with disability received a household income higher than \$4,000 per week. This is lower than the total Darebin household income proportion for the same range, which was 9.8%. Table 2 summarises this information.

Household income band (weekly)	Persons with disabilities	Darebin – total population
Nil - \$499	28.1%	9.6%
\$500-\$999	25.5%	14.2%
\$1,000-\$1,999	22.0%	26.9%
\$2,000 - \$3,999	13.1%	30.5%
\$4,000+	2.6%	9.8%
Not Stated	8.6%	9.0%
Total	100%	100%

Table 2 – Comparison of grouped household income bands for households in which people with disability lived, compared to the Darebin total population, 2016

Comparing changes to household incomes over time requires different analysis techniques. Household income levels are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method is a powerful and objective way of looking at income data and in particular, how it is changing.

Analysis is simpler due to the breakdown into four simple groups. Quartiles are defined as each containing 25% of all households in Victoria. This topic shows the proportion of the people with disability falling into these four groups which contain an equal number of households at the State level but may contain different numbers of people. A comparison is also shown for residents in Darebin as a whole.

Table 3 describes the dollar ranges included in the four quartiles. For more information on household income quartiles, please follow the link to the data notes, as presented on the [City of Darebin's Community Profile website](#).

Household income ranges <i>(calculated from income data for Victoria)</i>	2011	2016
Lowest group	\$0 to \$624	\$0 to \$740
Medium lowest	\$625 to \$1,213	\$741 to \$1,416
Medium highest	\$1,214 to \$2,148	\$1,417 to \$2,394
Highest group	\$2,149 and over	\$2,395 and over

Table 3 – household income quartiles for the two comparison years assessed in this report

The two lowest household income quartiles have an overrepresentation of people with disability compared to the Darebin total. In 2016, 44.5% of people with disability were in the lowest quartile for household income, compared to 17.6% for Darebin as a whole. Change over time analysis from 2011 indicates that the proportion of total people with disability in the lowest quartile has decreased, from 46.1% to 44.5%.

The medium lowest household income group represented 27.5% of people with disability compared to 21.9% for Darebin. There was a slight decrease from 2011 when 27.8% of people with disability were in the medium lowest income quartile.

A lower proportion of people with disability was in the top two household income quartiles compared to the lowest two. In 2016, 16.2% of people with disability were in the medium highest household income quartile compared to 26.4% for Darebin as a whole but there was an increase compared to 2011 when 15.9% of people with disability were in this household income quartile.

Finally, only 11.8% of people with disability were in the highest household income quartile compared to 34% of total Darebin residents. Since 2011, the trend was a slight increase (from 10.1%) for the highest quartile. This information is visually represented in charts 20 and 21.

Overall, the trend over time has been positive – that is, a lower proportion of people with disability in the lowest income quartiles and a higher proportion in the higher household income quartiles. However, the differences when comparing the proportion of people with disability in different income quartiles to the overall Darebin population are obvious, with much higher rates of people with disability in the lower income quartiles.

In 2016, 72% of people with disability in Darebin were in the two lowest household income quartiles (lowest, medium lowest) compared to only 39.5% of Darebin's total population. By contrast, only 28% of people with disability were in the top two household income quartiles (medium highest, highest), compared to 60.4% of Darebin's population as a whole.

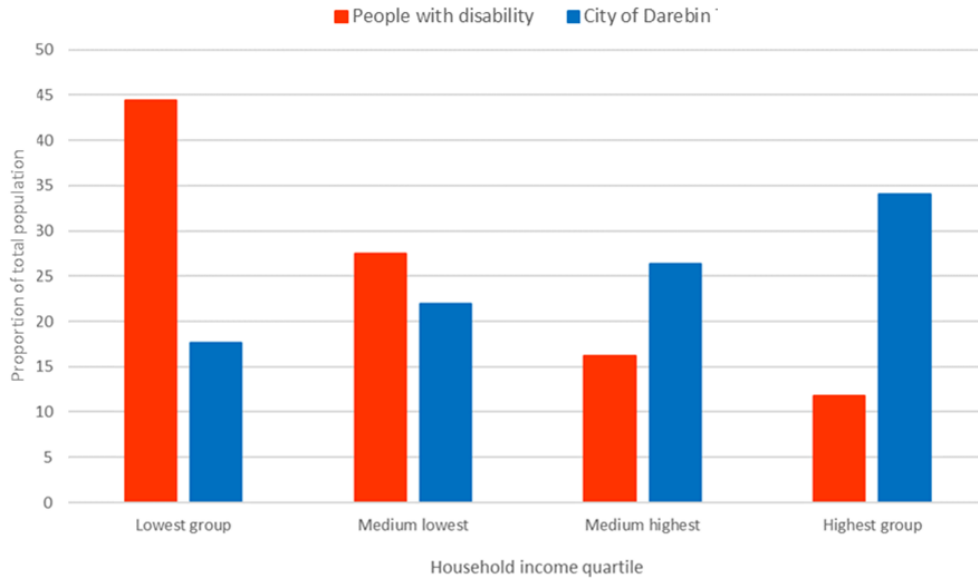


Chart 20 – Household income quartiles for households in which people with disability live compared to Darebin as a whole, 2016.

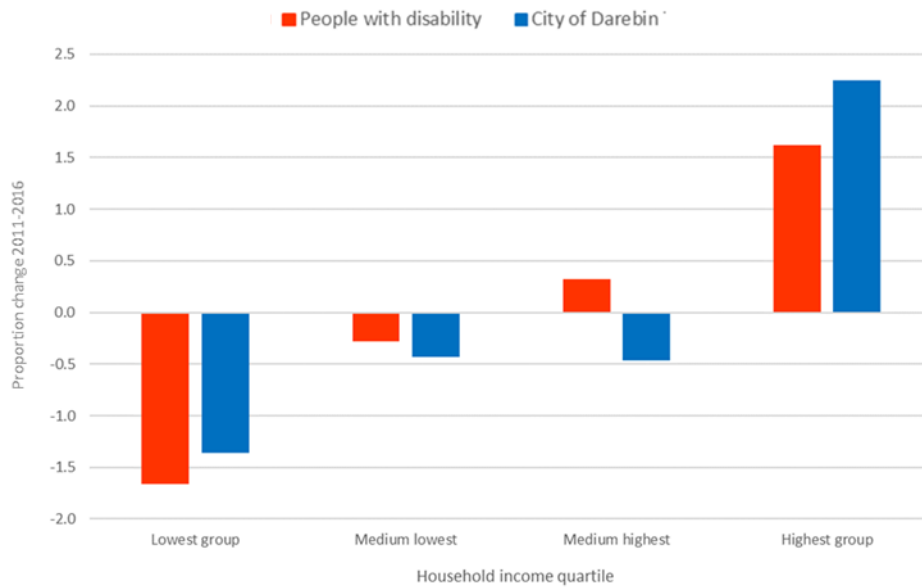


Chart 21 – Change in proportion of household income quartiles for people with disabilities compared to Darebin total population, 2011-2016

2.9 People with a need for assistance – employment and labour force status

Employment statistics are an important indicator of socio-economic status. The levels of full or part-time employment, unemployment and labour force participation indicate the strength of the local economy and social characteristics of the population. Employment status for people with disability can provide insight into their participation in the labour market and their likely need for social support services.

Before assessing employment status, it is worth noting that only 587 out of a total 8,772 people with disability are part of Darebin's labour force, translating to 6.7%. The 'labour force' includes all persons aged 15 years and over who are either employed or looking for work and available to start. Both full- and part-time work counts towards the labour force. Darebin as a whole had 51.6% of its residents in the labour force in the same year, meaning the participation rate for people with disability is much lower.

In 2016, 88.1% of people with disability in the labour were employed, compared to 92.8% for Darebin's labour force as a whole. There was a slight increase in the proportion of people with disability since 2006, when the employed proportion was 86.8%. This can be broken down further by assessing full-time and part-time employment. In 2016, 27.6% of people with disability in the labour force were employed full-time and 57.1%, part-time. Compared to overall Darebin figures, these proportions are almost mirror opposites, where 56% of Darebin's labour force was employed full-time and 35% part-time.

The unemployment rate for people with disability in the labour force is slightly higher than the general workforce of Darebin. In 2016, 11.9% of people with disability in the labour force were unemployed, compared to 7.2% for Darebin's overall labour force. Encouragingly, the unemployment rate decreased for people with disability between 2006 and 2016 (from 13.2% to 11.9%). Most of the unemployed labour force of people with disability were looking for part-time work (8.2%) compared to those who were looking for full-time work (3.7%).

Charts 22 and 23 illustrate the differences between employment status characteristics of people with disability compared to the total Darebin workforce.

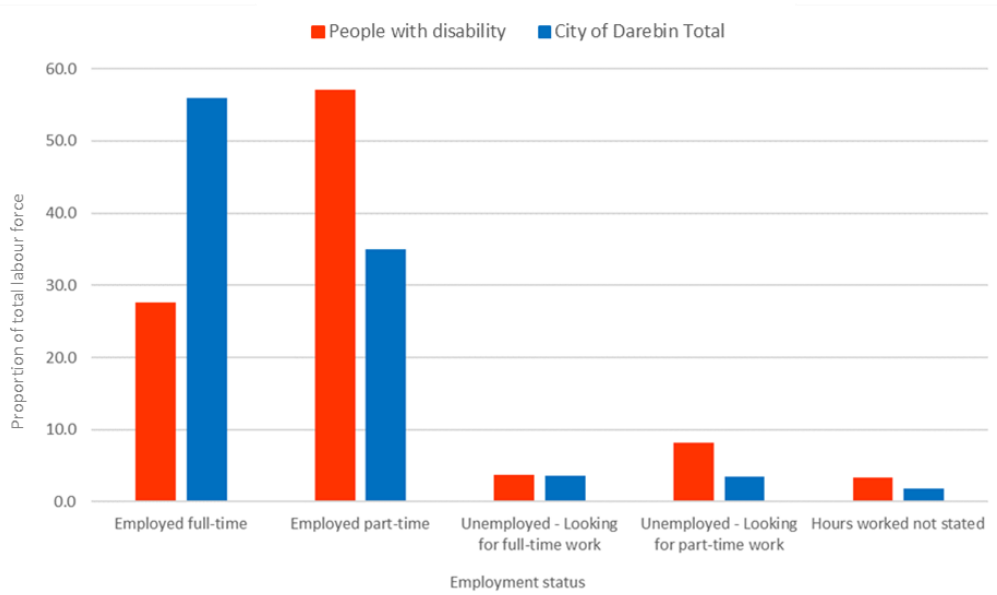


Chart 22 – Employment status for people with disability in the labour force and the Darebin total labour force, 2016

The overall trend in the employment status of people with disability since 2006 has been that more have been involved in the workforce. More people with disability were in full-time employment in 2016 (27.6%) than in 2006 (24.4%).

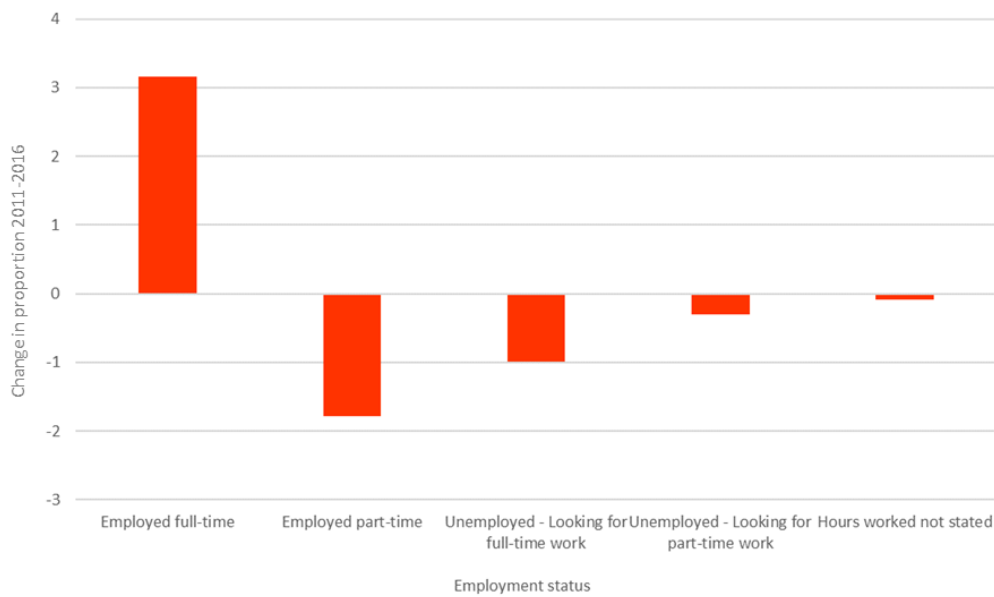


Chart 23 – Change of employment status characteristics over time for people with disability, 2006-2016

2.10 People with a need for assistance – analysis of “National Disability Insurance Scheme (NDIS) information”

The National Disability Insurance Scheme (NDIS) is an Australian Government scheme that funds costs associated with disability. The NDIS provides support to eligible people with intellectual, physical, sensory, cognitive and psychosocial disability. The National Disability Insurance Agency (NDIA) has released some participant data which allows exploration of the number of NDIS participants by State, region and postcode. When it is fully rolled out, the NDIS anticipates it will provide about 460,000 Australians aged under 65 who have permanent and significant disability with funding for support and services.

There are currently around 286,000 participants with active plans in Australia. Around 46% of these participants are aged under 18 years. Chart 24 illustrates the age structure of the participants, as at 30th June 2019. In Victoria, there are currently 75,825 NDIS participants. In the scheme documents, the City of Darebin is in the “North East Melbourne” district, which includes the following LGAs: Darebin, Yarra, Nillumbik, Whittlesea and Banyule.

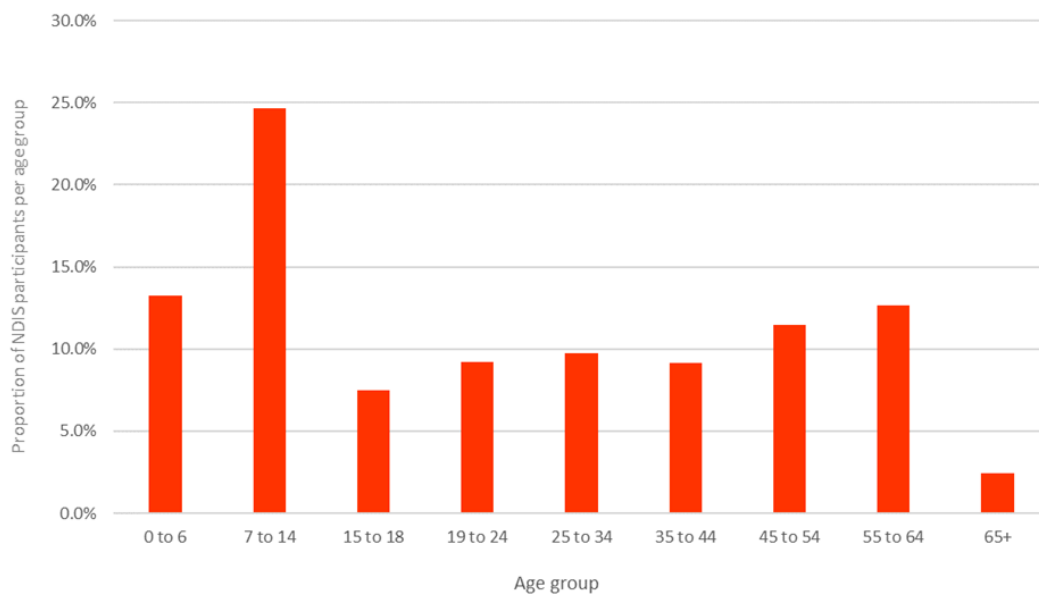
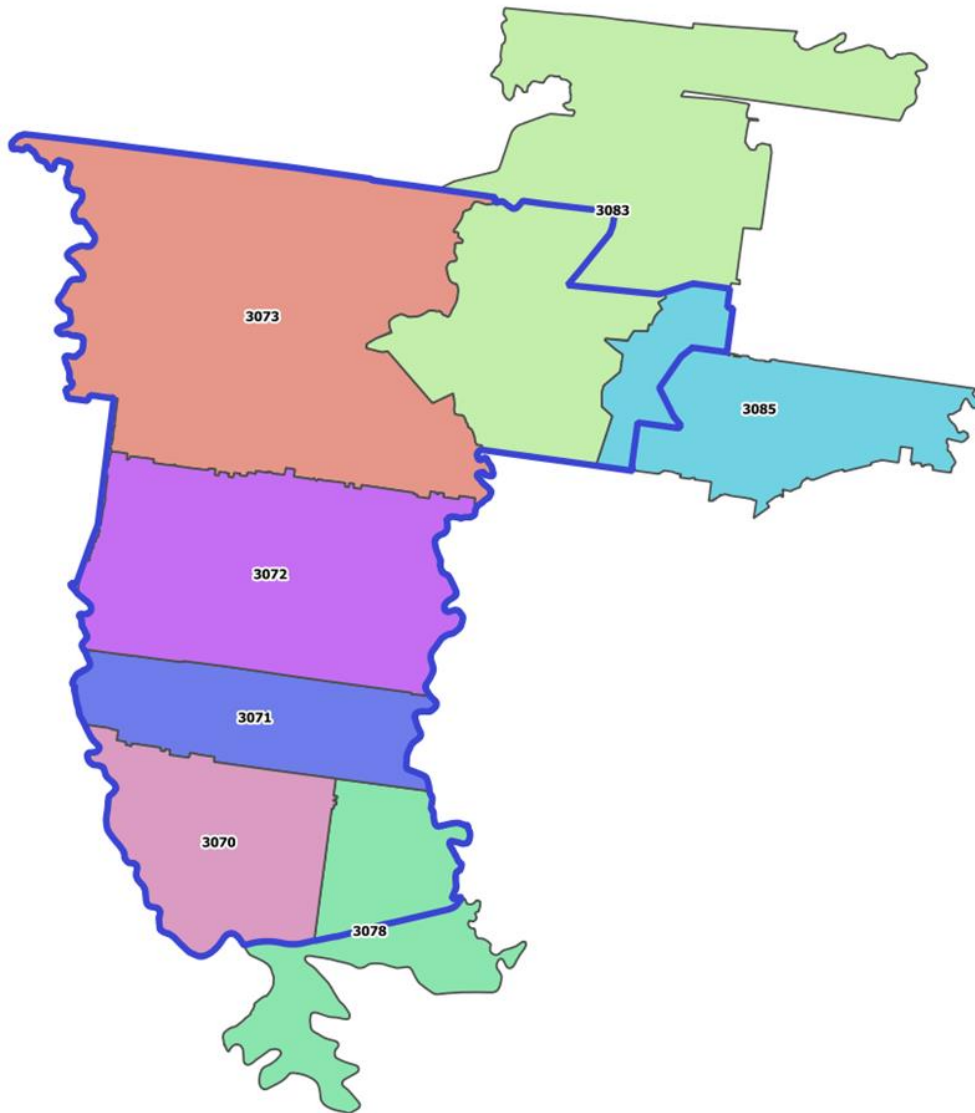


Chart 24 – Age structure of NDIS participants for Australia as at 30 June 2019

The NDIS has also created some demand figures which allow for analysis by postcode. This analysis provides information on current service uptake and can assist in understanding services and locations NDIS participants may choose by 2023. The forecasts use de-identified NDIS and other data (Census, Department of Social Services data) to predict what the NDIS will look like by 2023, when it is fully operating, and the growth of participant numbers starts to ease. Please note that the forecast will be updated regularly based on new NDIS data as it becomes available. Regularly checking <https://blcw.dss.gov.au/ndis-demand-map/> is advised.

The information presented below is an aggregation of postcodes which cover the City of Darebin and slightly beyond the LGA boundary. Map 4 illustrates the alignment between postcodes and the Darebin LGA boundary (thick blue line).



Map 4 – Alignment of postcodes with the Darebin LGA boundary

Table 4 lists current demand for NDIS by disability type. The lower and upper bounds define the lower and upper range of participation so for example, the autism figures can be read as “currently there are between 527 and 590 participants in NDIS with autism”. In this combined area covering Darebin and slightly beyond, the type of disability with the highest uptake is autism, intellectual disability and mental illness associated disability. Note that the disability types in this dataset are different to ones used by the ABS in the Survey of Disability, Ageing and Carers (SDAC).

Category of Type	Lower Bound Value	Upper Bound Value
Autism	527	590
Developmental Delay	96	150
Disability caused by Injury	137	200
Down Syndrome	43	70
Intellectual Disability	536	590
Mental Illness Associated Disability	497	560
Neurological Disorder	277	340
Participants with Physical Disabilities	32	50
Vision, Hearing, Speech or Other Sensory Impairments	116	170
All Categories total for 7 postcodes covering the LGA	2,261	2,720

Table 4 – Current NDIS participants by type of disability for the combined 7 postcodes covering the Darebin LGA

The NDIS demand dataset contains information about the current and forecasted spending by NDIS participants for both April 2018 - March 2019 period and the year 2023. For more information on the NDIS demand analysis and forecasting, see <https://blcw.dss.gov.au/ndis-demand-map#ndis>.

The information about current spend total and forecast spend total is derived from the NDIS Demand map (<https://blcw.dss.gov.au/demandmap/>) and covers the area depicted in map 4, an aggregation of seven postcodes.

- Current spend total (June 2018 - June 2019): \$140,720,161 - \$141,760,170
- Forecast spend total (2023): \$164,044,340 - \$240,723,818

Table 5 presents the total number of forecasted participants in NDIS for 2023

Category of Type	Lower Bound Value	Upper Bound Value
Autism	614	1,319
Developmental Delay	125	501
Disability caused by Injury	150	337
Down Syndrome	36	149
Intellectual Disability	579	1,060
Mental Illness Associated Disability	486	1,021
Neurological Disorder	291	543
Participants with Physical Disabilities	83	271
Vision, Hearing, Speech or Other Sensory Impairments	168	421
All categories total for 7 postcodes covering the LGA	2,532	5,622

Table 5 – Forecasted NDIS participants for the year 2023, by type of disability for the combined 7 postcodes covering the City of Darebin

The NDIS analysis by postcode describes NDIS demand and provides information regarding how many NDIS participants are expected to live in an area (postcode), how much participants are expected to spend, on what types of disability (as presented in tables 4 and 5) and how many workers may be required to meet participant needs and preferences.

For the postcodes that cover Darebin, the largest increase in NDIS uptake by type of disability is for "autism", with an increase between 87 and 729 participants by 2023, potentially more than doubling in total number of participants. "Intellectual disability" and "mental illness associated disability" uptake is also expected to increase significantly. Lowest increases are forecasted for "Down Syndrome" and "disability caused by injury".

The number of workers required to meet participant needs and preferences is also presented in this dataset. By 2023, there will be an additional 1,142-1,614 personal carers required to meet NDIS participant needs and preferences in the combined seven postcodes covering the Darebin extent and beyond. Along with that potential jobs increase, there will be a requirement for an additional 41-82 "Occupational Therapists, Physiotherapists, Professional Services, Psychologists, Speech Therapists and Audiologists" by 2023 and 322-438 positions for other disability related jobs.

2.11 People with a need for assistance – analysis of the "Specialist Disability Accommodation" report

The report "[*Specialist Disability Accommodation\(SDA\): Market Insights*](#)", prepared for the Summer Foundation by SGS Economics and Planning in 2018 demonstrates the scale and distribution of demand for specialist disability accommodation (SDA) under the National Disability Insurance Scheme (NDIS) with a view to mobilising both private and community sector interest in provision of this housing. The report assesses provision of SDAs in Australia from a "supply perspective", "demand distribution perspective" and "investor perspective" which assesses investor opportunity to simultaneously meet SDA needs and generate sound financial returns.

Across Australia, 17,500 people are currently living in SDAs. An additional 33,200 people have been identified with high support needs, with the potential to qualify for SDA payments. This group consists of:

- 6,200 people aged under 64 with very high support needs living in aged care, and
- 27,000 people with very high support needs not currently living in SDA or aged care.

According to the SDA report, most of the people not currently in SDA or aged care (75%) are living at home, two-thirds with family (many with ageing parents or other family carers). Two thirds are under 45 years of age. The report suggests that these people will continue to receive disability support services through the NDIS and many will seek more appropriate accommodation, given more flexible support provided under the NDIS. Similarly, many of the group currently living in aged care would be expected to seek more appropriate accommodation under the NDIS.

In Victoria, there are currently 4,260 SDA residents. The per-capita distribution of SDA in Victoria is 7,200 – a difference (gap) of 2,940 places, second behind New South Wales (gap of 3,290 places). The per-capita analysis in the SDA report looks at what the SDA places total should be if the 1:857 ratio (one SDA place per 857 people) is applied to the total population of a State/Territory. This ratio is based on there being 28,000 SDA places funded once the NDIS is fully rolled out and when multiplied by 857 approximately equals the population of Australia as at 2018. The SDA looks at whether this total is adequate when compared to a total population of a State.

The report identifies the Darebin-North Statistical Area 3 (SA3) which includes, Bundoora and Macleod, Kingsbury, Reservoir, and Preston as one of the notable areas with a high "effective job density" (EJD) and strong potential demand. As stated in the SDA report, the Effective Job Density (EJD) of an area is a reliable predictor of current and future property value. It is a measure of relative access to jobs across a region. This, in turn, reflects relative access to retail, health, education, recreational and other opportunities, which is a driver of property values.

The report identifies that in Darebin, SDA demand does not outstrip supply, with there being 71 more people living in SDA than the per-capita distribution suggests there should be.

Demand analysis in the "*Specialist Disability Accommodation (SDA): Market Insights*" report was done because it was identified that the need for SDA is not proportionally distributed across the country as there are areas of concentrated demand. Detailed methodology for this analysis is available on page 17 of the document available from the [Summer Foundation website](#) and is a slightly more sophisticated way of calculating demand compared to the per capita approach.

In summary, both the "per-capita" and "potential SDA demand" measures suggest that Darebin is well serviced in terms of SDA availability and uptake and that the current 252 SDA residents is more than the potential demand of 215.

SA3 Name	Suburbs within SA3	Existing SDA residents	Per capita distribution	Difference between existing and per-capita distribution	Potential SDA demand
Darebin-North	Bundoora and Macleod, Kingsbury, Preston, Reservoir	179	116	63 (i.e. more actual SDA residents than the per capita calculation dictates is needed)	147
Darebin-South	Alphington, Fairfield, Northcote, Thornbury	73	64	8	68
Darebin Total		252	180	71	215

Table 6 – Existing demand and potential per-capita supply for specialist disability accommodation (SDA), for the Darebin

2.12 People with a need for assistance – summary

- In 2016 there were 8,774 people in the Darebin who reported needing help in their day-to-day lives due to disability. This equates to 6.0% of the total Darebin population.
- The total number of people with disability in Darebin between 2006 and 2016 (7,143 people in 2006 and 8,050 in 2011), as did the proportion of the total Darebin population, from 5.6% in 2006 to 6.0% in 2016.
- The suburbs which experienced decreases in proportion of the population with a disability between 2006 and 2016 are Alphington, Bundoora and Macleod and Northcote.
- Thornbury and Reservoir experienced the largest increases of people with disability (as proportion of total population) with Alphington and Kingsbury also experiencing an increase but at a lower rate.
- Almost 65% of people with disability are aged over 65 years old in Darebin. By comparison, only 14.2% of Darebin's total population is aged 65 years and over.
- Compared to the general population, Darebin residents with a disability are more likely to live in separate houses and less likely to live in medium- or high-density dwellings.
- A higher proportion of people with disability also live in non-private dwellings (institutions such as aged care) compared to the overall Darebin population.
- More people with disabilities live as "Couples without children", "One parent family" or "Lone person" households than the total Darebin population.
- Housing tenure data for people with disability shows that there is a much higher proportion who are in full ownership of their dwellings.
- The proportion of people with disability who've completed a "Bachelor or Higher degree" is quite low. Only 6.4% achieved this qualification level in 2016 compared to 32.7% of Darebin as a whole. The proportion of people with disability who achieved a "Bachelor or Higher degree" has increased since 2006.
- The proportion of people with disability who have no qualification is almost twice as high as for Darebin as a whole.
- A lower proportion of people with disability had internet access compared to Darebin as a whole.
- Close to one quarter of people with disability had no motor vehicles in their household, compared to 7.9% for Darebin as a whole.

- 71.2% of people with disability aged over 15 years had an individual income of less than \$500 per week compared to 32% for Darebin total population aged 15 years; more than 3.3% have an individual income of over \$1,000 compared to Darebin's 25.6% percentage.
- 28.1% of people with disability live in households with a total income of \$500 or less compared to 9.6% for Darebin as a whole. 2.6% live in households with a total income of \$4,000 or more, compared to 9.8% for Darebin as a whole.

3. Carers for older adults or people with disability in Darebin

This section focuses on describing the demographic characteristics of people who provide unpaid care, help or assistance to family members or others due to a disability, a long-term illness or old age. This report will often refer to them as "carers" for brevity's sake. The proportion of carers for the aged and people with disability in Darebin can be an important indicator of the level of demand for aged-care services and facilities by local and state governments.

An increasing proportion of carers among the population may indicate inadequate service provision or the need for in-home support or support for the carers themselves. The level of care provided by individuals is likely to be affected by household income, age structure and the ethnic makeup of the community, as well as the sense of community cohesiveness.

3.1 Carers for older adults or people with disability – change over time

According to 2016 Census figures, 13,672 Darebin residents aged over 15 years provided unpaid assistance to a person with a disability, long term illness or old age. This figure represents 11.1% of the total Darebin population aged over 15 years, up from 10% in 2006. A similar proportion (11.3%) of Greater Melbourne's population aged over 15 years provided unpaid assistance in 2016.

Chart 25 illustrates the proportion of population who are carers in Darebin and Greater Melbourne.

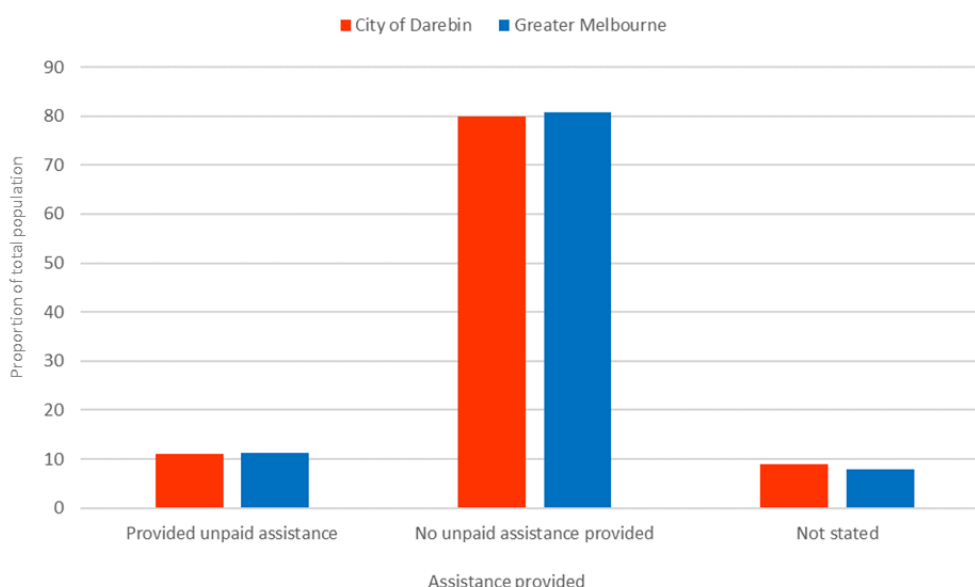


Chart 25 – Proportion of population who provide care, Darebin and Greater Melbourne, 2016

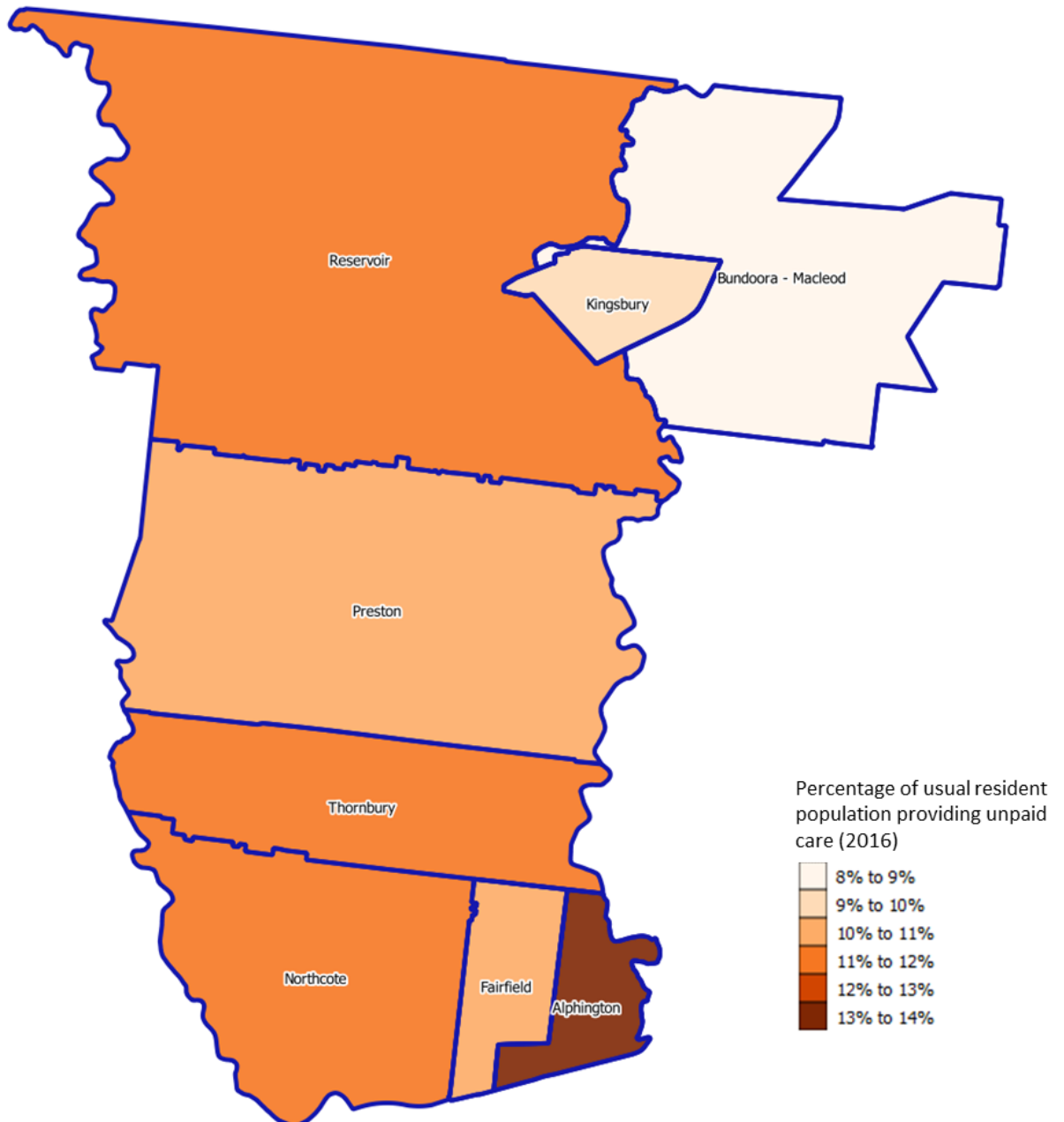
3.2 Carers for older adults or people with disability – spatial distribution

The spatial distribution of carers refers to where the person lives (usual residence) rather than where they provide the care. In 2016, Alphington had the highest proportion of residents who provided unpaid care with 13.4% (351 persons). Reservoir, 11.5% (4,812 persons), Northcote, 11.2% (2,301 persons), Thornbury, 11.2% (1,751 persons), and Preston, 11.0% (3,078 persons) were the other suburbs with a relatively high level of unpaid care provision. Bundoora and Macleod, 8.7% (570 persons) and Kingsbury, 9.5% (309 persons) were the only two suburbs where less than 10% of the resident population aged over 15 years provided unpaid care.

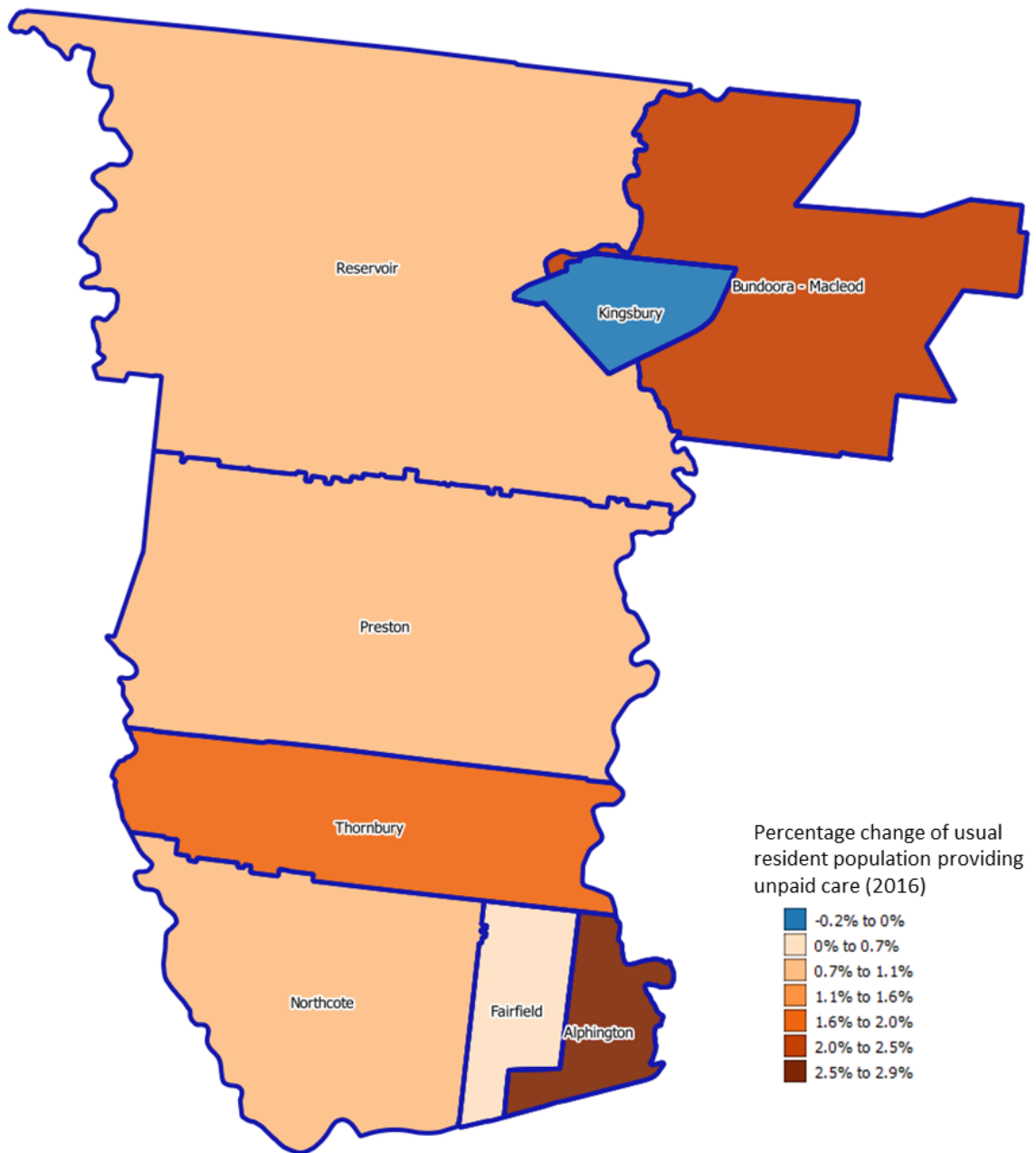
Suburb	2006 total	2006 % of pop	2016 total	2016 % of pop	Change 2006-2016	Change in % 2006-2016
Alphington	229	10.5%	351	13.4%	122	2.9%
Bundoora and Macleod	279	6.4%	570	8.7%	291	2.3%
Fairfield	413	9.9%	503	10.4%	90	0.5%
Kingsbury	262	9.7%	309	9.5%	47	-0.2%
Northcote	1,827	10.2%	2,301	11.2%	474	1.0%
Preston	2,427	10.2%	3,078	11.0%	651	0.8%
Reservoir	3,926	10.4%	4,812	11.5%	886	1.1%
Thornbury	1,362	9.5%	1,751	11.2%	389	1.7%
Darebin Total	10,740	10.0%	13,672	11.1%	2,932	1.1%

Table 7 – Total residents who provided unpaid care to a person with a disability, long term illness or old age by suburb, 2006-2016

Alphington experienced the highest increase in the proportion of resident population who provided unpaid care – an increase of 2.9% between 2006 and 2016. Bundoora and Macleod saw an increase of 2.3% more residents providing unpaid care in the same period. Thornbury, which experienced the largest increase of people with disability between 2006 and 2016 also experienced a relatively large increase in percentage of the population providing unpaid care, an increase of 1.7% between 2006 and 2016. The only suburb that decreased in proportion of the population providing unpaid care between 2006 and 2016 was Kingsbury, with a decrease of 0.2% – though the actual *number* of carers increased from 262 to 309.



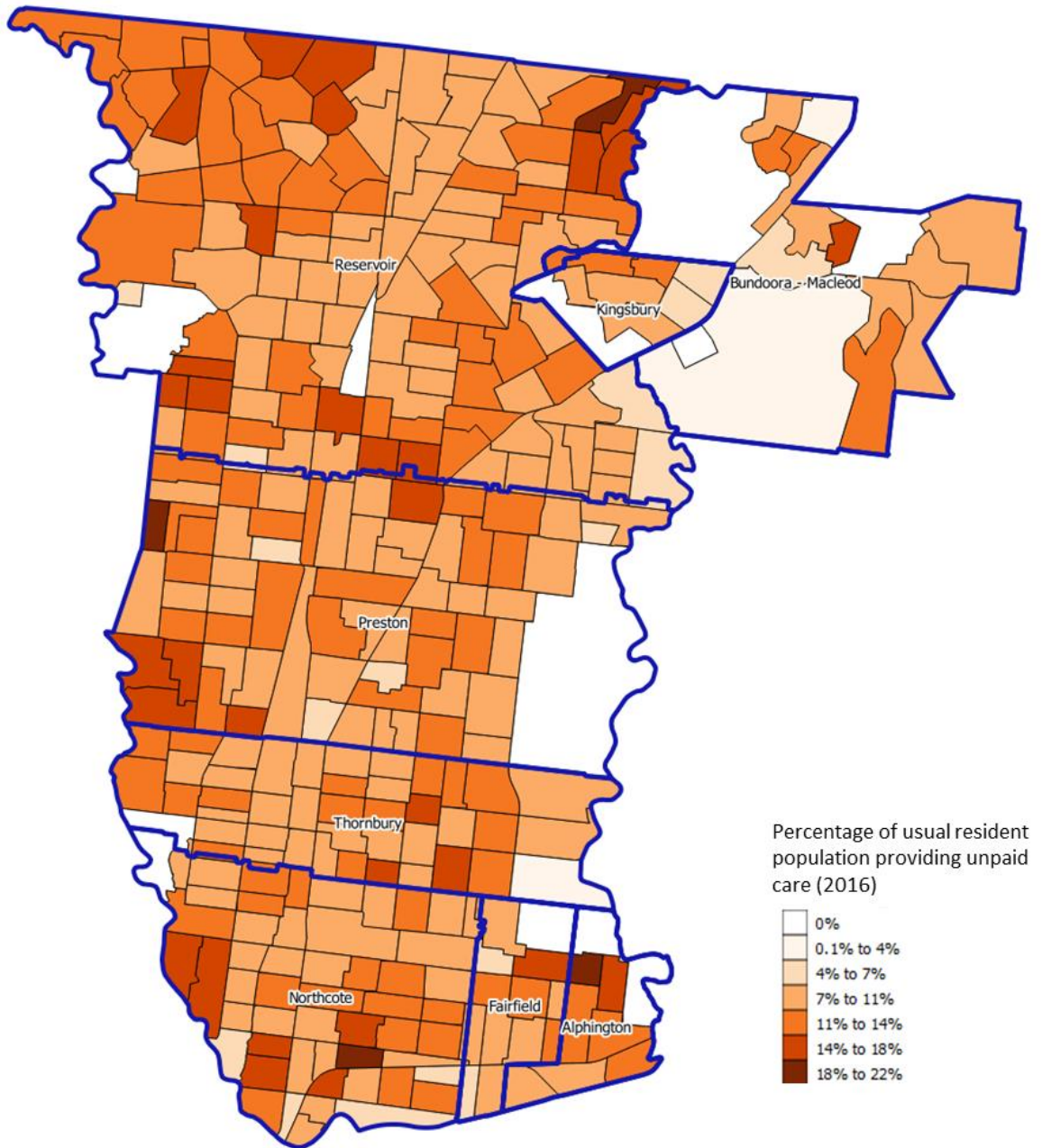
Map 5 – Proportion of resident population (aged over 15 years) who are carers, by suburb, 2016.



Map 6 – Percentage change of resident population (aged over 15 years) who are carers, by suburb, 2006-2016.

Map 5 illustrates the proportion of residents who are carers by suburb and shows a relatively similar spatial trend with Alphington as the suburb with the highest proportion of residents providing unpaid care. Northcote, Thornbury and Reservoir are suburbs with an above average proportion of residents as carers. Kingsbury, Bundoora and Macleod have the lowest percentages of residents providing unpaid care.

Over ten years from 2006 to 2016, Alphington, Bundoora and Macleod had the largest increases in the proportion of residents who are carers. Thornbury also exhibited an above average increase in this category whereas Northcote, Reservoir and Preston had increases closer to the LGA average of 1.1%. Fairfield was the suburb with the smallest increase (0.5%) and Kingsbury was the only suburb which had a decline in proportion of carers, although the total number increased by 47 persons, from 262 in 2006 to 309 in 2016.



Map 7 – Proportion of resident population (aged over 15 years) who are carers, by SA1, 2016.

Map 7 shows the spatial distribution of carers at SA1 level. There are no clear patterns, with many neighbourhoods having between 7% and 14% of their resident population as carers. Some northern parts of Reservoir, eastern parts of Preston, central and eastern parts of Northcote and northern parts of Alphington stand out as SA1s with a higher than average proportion of carers.

3.3 Carers for older adults or people with disability – age structure

Comparing the age structure of carers with that of people with disability or with Darebin as a whole shows how similar or different these groups are and, combined with analysis of change over time, can provide insight into trends, sustainability of care provision and likely future changes to carers.

In 2016, carers were predominantly aged 45-59 years old. Chart 26 compares the age structure of carers to the overall population of Darebin.

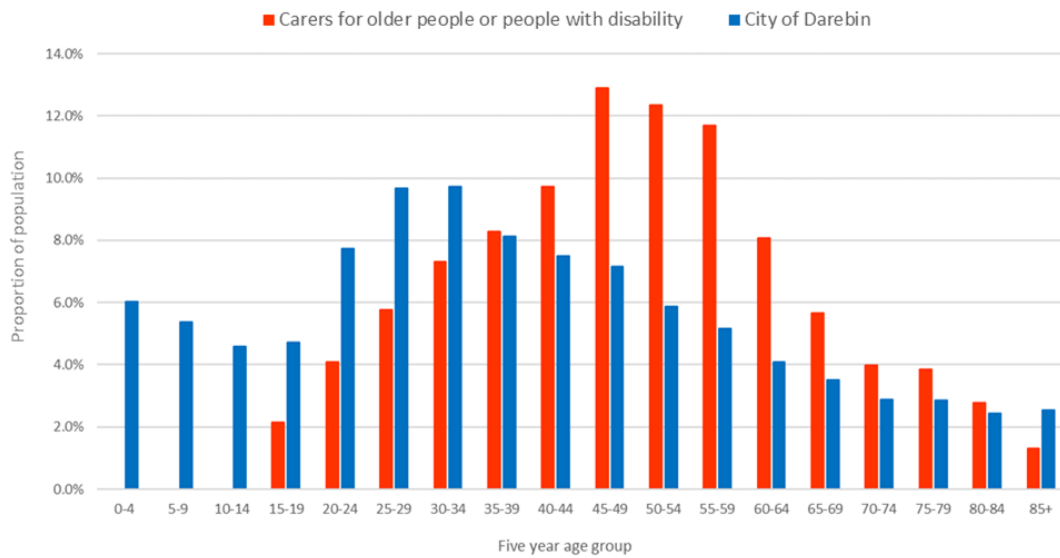


Chart 26 – Age structure of carers compared to the Darebin total population, 2016.

Change in the age structure of carers between 2006 and 2016 shows that they are getting older, as seen in chart 27. There is a decrease in the proportion of carers aged 15-44 years old with the largest decreases seen in the 35-44 year old age groups.

Carers aged 50–64 years made up a larger proportion in 2016 compared to 2006. There was a slight decrease in carers aged 70–74 years old and an increase in carers aged 80 years or older. This trend is worth investigating in the future and something worth focussing on when the 2021 Census information is available to examine whether the age structure of carers continues to shift along into older age groups and what this could mean for sustainable provision of care in the future.

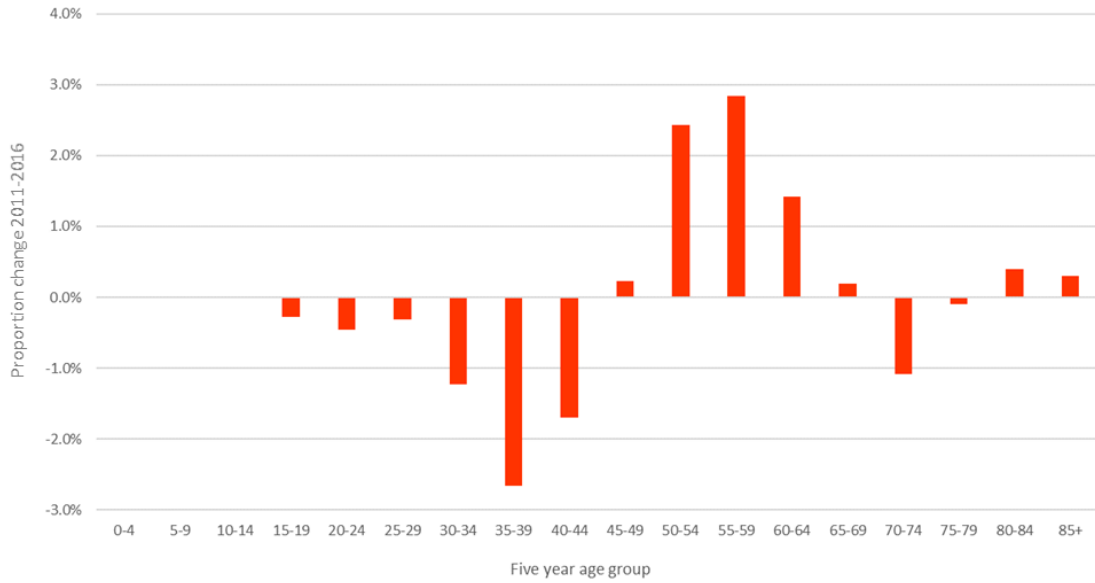


Chart 27 – Change over time of proportion of carers by age group in Darebin, 2006-2016.

Finally, an age-structure comparison of carers and people with disability shows that it is predominantly a middle-aged population (mature adults, empty nesters and early retirees aged 40–64 years) who are caring for people with disability aged 70 years and older. Chart 28 shows this difference.

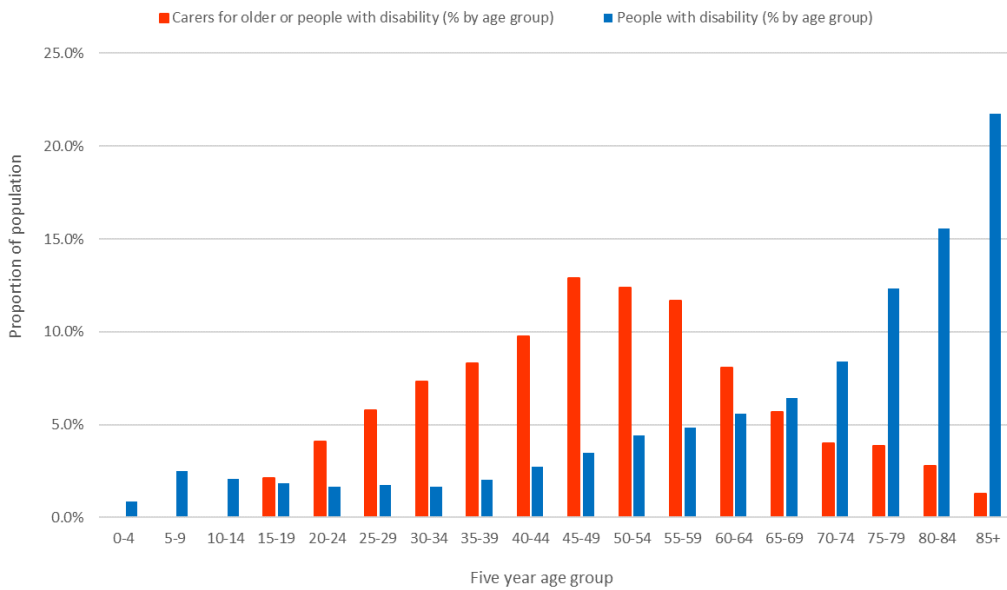


Chart 28 – Comparison of age structure – carers and people with disability, Darebin, 2016

3.4 Carers for older adults or people with disability – household types

Housing and household characteristics of carers provides insight into how similar or different they are to the overall Darebin population when it comes to the type of households they occupy.

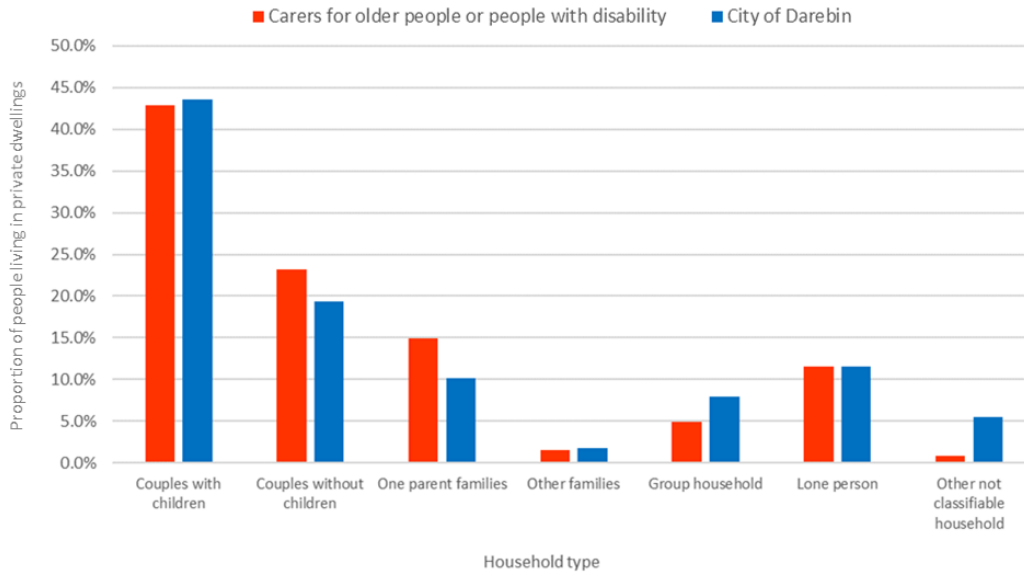


Chart 29 – Household types for carers compared to the Darebin total, 2016

Census data for household types occupied by carers shows that they are not dissimilar to Darebin as a whole. In 2016, 42.9% of all carers in Darebin lived as “Couple with children” households, compared to 43.6% for Darebin as a whole.

The second most common household type for carers in 2016 was “Couples without children” (23.3%, not dissimilar from Darebin as a whole, at 19.4. Carers are represented slightly higher in “One parent family” households (15% compared to 10.2% for Darebin as a whole) and the proportion of carers living in “Lone person” households is almost identical as the Darebin total – (11.6% compared to 11.5% for Darebin).

Analysis of change to household types of carers between 2006 and 2016 shows that there has been an increase in “One parent families”, “Group households” and “Lone person” households. Decreases were observed for “Couples without children” households (-1.3%) and “Couples with children” households (-0.3%). This is illustrated in chart 30.

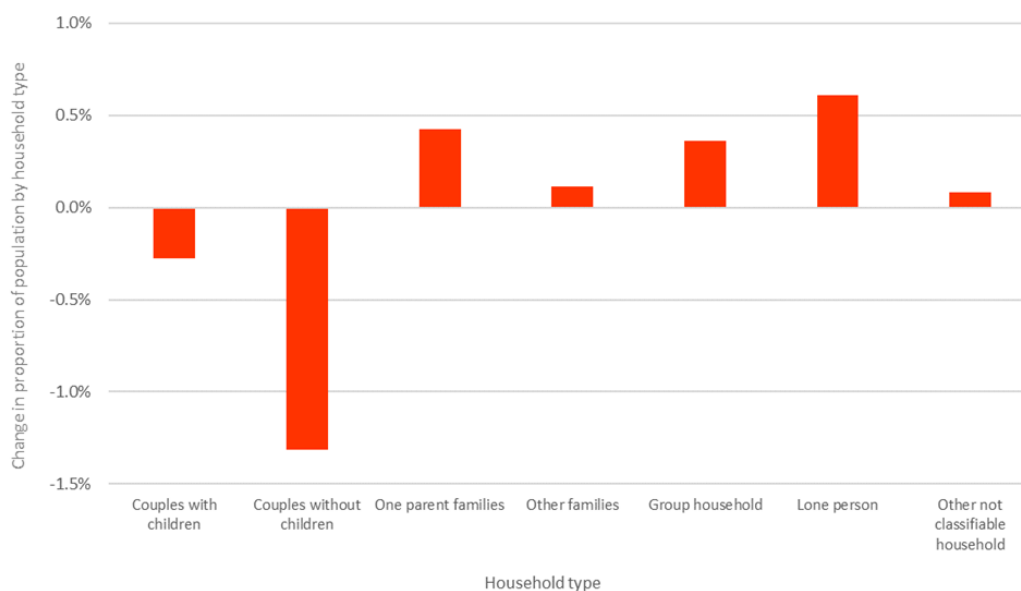


Chart 30 – Changes in household type for carers, 2006-2016

3.5 Carers for older adults or people with disability – education

The information below refers to the Census question “*What is the level of the highest qualification the person has completed?*” and includes residents aged over the age of 15 years. In 2016, 42% of carers in Darebin had no qualification outside of primary and secondary school. This was a decrease of 6.4% since 2006. In both 2006 and 2016 the proportion of carers with no qualifications was slightly higher than Darebin as a whole (37.1% in 2016, 47.2% in 2011).

23.5% of carers in Darebin had a “Bachelor or Higher degree” as their highest qualification level, slightly lower than Darebin as a whole (32.7%) and an increase of 0.7% since 2006. A slightly higher proportion of carers had “Vocational qualifications” as their highest qualification obtained (19%) compared to Darebin as a whole (11.6%). Carers with an “Advanced diploma or diploma” as their highest qualification were higher in proportion compared to Darebin overall (11.7% compared to 8.4% for Darebin).

Charts 31 and 32 illustrate the similarities and differences of carers’ qualifications with that of Darebin as a whole and how the trends in qualification level (outside of primary and secondary school) changed over time.

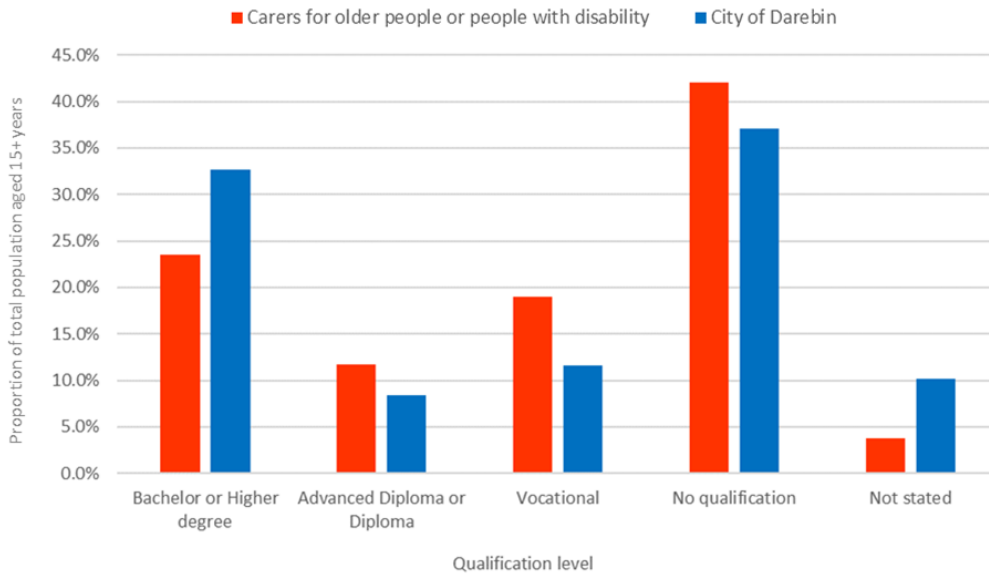


Chart 31 – Qualification levels of carers and the Darebin Total, 2016

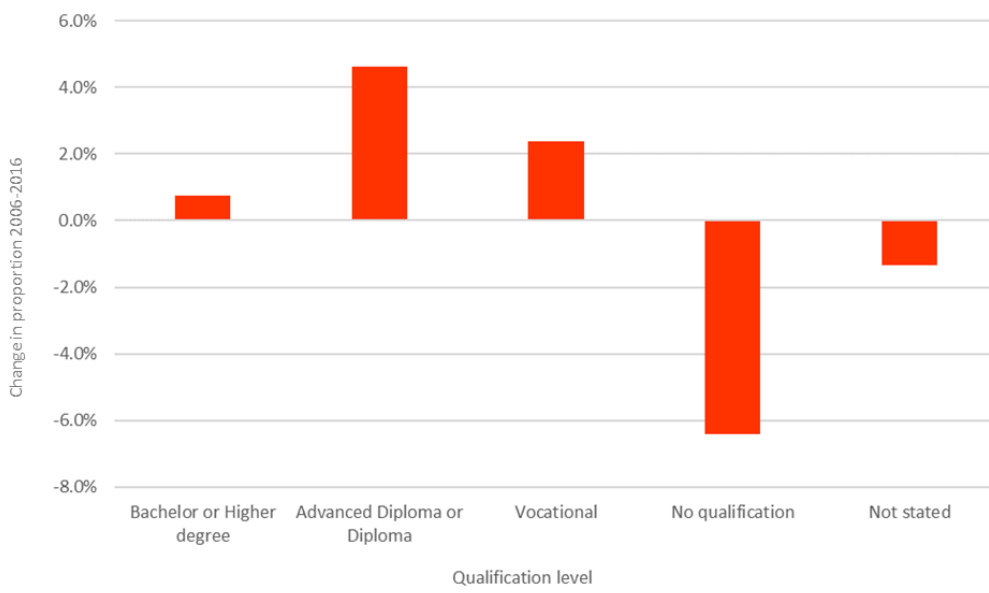


Chart 32 – Change in proportion of qualification level for carers, 2006-2016

Current attendance of education institutions is presented in charts 33 and 34 and shows how the education attendance behaviour of carers has changed over time and how it differs from Darebin as a whole.

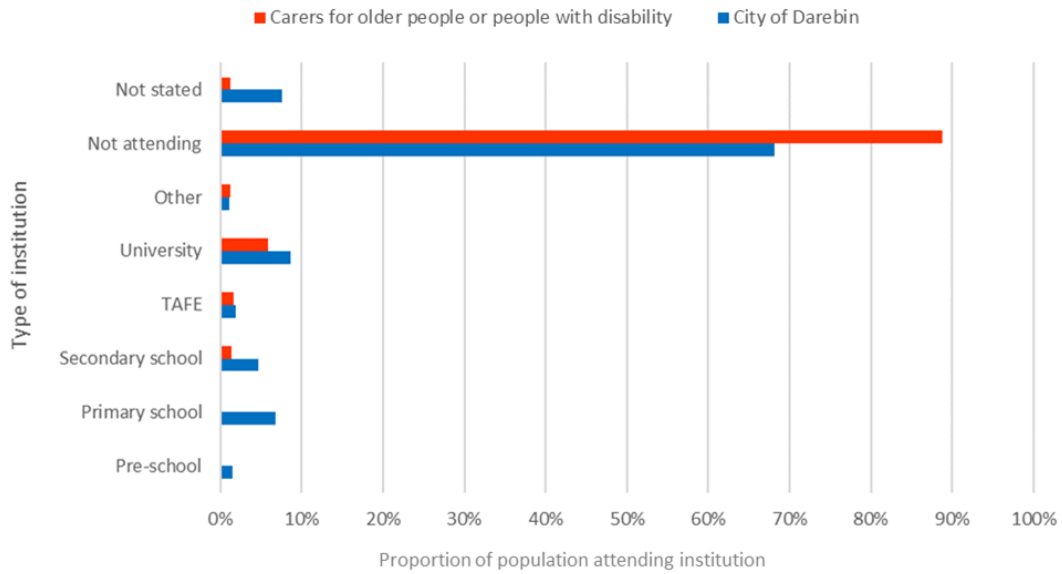


Chart 33 – Education institution attending for carers and the Darebin total, 2016

In 2016, 88.8% of the carers within Darebin were not attending any education institution. This proportion is higher than Darebin as a whole, where 68.2% of residents were not attending any education institutions.

Of those carers who did attend an education institution, 5.8% were attending a University, 1.6% a TAFE, 1.3% a secondary school and 1.2% another type of institution. All of these were lower than the Darebin figures for attendance of education institutions as seen in chart 33.

When compared to 2006, largest increases were in the proportion of carers who did not attend any education institutions. There was an increase of 1% for carers who attended University over that ten-year period. Notable decreases occurred in the “Not stated” category, which could be related to better response rates or more carers correctly completing the Census form if they are attending an institution. There was a 0.8% decrease in the proportion of carers who attended a TAFE. See charts 34 and 35 for these ten-year trends.

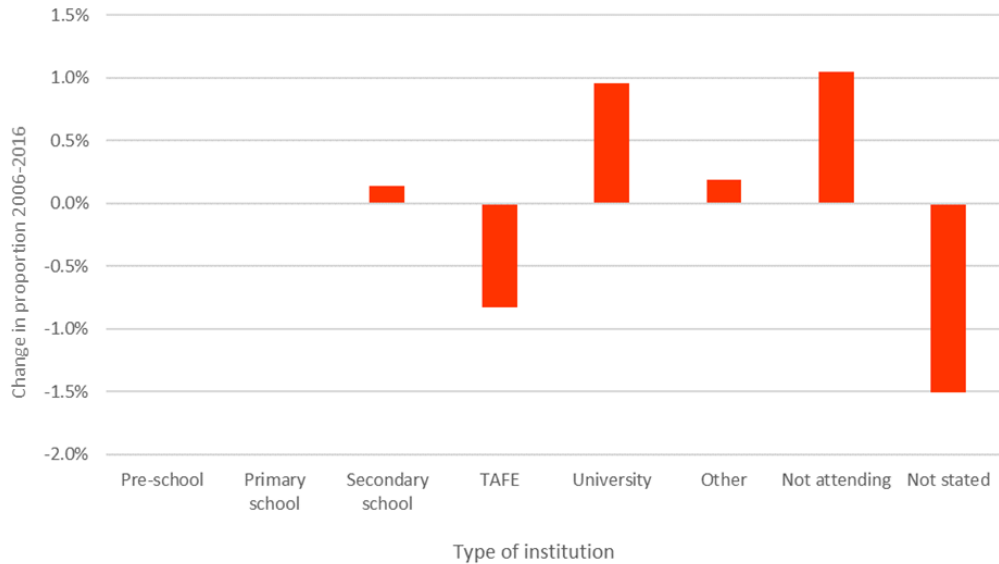


Chart 34 – Change in proportion of types of education institutions attended for carers, 2006-2016

3.6 Carers for older adults or people with disability – individual and household income

Information about income levels of carers is an important indicator of socio-economic status. This section assesses the individual and household income characteristics of carers within Darebin and presents a comparison to Darebin as a whole while assessing change over time.

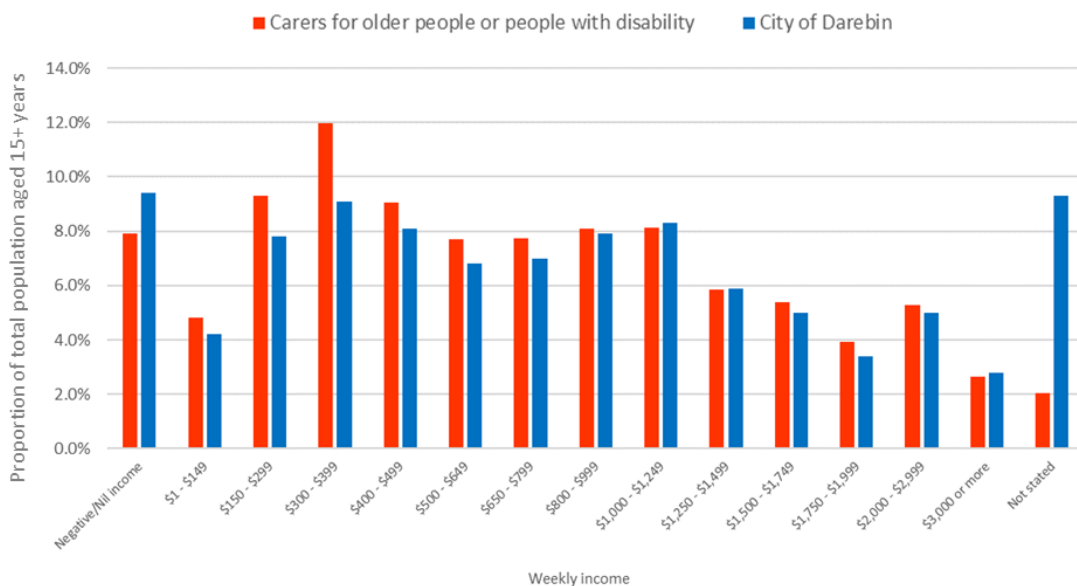


Chart 35 – Weekly individual income bands for carers and the Darebin total, 2016

For a full list of annual individual and household income that the ranges used in this section (weekly income) refer to section 2.8.

Individual income statistics for carers are relatively similar to Darebin as a whole. There is a slightly lower percentage of carers who have a negative or nil weekly individual income (7.9% compared to 9.4% for Darebin). A slightly higher proportion of carers have an individual weekly income of \$1–\$499 (35.2% compared to 29.2% for Darebin as a whole) and the proportion of carers with an individual income of \$500–\$999 per week is also slightly higher than the Darebin total (23.6% compared to 21.7%).

The proportion of carers with an individual weekly income of \$1,000–\$1,999 is slightly higher than Darebin as a whole (23.3% compared to 22.6%) and an almost identical proportion of carers and total Darebin residents have an individual weekly income of over \$2,000. It should be noted that a much higher proportion of overall Darebin residents did not state their weekly individual income (9.3% for Darebin compared to 2% for carers), therefore some of the comparison trends may be influenced by this missing data.

Household income figures tell another story about how carers live and about their socio-economic status. As with the household income data in section 2.8 of this report, it is worth remembering that any persons in a household shared by carers will be counted in this dataset, including those household members who are not carers.

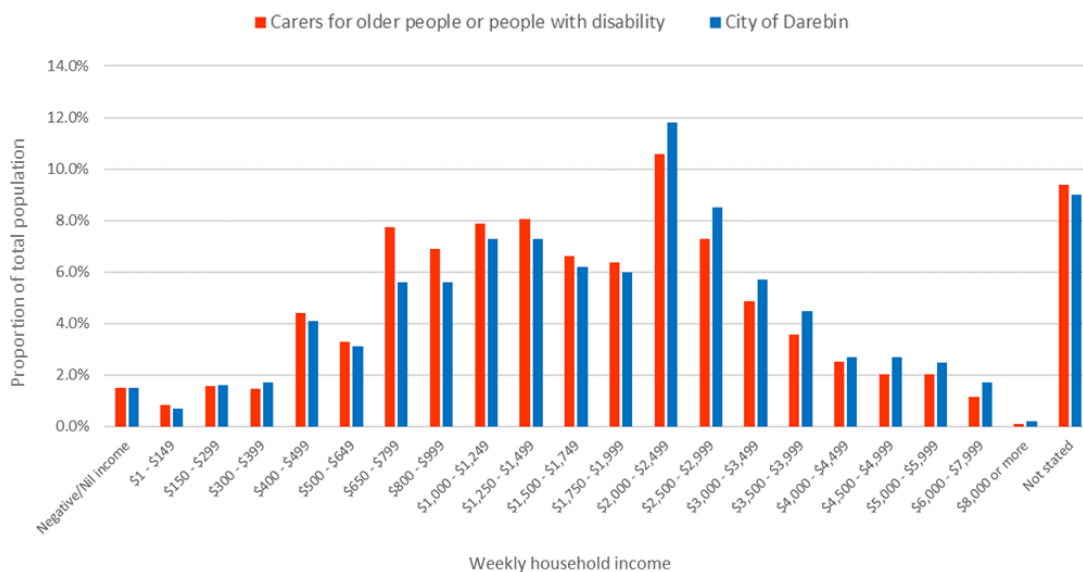


Chart 36 – Weekly household income bands for carers and the Darebin total, 2016

The proportion of carers in Darebin who live in households with weekly incomes of below \$500 is similar to Darebin as a whole (9.8% compared to 9.6% for Darebin). A slightly higher proportion of carers live in households with a weekly income of \$500–\$999 (18% compared to 14.3% for Darebin as a whole). Carers who live in households with weekly incomes between \$1,000 and \$1,999 represent a slightly higher proportion of the population compared to Darebin overall (28.9% compared to 26.8% for Darebin).

A slightly lower proportion of carers live in households with weekly incomes between \$2,000 and \$3,999 compared to Darebin as a whole (26.3% compared to 30.5%) and

a lower proportion live in households with a weekly income between \$4,000 and \$5,999 compared to Darebin (6.6% compared to 7.9%).

The proportion of carers in the highest household income ranges are lower compared to Darebin as a whole, albeit only slightly. Only 1.2% of carers had a weekly household income of \$6,000 or more, compared to 1.9% for Darebin overall. The "not stated" category was similar for carers and Darebin as a whole. This is presented in table 8 below.

Household income band (weekly)	Carers	Darebin – total population
Nil - \$499	9.8%	9.6%
\$500-\$999	18.0%	14.3%
\$1,000-\$1,999	28.9%	26.8%
\$2,000 - \$3,999	26.3%	30.5%
\$4,000 - \$5,999	6.6%	7.9%
\$6,000+	1.2%	1.9%
Not Stated	9.4%	9.0%
Total	100%	100%

Table 8 – Comparison of grouped household income bands for households in which carers lived, compared to the Darebin total population, 2016

3.7 Carers for older adults or people with disability – summary

- In 2016, there were 13,672 residents in Darebin (aged over 15 years) who provided unpaid assistance (care) to a person with a disability, long term illness or old age. This represents 11.1% of Darebin's population.
- Compared to Greater Melbourne, Darebin had a very similar proportion of carers in both 2006 and 2016.
- Alphington had the highest proportion of residents who provided unpaid care in 2016 (13.4%). Reservoir, Northcote, Thornbury and Preston were the other suburbs with a relatively high level of unpaid care provision.
- Bundoora and Macleod and Kingsbury were the only two suburbs where less than 10% of the resident population were carers.
- In 2016, carers were predominantly aged 45 - 59 years. Change in the age structure of carers between 2006 and 2016 shows that the age of carers is increasing and there are more persons in older age groups who are undertaking unpaid care work.
- Most carers live in "Couples with children" households. The second most common household type for carers in 2016 was "Couples without children".

- In 2016, 42% of carers had no qualification outside of primary and secondary school. This was higher than Darebin overall (37.1%) but represented a decrease of 6.4% since 2006.
- In 2016, 88.8% of carers within Darebin were not attending any education institution. Of those who did attend an education institution, 5.8% were attending a University, 1.6% a TAFE, 1.3% a secondary school and 1.2% another type of institution. All of these were lower than the Darebin's overall education attendance figures.
- Carers are slightly over-represented in the lower individual weekly income ranges and slightly under-represented in the higher individual weekly income ranges though the overall comparisons to Darebin as a whole show the individual income for carers as quite similar.
- A similar pattern emerges when comparing weekly household income – 57% of carers live in households with a weekly income of less than \$2,000 compared to 51% for Darebin as a whole. On the other hand, 34% of carers live in households with a weekly income of more than \$2,000 compared to the Darebin total which is 40% in 2016.

4. Estimates and forecasts of need for assistance using data modelling

The Survey of Disability, Ageing and Carers (SDAC) is an ABS Survey conducted every three years. The Census is generally accepted as an undercount of the total need for assistance level in the population, due to the need to ask broad questions on a self-responded form.

Because it is interview based, SDAC provides better estimates than the Census of overall need for assistance at the State and national level while also breaking down by specific type of disabilities and need for assistance. Because SDAC is a survey, the sample size from any individual LGA is small (~100-200 dwellings likely in Darebin), and it cannot produce quality local information as is. SDAC data is not available at local government level but it does provide an age/sex breakdown of need for assistance, which is what we use to model to the local level using interpolation and simple propensity estimates based on levels of need for assistance recorded in the Census. The latest SDAC edition is 2018-based and was published in November 2019.

Our model takes into uses two main factors:

- Age/sex propensities for particular characteristics derived from the SDAC, and
- Census-derived need for assistance level for each age/sex group.

The latter provides a localised nuance than is available from SDAC alone. As an example, Darebin's "Need for Assistance" percentage among males aged 70-74 was 39.3%, while the national one was only 24.1%; therefore, propensities applied to this age group are increased by 63.1% (because the 39.3 figure is 63% larger than 24.1).

The information included in the output contains:

- Estimate of need for assistance number and rate for 2018 (based on latest ERP – *estimated resident population*)
- Breakdown of type of need for assistance:
 - Self care of health care
 - Households chores or property maintenance
 - Mobility issues
 - Meal preparation
 - Reading or writing
 - Private transport
- Breakdown by age and sex (5-year age groups)
- Forecast need for assistance at 2021, 2026, 2031, 2036 and 2041.

Some of the information is quite detailed and best viewed as spreadsheet tables; detailed information is only included in the spreadsheet which accompanies this report (**Darebin disability modelling SDAC.xlsx**).

4.1 Estimates and forecasts of need for assistance – summary

In total, our modelling of SDAC and Census data indicates approximately 20,959 people currently needing assistance in one or more categories in Darebin, or 13.5% of the population. This is higher than the national average recorded in the survey (11.7%) and higher than the 2016 Census figure. This is due to adjustment via Census-revealed propensity – the need for assistance level in Darebin is generally higher among the older groups (over 50-year olds) and lower among younger groups than the Australian average.

As mentioned, the main differences between the Census measure of disability and the SDAC measure of disability is that SDAC measures a broader range of disability whereas the Census identifies people who report a need for assistance due to a 'profound or severe core activity limitation'.

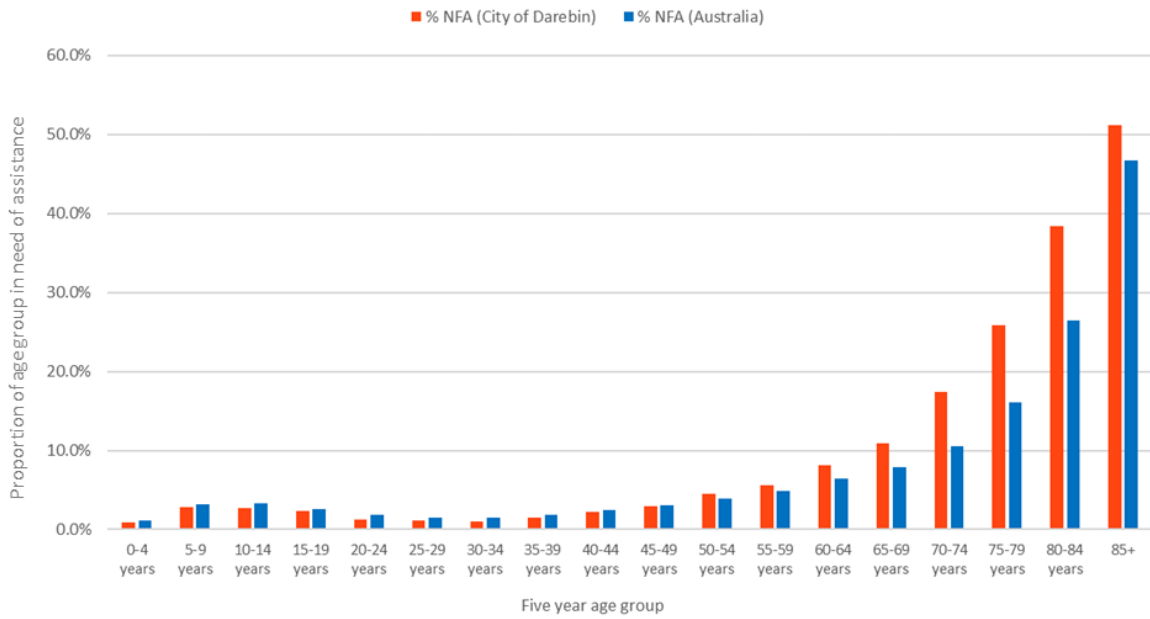


Chart 37 – Need for assistance (NFA) as a percentage of people with disability by five-year age group, Darebin and Australia 2016 Census data

The need for assistance level in Darebin is slightly lower among younger age groups than the Australian average and noticeably higher than the Australian average in the older age groups, especially in the 70-84 year age groups.

The SDAC shows that types of assistance such as self-care, property maintenance, meal preparation and transport are generally those required mainly by older adults, with a median age well over 60; cognitive tasks and oral communication have a younger age profile, with medians in the 40s. The provided spreadsheet showing the workings of the model has a sheet showing the median age by assistance type. Note that although some types of assistance have younger age profiles than others, all types of need for assistance have an older age profile than the total population.

In Darebin, the largest proportion of need for assistance is in the “Household Chores or Property Maintenance” category, with 14% of the population in 2016. This is closely followed by “Self-care or Health care” (13.9% of the population) and “Oral Communication or Cognitive tasks” (9.4% of the population in 2016). The full table of modelled propensity for types of need for assistance are shown in table 9. Note that people with disability can be included in more than one category, hence the total being greater than 100%. An outlook of forecasted need for assistance figures to 2041 is illustrated in table 10.

City of Darebin	2016	
	No.	%
Modelled propensity for need for assistance		
<i>Self-Care or Health Care</i>	21,489	13.9%
<i>Oral Communication or Cognitive tasks</i>	14,544	9.4%
<i>Household Chores or Property Maintenance</i>	21,716	14.0%
<i>Mobility issues</i>	10,739	6.9%
<i>Meal preparation</i>	3,249	2.1%
<i>Reading or writing</i>	4,656	3.0%
<i>Private transport</i>	7,883	5.1%
Total need for assistance	20,959	13.5%
No need for assistance	134,063	86.5%
Total population	155,022	100.0%

Table 9 – SDAC results modelled against Darebin data using propensity for need for assistance by type of disability

Charts 38 and 39 illustrate the modelled propensity for need for assistance using [forecast.id data for Darebin](#). As the modelling relies on age structure, some of the needs for assistance can be seen falling during certain periods in the 2016–2041 forecast but usually increasing near the later years of the forecast. This is due to the forecasted influx of younger people into the new higher density residential developments in Darebin.

- **Self-care or health care:** *increases from 13.9% in 2016 to 14.3% in 2041 (+0.4)*
- **Oral communication or cognitive tasks:** *increases from 9.4% in 2016 to 9.5% in 2041 (+0.1%)*
- **Household chores or property maintenance:** *increases from 14.0% in 2016 to 14.4% in 2041 (+0.4%)*
- **Mobility issues:** *increases from 6.9% in 2016 to 7.1% in 2041 (+0.2%)*
- **Meal preparation:** *remains same in 2041 as in 2016 (2.1%)*
- **Reading or writing:** *remains same in 2041 as in 2016 (3.0%)*
- **Private transport:** *increases from 5.1% in 2016 to 5.2% in 2041 (+0.1%)*

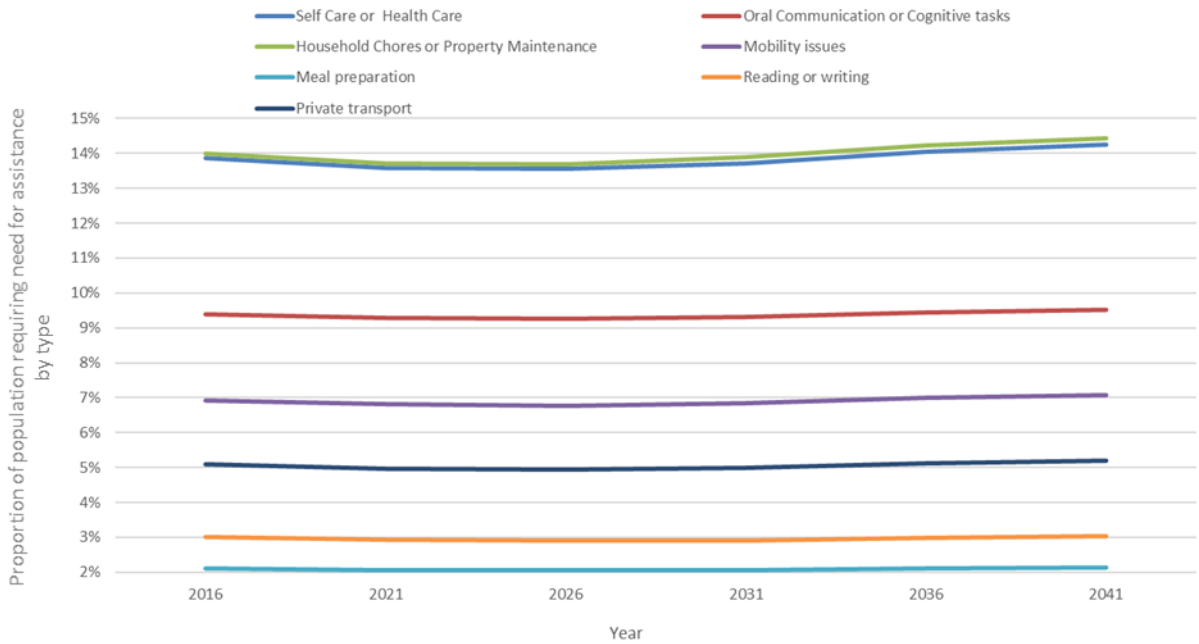


Chart 38 – Modelled results of different need for assistance types for the 2016-2041 period

The modelled total numbers of residents with a need for assistance due to disability is displayed in chart 39. The latest estimated resident population (ERP) data from 2018 allows for a creation of a more current figure/estimate of residents with a need for assistance. In 2018 the estimated number of Darebin residents with a need for assistance due to disability is 21,805, or 13.5% of the population, same as in 2016.

This total increases to nearly 23,000 by 2021 according to the model output. By 2026, Darebin will have over 25,000 people in need of assistance and from then until the end of the forecast period in 2041, that number is expected to increase by 415-485 people with disability per year.

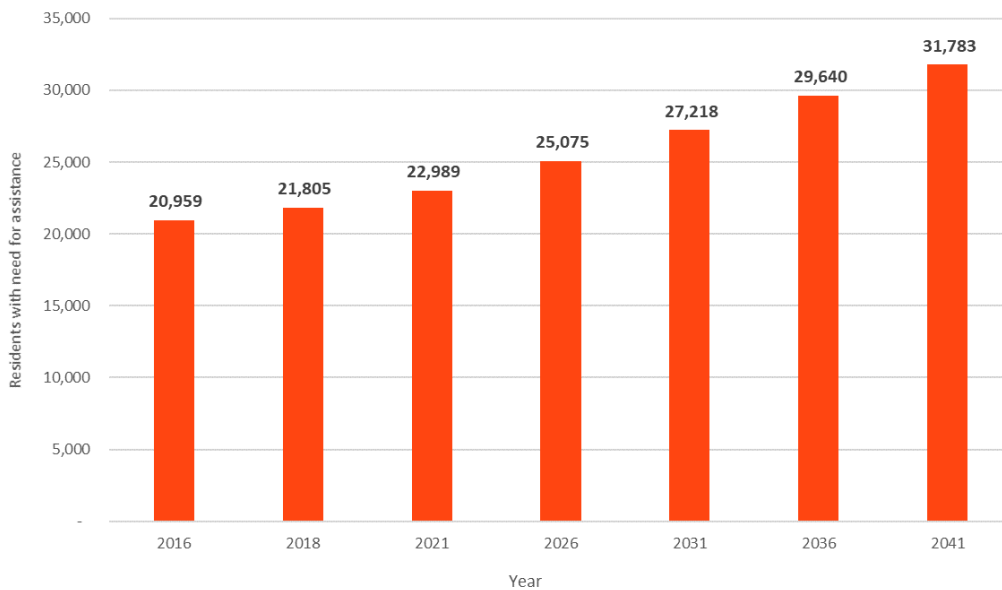


Chart 39 – Modelled output – total number of residents with need for assistance (2016-2041)

City of Darebin	2016		2018		2021		2026		2031		2036		2041		Avg. annual % change 2016-2041	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		Change % 2016-2041
Modelled propensity for need for assistance																
Self Care or Health Care	21,489	13.9%	22,362	13.8%	23,571	13.6%	25,743	13.6%	27,996	13.7%	30,533	14.1%	32,796	14.3%	11,307	1.7%
Oral Communication or Cognitive tasks	14,544	9.4%	15,204	9.4%	16,093	9.3%	17,603	9.3%	19,029	9.3%	20,526	9.5%	21,893	9.5%	7,349	1.6%
Household Chores or Property Maintenance	21,716	14.0%	22,461	13.9%	23,784	13.7%	26,007	13.7%	28,356	13.9%	30,897	14.2%	33,223	14.4%	11,507	1.7%
Mobility issues	10,739	6.9%	11,172	6.9%	11,808	6.8%	12,876	6.8%	13,964	6.8%	15,178	7.0%	16,268	7.1%	5,529	1.7%
Meal preparation	3,249	2.1%	3,375	2.1%	3,560	2.1%	3,886	2.0%	4,219	2.1%	4,580	2.1%	4,916	2.1%	1,667	1.7%
Reading or writing	4,656	3.0%	4,838	3.0%	5,072	2.9%	5,499	2.9%	5,954	2.9%	6,497	3.0%	6,980	3.0%	2,323	1.6%
Private transport	7,883	5.1%	8,163	5.1%	8,611	5.0%	9,364	4.9%	10,185	5.0%	11,115	5.1%	11,962	5.2%	4,078	1.7%
Total need for assistance	20,959	13.5%	21,805	13.5%	22,989	13.3%	25,075	13.2%	27,218	13.3%	29,640	13.6%	31,783	13.8%	10,824	1.7%
No need for assistance	134,063	86.5%	139,804	86.5%	150,398	86.7%	164,911	86.8%	176,916	86.7%	187,545	86.4%	198,334	86.2%	64,271	1.6%
Total forecast population	155,022	100.0%	161,609	100.0%	173,387	100.0%	189,986	100.0%	204,134	100.0%	217,185	100.0%	230,117	100.0%	75,095	1.6%

Table 10 – Detailed modelling results using SDAC data and forecast.id population forecast data, for the Darebin, 2016-2041

5. Annex

Two raw datasets, in Microsoft Excel format are provided along with this report:

- **DarebinDisability2019_Data_for_charts_and_report.xlsx** – containing all raw data and charts used in this report
- **Darebin disability modelling SDAC.xlsx** – containing modelling output used in section 4 at a detailed level

5.1 Raw data

- Total need for assistance by LGA, 2006, 2011, 2016
- Need for assistance by suburb, 2006 and 2016
- Need for assistance (NFA) age structure change 2006-2016
- NFA age structure compared to Darebin usual residents, 2016
- NFA dwelling types, 2006 and 2016, benchmarked to LGA
- NFA private/non-private dwelling types breakdown, 2006 and 2016, benchmarked to LGA
- NFA household types, 2006 and 2016, benchmarked to LGA
- NFA tenure type, 2006 and 2016, benchmarked to LGA
- NFA highest qualification level achieved, 2006 and 2016, benchmarked to LGA
- NFA education institution attending, 2006 and 2016, benchmarked to LGA
- NFA internet connection, 2011 and 2016, benchmarked to LGA
- NFA car ownership, 2006 and 2016, benchmarked to LGA
- NFA individual income, 2016, benchmarked to LGA
- NFA household income, 2016, benchmarked to LGA
- NFA employment status, 2006 and 2016, benchmarked to LGA
- NFA household income quartiles, 2011 and 2016, benchmarked to LGA
- NDIS participant age structure
- Carers summary, 2006 and 2016, benchmarked to LGA
- Unpaid care by suburb, 2006 and 2016
- Carers age structure, 2006 and 2016
- Carers household types, 2006 and 2016, benchmarked to LGA
- Carers highest qualification level achieved, 2006 and 2016, benchmarked to LGA
- Carers education institution attending, 2006 and 2016, benchmarked to LGA
- Carers individual income, 2016, benchmarked to LGA
- Carers household income, 2016, benchmarked to LGA

5.2 Darebin disability propensity modelling

- Median age by assistance type
- NFA by age
- Age by sex – NFA
- Propensities for disability category by age and sex, Australia, 2018
- City of Darebin NFA figures by age and sex, Census 2016
- City of Darebin adjusted propensities by different types of assistance, 2018

- Modelled propensities for need for assistance by age and sex, City of Darebin, 2016
- Modelled propensities for need for assistance by age and sex, City of Darebin, 2018 ERP
- Modelled propensities for need for assistance by age and sex, City of Darebin, 2021
- Modelled propensities for need for assistance by age and sex, City of Darebin, 2026
- Modelled propensities for need for assistance by age and sex, City of Darebin, 2031
- Modelled propensities for need for assistance by age and sex, City of Darebin, 2036
- Modelled propensities for need for assistance by age and sex, City of Darebin, 2041

- Needs for assistance summary by type of disability for 2016, 2018, 2021, 2026, 2031, 2036 and 2041

6. Glossary

ABS

Australian Bureau of Statistics

Australian Census of Population and Housing

The Australian Bureau of Statistics (ABS) conducts the Census of Population and Housing every five years. The Census aims to count the number of people in Australia and record their key characteristics (age, country of birth, main language spoken at home, religion, marital status, employment, income and family characteristics) and the dwellings in which they live.

Greater Melbourne

Greater Melbourne refers to the Greater Melbourne Capital City Statistical Area (GCCSA) and is often used as a benchmark to which areas within Melbourne are compared to. To see the extent of the Greater Melbourne Capital City area, follow this link: <https://profile.id.com.au/australia/about?WebID=260>

High Density Dwellings

'High density' dwelling type includes flats and apartments in 3 storey and larger blocks.

Household Income

Household income data presents the total weekly incomes of all persons over the age of 15 in the household.

Housing Tenure

Presents the tenure type of occupied private dwellings, and for those dwellings being rented, provides a breakdown of the type of landlord the dwelling is being rented from. For more information, visit: <https://profile.id.com.au/australia/topic-notes#housing-tenure>

Individual Income

Individual income data presents the total gross income (including pensions and allowances) that a person usually receives each week.

Labour Force

Labour force includes persons aged 15 years and over, and assesses employment in the week prior to the Census. Derived from the Census question: "Last week did the person have a full time or part time job of any kind?"

LGA

Local Government Area

Medium Density Dwellings

'Medium density' dwelling type includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

NDIS

National Disability Insurance Scheme. For more information, visit:

<https://www.ndis.gov.au/understanding/what-ndis>

Non-Private Dwellings

'Non-private dwellings' are dwellings which provide a communal form of accommodation such as Hotels, Motels, Nursing Homes, Hospitals, Army Barracks, Staff Quarters, Boarding Houses, Homeless shelters, Youth hostels and Ski Lodges.

Private Dwellings

Private dwellings are enumerated using online or paper household forms, which obtain family and relationship data as well as information on the dwelling itself such as rent or mortgage payments and ownership. All occupied dwellings are counted in the Census. Unoccupied private dwellings are also counted.

SDAC

The Survey of Disability, Ageing and Carers (SDAC) is conducted by the Australian Bureau of Statistics (ABS) throughout Australia. The survey collects information from three target populations: people with disability, older people and people who care for persons with disability, long-term health, conditions and older people.

Separate House Dwellings

'Separate house' dwelling type includes all free-standing dwellings separated from neighbouring dwellings by a gap of at least half a metre.

Statistical Area 1 (SA1) geography

Statistical Areas Level 1 (SA1s) are an ABS-designed geography. They are designed to maximise the spatial detail available for Census data. Most SA1s have a population of between 200 to 800 persons with an average population of approximately 400 persons.

Statistical Area 3 (SA3) geography

Statistical Areas Level 3 (SA3s) are an ABS-designed geography. They generally have a population of between 30,000 and 130,000 people. In regional areas, SA3s represent the area serviced by regional cities that have a population over 20,000 people. In the major cities, SA3s represent the area serviced by a major transport and commercial hub.