

3 Demography and socioeconomic status

Introduction

Socioeconomic disadvantage is a unique determinant of inequalities in health: evidence for this is presented in Chapter 1.

A range of data variables from the 1996 Population Census is mapped in this chapter to indicate variations in socioeconomic disadvantage at the small area level. The results of the correlation analysis, shown in Chapter 8, provide a measure of the strength of the association at the small area level in the distribution of the population with similar characteristics. The correlation analysis also draws attention to associations between the measures being discussed (eg. high rates of premature deaths of males, or high rates of admissions to hospital for circulatory system diseases) and the indicators of socioeconomic disadvantage mapped in this and the following chapters.

The next section describes the growth and distribution of the population in New South Wales (derived from Hugo 1991), discusses population projections and Indigenous population issues and raises some of the data issues that apply to the variables mapped and described in the remainder of the chapter.

Background

Population and distribution

At the 1996 Census, the population of New South Wales was 6,035,696. It is the most populous of the Australian States and, with an area of 800,725 square kilometres (**Table 3.1**), is the fifth largest Australian State. Sydney, at 12,138 square kilometres, is the largest capital city Statistical Division in Australia and is nearly twice the area of the next largest, Melbourne Statistical Division.

In common with most other States, much of the population is resident in the capital city. In the decade to 1996, the proportion of the New South Wales population resident in Sydney has been around 62 per cent. This proportion is considerably less than levels recorded in Melbourne (72.0 per cent), Adelaide (73.0 per cent) and Perth (72.0 per cent).

The European settlement of Sydney commenced in 1788 with the establishment, by Governor Phillip, of a penal colony at Sydney Cove. Sydney's unique position in relation to Sydney Harbour linked it to the rest of the world, and meant that it would be the pre-eminent town in New South Wales' development.

Sydney's development since has been strongly influenced by the Harbour, as well as the physical characteristics of the immediate hinterland. For its first 100 years, most of Sydney's expansion occurred to the south of the initial settlement, into the Cumberland Plain where relatively level landscape and fertile soils encouraged agricultural, industrial and residential development.

On the other hand, expansion to the north shore was restricted by access difficulties and shunned because its dissected sandstone topography hampered residential expansion.

In the absence of a public transport system, residential development occurred in close proximity to the commercial areas of Circular Quay and Darling Harbour, at locations such as Newtown, Glebe, Woolloomooloo and Surry Hills. At the same time, Parramatta developed separately as an agricultural settlement, connected to Sydney by the Parramatta River.

During the second half of the nineteenth century, railway development encouraged the urbanisation of Sydney. Lines to Parramatta in the west, to Hornsby in the north and to Sutherland in the south established the pattern of urban development for Sydney. As well, the beginnings of Sydney's ferry system were established and, in the early part of the twentieth century, a tramway network began to service residential developments in the inner west, southern and eastern suburbs.

These developments were in response to a steadily increasing population. The population of Sydney in 1861 was 96,000. It more than doubled during the next 20 years, and by Federation its population was 497,000 people, some 5,000 fewer than the population of Melbourne. By the Census of 1911, Sydney had become the largest city in Australia. Its population reached one million during the 1920s, and with the construction of the Sydney Harbour Bridge during the early 1930s, the development of the northern suburbs began. As is typical for city development, urbanisation occurred in close proximity to the main arterial transport routes, fostering the low density housing development characteristic of Australian cities. The infill of these interstitial areas would occur during the "long boom" of the 1950s and 1960s.

Between 1947 and 1971, Sydney's population increased by 88 per cent, from 1,484,000 to 2,799,600. Much of this population growth was fuelled by the policies of post-war reconstruction and the development of a manufacturing and industrial base to the Australian economy. Moreover, immigration played a significant role in this manufacturing expansion. Since 1947, typically around one quarter of all overseas born immigrants have sought to live in Sydney, although between 1954 and 1976 more migrants chose to live in Melbourne than any other capital city in Australia. Since 1976, Sydney has been the principal location for international immigrants. The rapid population growth during the fifties and sixties not only caused residential development between the main transport corridors, but in locations such as Bankstown, Fairfield, Liverpool, Parramatta, Blacktown and

Table 3.1: Population and area, New South Wales, 1996

Section of State	Population:		Area:	
	No.	Per cent	km ²	Per cent
Sydney Statistical Division	3,741,290	62.0	12,138	1.5
Rest of State	2,297,406	38.0	788,586	98.5
Whole State	6,035,696	100.0	800,725	100.0

Source: ABS special data services

Penrith, manufacturing development encouraged the creation of new suburbs to house the workforce required by these industries. The relative cheapness of motor vehicles encouraged a separation of residence from workplace, and a low population density. However, the physical characteristics of Sydney, especially the constraints imposed by the Harbour, and the large proportion of Sydney's housing constructed as high density row and terrace housing before the advent of public transport facilities, have caused the city to have a higher population density than is found in the other Australian capital cities.

Projected population

By 2006, Sydney's population is projected to increase by 14.2 per cent to 4,272,000, and then to 4,594,500 by 2016. Over the same period, the population in the non-metropolitan areas of New South Wales is projected to increase by 7.5 per cent to 2,470,100 by 2006 and to 2,577,600 by 2016. The projected growth rate for Sydney during this time will be marginally greater than that for Melbourne, but considerably less than the rates expected for Brisbane, Darwin and Perth. However, future population predictions for New South Wales are heavily

dependent on both the size of the international migrant intake and the level of net interstate migration (ABS 1998).

Data issues

Data quality of Indigenous population counts

As noted in Chapter 2, *Methods*, the data describing the health status and utilisation of health services by Aboriginal people are generally of poor quality. It has become clear with the release of results from the 1996 Census that population data are also less than ideal. **Table 3.2** shows the population of Indigenous Australians as recorded at the three most recent Censuses, as well as changes over the ten-year period from 1986 to 1996.

The number of Indigenous people recorded has increased by 125,325 people, from 227,645 at the 1986 Census to 352,970 at the 1996 Census (an increase of 55.1 per cent). Of the total increase, over half (69,051, or 55.1 per cent) occurred in the non-metropolitan areas, an increase for these areas of 44.4 per cent over ten years. The capital cities, with 26.6 per cent of the population of Indigenous Australians in 1986, showed an apparently stronger growth rate, of 79.0 per cent.

Table 3.2: Population of Indigenous Australians, 1986 to 1996

Area	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
1986									
Capital City	18,589	6,173	11,257	5,825	10,087	2,136	5,536	1,056	60,659
Other Major Urban Centres	4,515	392	6,515	..	..	..	..	..	11,422
Rest of State/Territory	35,907	6,046	44,101	8,466	27,702	4,580	29,203	164	155,564
Whole State/Territory	59,011	12,611	61,268	14,291	37,789	6,716	34,739	1,220	227,645
1991									
Capital City	22,600	7,956	13,456	6,948	11,744	3,026	6,179	1,588	73,497
Other Major Urban Centres	6,641	625	7,462	..	..	..	..	..	14,728
Rest of State/Territory	40,778	8,154	49,977	9,284	30,035	5,859	33,731	187	177,234
Whole State/Territory	70,019	16,735	70,124	16,232	41,779	8,885	39,910	1,775	265,459
1996									
Capital City	34,438	10,725	21,887	9,387	17,198	4,705	7,368	2,896	108,604
Other Major Urban Centres	10,573	1,802	9,233	..	..	..	..	..	20,608
Rest of State/Territory	56,474	9,947	65,462	11,057	33,595	9,168	38,909	3	224,615
Whole State/Territory	101,485	22,474	95,518	20,444	50,793	13,873	46,277	2,899	352,970
percentage change									
Capital city									
1986 to 1991	21.6	28.9	19.5	19.3	16.4	41.7	11.6	50.4	21.2
1991 to 1996	52.4	34.8	62.7	35.1	46.4	55.5	19.2	82.4	47.8
1986 to 1996	85.3	73.7	94.4	61.2	70.5	120.3	33.1	174.2	79.0
Other major urban centre									
1986 to 1991	47.1	59.4	14.5	..	..	..	..	..	28.9
1991 to 1996	59.2	188.3	23.7	..	..	..	..	..	39.9
1986 to 1996	134.2	359.7	41.7	..	..	..	..	..	80.4
Rest of State/Territory									
1986 to 1991	13.6	34.9	13.3	9.7	8.4	27.9	15.5	..	13.9
1991 to 1996	38.5	22.0	31.0	19.1	11.9	56.5	15.4	..	26.7
1986 to 1996	57.3	64.5	48.4	30.6	21.3	100.2	33.2	..	44.4
Whole State/Territory									
1986 to 1991	18.7	32.7	14.5	13.6	10.6	32.3	14.9	45.5	16.6
1991 to 1996	44.9	64.3	36.2	25.9	21.6	56.1	16.0	63.3	33.0
1986 to 1996	72.0	78.2	55.9	43.1	34.4	106.6	33.2	137.6	55.1

Source: ABS special data services

At the State/Territory level, the apparent rate of Indigenous population growth was highest in the Australian Capital Territory (137.6 per cent) and Tasmania (106.6 per cent), and lowest in the Northern Territory (33.2 per cent) and Western Australia (34.4 per cent). Queensland moved from having the largest population of Indigenous Australians in 1986 (with 61,268) to second largest, with 95,518 (after New South Wales with 101,485) in 1986. Sydney remained the capital city with the largest population of Indigenous people over the ten years to 1996. The major urban centres of Geelong and Newcastle/Wollongong had the largest increases, of 359.7 per cent and 134.2 per cent, respectively.

Such increases are not explained by the relatively higher fertility rates among Indigenous people, nor are they explained by a decline in mortality of Indigenous Australians. Rather, it appears that Australian's have been increasingly prepared to identify themselves as Indigenous on the Census form. The question remains as to what per cent of the actual population of Indigenous Australians these current levels of identification represent.

ABS SEIFA Index of Relative Socio-Economic Disadvantage

At each Census since the 1986 Census, the ABS have produced a number of indexes which measure different aspects of the socioeconomic conditions of the populations of geographic areas (ABS 1998). These summary measures, the Socio-Economic Indexes for Areas (SEIFA), combine into one index a range of information relating to the social and economic characteristics of the populations in small areas.

One of these indexes, the Index of Relative Socio-Economic Disadvantage (IRSD), summarises the information available from variables related to education, occupation, income, family structure, race (the proportion of Indigenous people), ethnicity (poor proficiency in use of the English language) and housing. The index reflects the extent of disadvantage represented by, for example, the proportion of low income families, of those with relatively low educational attainment and of high unemployment, in the area being examined. The variables are, therefore, similar to those presented in the remainder of this chapter. While the index number is a useful measure of socioeconomic disadvantage, users should realise its limitations. For example, while it represents the results of a particular set of statistical analyses on a set of variables from the 1996 Census, changing the variables could change the particular index values calculated (although the relativities between the areas for these variables are, in general, likely to remain). It also has a wide range of uses, such as for the allocation of resources or as a shorthand description of populations living in an area, but is not a universal answer to all such needs.

The IRSD is calculated at the smallest geographic level for which data are available from population Censuses – the Census Collection District – and was then calculated for the larger areas in the atlas (Statistical Local Areas, Statistical Subdivisions, Statistical Divisions and States and Territories) by weighting the scores for these smaller units by their population.

The IRSD is calculated to show the relativity of areas to the Australian average for the particular set of variables that

comprise it. The average score is set at 1000. In this atlas, data mapped at the SLA level have been re-weighted so that New South Wales is the average, with a State score of 1000. The text draws attention to the use of the two averages. Areas with relatively less disadvantaged populations (ie. those of higher socioeconomic status) have an index number of above 1000 and those with relatively greater disadvantage (ie. of lower socioeconomic status) have an index number of less than 1000. It is unfortunate that an IRSD uses high index scores to indicate advantage, when it would be intuitively expected that high index scores would indicate disadvantage, as implied by the name of the index. The text and maps for the IRSD are on pages 74 to 77.

In the discussion in the text, statistically significant *inverse correlations* between the IRSD and other variables indicate a positive association between the distributions of those variables and the disadvantaged population at the SLA level. Statistically significant *positive correlations* indicate an association between the particular variable(s) and areas comprising relatively advantaged populations. This is a difficult concept to grasp, so an example may assist. In the case of the variable for single parent families in Sydney (page 28), there is an inverse correlation (-0.70) with the IRSD. Thus, at the SLA level in Sydney there is a strong *negative* association between high proportions of single parent families and high SEIFA index scores. This can be restated as there being a strong *positive* association with socioeconomic disadvantage (ie. low index scores).

Age-sex standardisation

Age-sex standardisation was used to adjust the data mapped for the variable for early school leavers (**Maps 3.19 and 3.20**).

It is straightforward to calculate from the Census the percentage of each SLAs adult population, leaving school at the age of 15 or less, but a significant part of the variation between SLAs in this measure is caused by age structure. A person aged 70 is less likely to have stayed at school past the age of 15 than a person aged 20, simply because of the changes over the past 55 years in the education system. Age-sex standardisation measures variations in educational participation in a way unaffected by age structure. For each SLA, a theoretical expected number of adult residents who left school at age 15 or less has been calculated, assuming that each 5 year age group in its population had the same educational participation record as that age group in the New South Wales population as a whole. This expected number is then compared with the actual number, to establish whether the number of people who did not continue at school beyond 15 is significantly greater or less than one would expect given the area's age structure. A similar analysis compares the level of participation for each State/Territory and capital city, using Australia as the standard.

Data definitions

The variables mapped in this chapter and details of the way in which they have been defined are shown in **Table 3.3**.

Table 3.3: Details of demographic and socioeconomic variables mapped

Topic and variable name	Numerator	Denominator
Age distribution		
children aged 0 to 4	All children aged from 0 to 4 years	Total population
people aged 65 and over	All people aged 65 years & over	Total population
Families		
single parent families	Single parent families with dependent children [under 15 yrs]	All families
low income families ¹	Families with income less than \$21,000 p.a. [\$400 per week]	All families with an income
high income families ²	Families with income of \$52,000 or more p.a. [\$1,000 per week]	All families with an income
Labour force		
unskilled and semi-skilled workers	Intermediate production & transport workers; labourers & related workers	Total employed labour force
high status occupations ²	Managers and administrators; & professionals	Total employed labour force
unemployed people	People with labour force status as unemployed	Total labour force
female labour force participation	All females aged 20 to 54 years in the labour force	All females aged 20 to 54 years
Educational participation and achievement		
early school leavers ³	People who left school at age 15 years or less, or did not go to school	Population aged 15 years & over
Aboriginal and Torres Strait Islander	Aboriginal and/or Torres Strait Islander people	Total population
People born in predominantly non-English speaking countries		
resident for five years or more	Number born in predominantly non-English speaking countries and resident for five years or more	Total population
resident for less than five years	Number born in predominantly non-English speaking countries and resident for less than five years	Total population
proficiency in English	People aged five years and over and born in predominantly non-English speaking countries who speak English 'not well' or 'not at all'	Population aged five years and over
Housing		
housing authority rented dwellings	Occupied private dwellings rented from the State/Territory housing authority	All occupied private dwellings
dwellings with no motor vehicle	Occupied private dwellings with no motor vehicle garaged or parked there on Census night	All occupied private dwellings

¹When interpreting the figures for low income families in the text in this chapter, it should be noted that the indicators of low income used in the comparisons (\$12,000 per annum or less in 1986 and less than \$21,000 per annum in 1996) do not equate to equivalent incomes and have thus not been adjusted based on changes to buying power. Rather, they are based on categories of income available from the Census and denote comparability of income in 1986, 1991 and 1996 based on the levels of incomes of recipients of the sole parents' allowance and unemployment allowances.

²These variables were not mapped but are included in the correlation analyses.

³This variable was adjusted using age-sex standardisation: a description of this process is in the text above.

Source: Compiled from project sources

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Children aged 0 to 4 years, 1996

Capital city comparison

Children are major users of health services, especially in the first years of life. Children living in families of lower socioeconomic status are more likely to have poorer health status and generally make more use of primary and secondary health services than those who are better off. Their distribution at a local area level is therefore an indicator of likely health service demand and the need for preventative programs.

Children aged from 0 to 4 years comprised 7.1 per cent of Australia's total population at the 1996 Census, and 6.9 per cent of the population of the capital cities (**Table 3.4**). In the last three Censuses, the proportion of young children in **Adelaide**, the capital city with the highest proportion of population at older ages and the lowest Total Fertility Rate (see **Chapter 5**), was the lowest of all these cities. The percentages for most of the other capitals equated to or were slightly above the average. In contrast **Darwin**, with 8.1 per cent, had a considerably higher proportion of children aged from 0 to 4 years.

The proportion of the total population aged from 0 to 4 years in Australia's capital cities decreased marginally in the ten years to 1996, from 7.3 per cent in 1986 to 7.2 per cent in 1991 and 6.9 per cent in 1996.

Table 3.4: Proportion of population aged 0 to 4 years, capital cities
Per cent

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	7.0	6.9	7.1	6.4	6.8	6.9	8.1	7.3	6.9
1986	7.3	7.0	7.5	6.9	7.6	7.8	9.0	8.3	7.3

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

The number of children in **Sydney** aged from 0 to 4 years increased from 243,971 in 1986 to 260,285 in 1996. Whilst this equates to an additional 16,134 children in this age group in **Sydney**, the percentage declined, falling from 7.3 per cent to 7.0 per cent over the ten years to 1996.

Map 3.1 shows clear groupings of SLAs with similar percentages of children aged from 0 to 4 years. The pattern is similar to that in 1986, with a progression from lower percentages in the inner suburbs to higher percentages in the outer suburbs and urban fringe.

The highest percentages were recorded in the SLAs of Campbelltown (9.5 per cent), Blacktown (9.4 per cent), Camden (9.3 per cent), Liverpool (9.2 per cent) and Penrith (9.0 per cent).

The lowest proportions were found in the inner SLAs of Sydney (2.1 per cent), South Sydney (3.4 per cent), North Sydney (3.7 per cent), Leichhardt (5.0 per cent), and other harbourside SLAs.

There were correlations of substantial significance at the SLA level with the variables for unskilled and semi-skilled workers (0.74) and early school leavers (0.83), and of meaningful significance with the variable for Indigenous people (0.53). The inverse correlation with the IRSD (-0.52) also indicates a positive association at the SLA level between high proportions of young children and socioeconomic disadvantage. The inverse correlations with the variables for managers and administrators, and professionals (-0.79), dwellings with no motor vehicle (-0.60) and high income families (-0.59), support this association.

Newcastle

There were 31,860 children aged from 0 to 4 years in **Newcastle** in 1996, 7.1 per cent of the population. Within **Newcastle**, Maitland (8.0 per cent) had the highest percentage, with the lowest percentages in the SLAs of Newcastle (6.2 per cent) and Lake Macquarie (7.1 per cent).

Wollongong

In 1996, 7.3 per cent of the population in **Wollongong** was aged from 0 to 4 years (18,123 children). Shellharbour was a significant contributor to this figure, with 8.5 per cent of its own population in this age group. The City of Wollongong and Kiama both had 7.0 per cent of their population in this category.

Map 3.1

Children aged 0 to 4 years, Sydney, Newcastle and Wollongong, 1996

as a percentage of the total population in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Children aged 0 to 4 years, 1996

State/Territory comparison

The proportions of children aged from 0 to 4 years in the non-metropolitan areas of Australia (the areas designated *Rest of State/Territory* in the table) were higher than in the capital cities. The average nation-wide percentage for the *Rest of State/Territory* areas was 7.5 per cent, with a similar percentage in New South Wales (**Table 3.5**). At the *Whole of State/Territory* level South Australia had the lowest proportion (6.7 per cent) and the Northern Territory had the highest (8.6 per cent), with the other States having percentages near the average.

Comparisons between the 1986, 1991 and 1996 Censuses indicate a consistent reduction in the proportions of children aged from 0 to 4 years during the past decade. This trend of declining numbers of children over time is apparent across all of the States and Territories, and is particularly significant in the *Rest of State/Territory* areas, where the average declined from 8.4 per cent to 7.5 per cent between 1986 and 1996.

Table 3.5: Proportion of population aged 0 to 4 years, State/Territory
Per cent

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	7.0	6.9	7.1	6.4	6.8	6.9	8.1	7.3 ²	6.9
Other major urban centres ³	7.2	6.9	6.4	..	..	..	..	..	6.8
Rest of State/Territory	7.4	7.5	7.4	7.4	8.0	7.6	9.0	— ⁴	7.5
Whole of State/Territory	7.1	7.0	7.1	6.7	7.2	7.3	8.6	7.2	7.1
1986									
Rest of State/Territory	8.2	8.2	8.4	8.3	9.2	8.3	10.2	— ⁴	8.4

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

The number of children aged from 0 to 4 years increased from 115,626 in 1986 to 123,712 in 1991, before declining to the current level of 118,354 children. Their proportion in the population has, however, shown a continued decline, from 8.2 per cent in 1986 to 8.1 per cent in 1991 and 7.4 per cent in 1996.

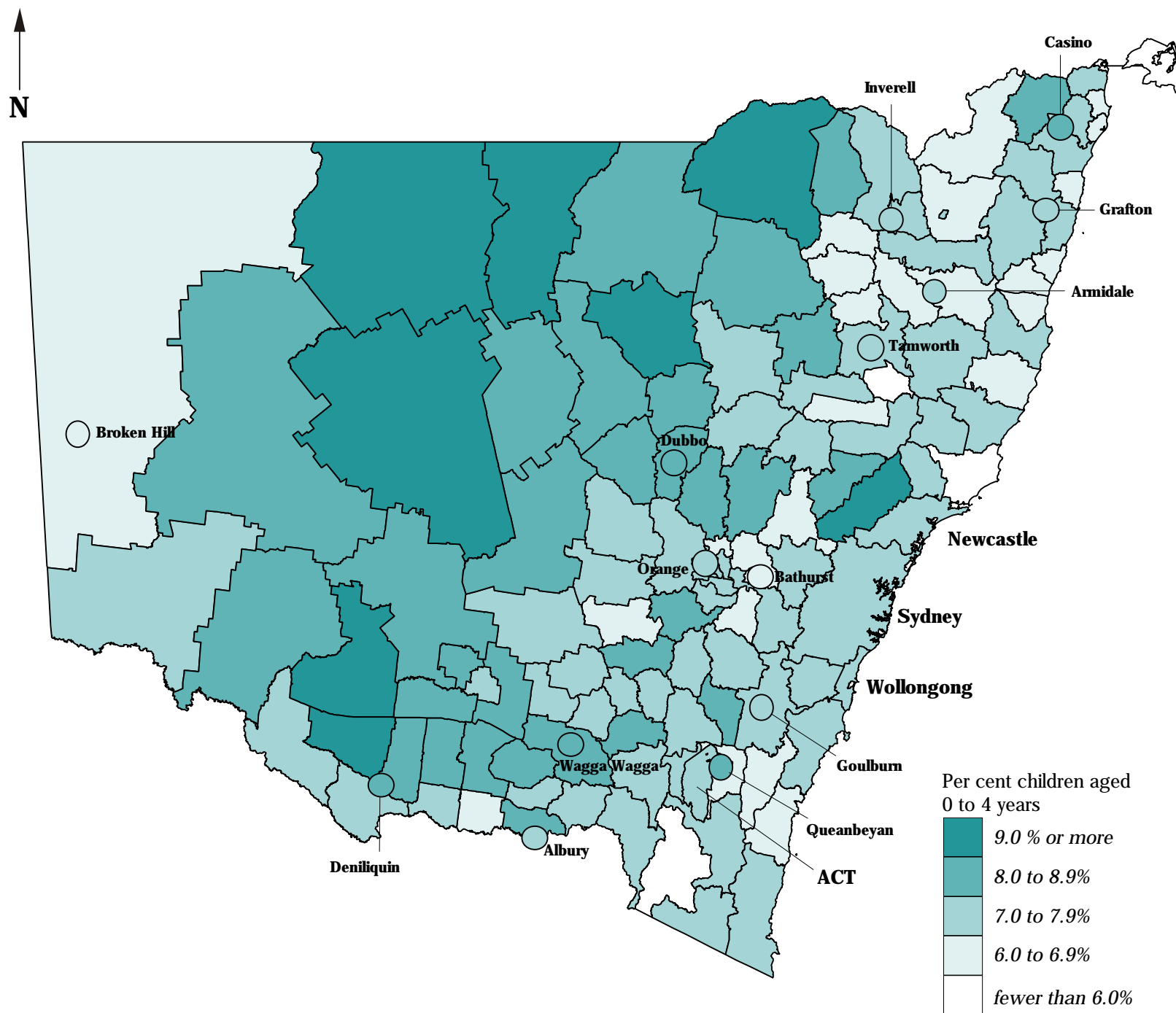
Map 3.2 shows clear patterns of distribution throughout the non-metropolitan areas of New South Wales. Areas recording above average percentages of children aged from 0 to 4 years are located throughout the middle regions of the State. Of these areas, Brewarrina (11.7 per cent; 257 children), Coonamble (9.8 per cent; 473 children), and Moree Plains (9.2 per cent; 1,433 children) in the north and north-west of the State, and Windouran (10.0 per cent; 42 children) and Hay (9.3 per cent; 354 children) in the south-west had percentages well above the non-metropolitan average.

Conversely, the majority of SLAs in the eastern third of the State had either average or below average percentages of children aged 0 to 4. Examples of this are seen in the southern SLAs of Snowy River (4.5 per cent) and Corowa (6.9 per cent), and the eastern SLAs of Great Lakes (5.9 per cent) and Hastings (6.2 per cent). The main exception was Singleton, with 9.0 per cent, although with only 1,805 young children.

The largest numbers of children aged from 0 to 4 years were in Shoalhaven (5,769 children); Wagga Wagga (4,645 children) and Coffs Harbour (4,037 children).

There was no consistent evidence in the correlation analysis of an association at the SLA level between high proportions of 0 to 4 year old children and socioeconomic status. The only correlation of meaningful significance was that recorded with the variable for Indigenous people (0.55).

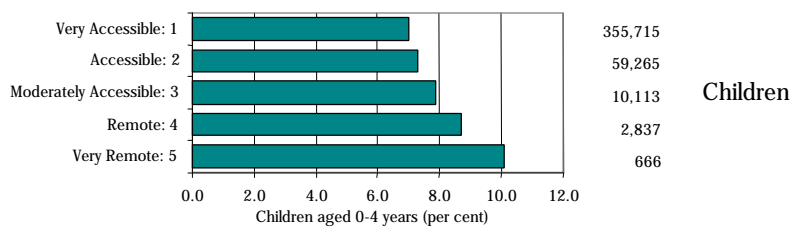
Map 3.2
Children aged 0 to 4 years, New South Wales, 1996
 as a percentage of the total population in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



The highest proportions of young children aged from 0 to 4 years live in the most remote areas of Australia (10.1 per cent of the population in the Very Remote ARIA category), although the numbers are largest in the most highly populated areas, and drop off markedly at each level of increasing remoteness.

Source: Calculated on ARIA classification, DHAC
 National Social Health Atlas Project, 1999

People aged 65 years and over, 1996

Capital city comparison

Australia is an ageing society, brought about in part by reduced mortality rates at older ages, a trend that has become especially evident over the past two to three decades. Increased morbidity is often associated with reduced mortality, and the incidence of an older population is likely to indicate areas where increased health services will be required.

People aged 65 years and over comprised 12.1 per cent of the Australian population at the 1996 Census, with a slightly smaller proportion in the capital cities (11.6 per cent) (Table 3.6). This latter proportion compares to percentages of 10.9 per cent in 1991 and 10.4 per cent in 1986, reflecting the general ageing of the population, a trend expected to continue well into the next century (ABS, 1998). Importantly, this rising proportion of older people represents an increase of 275,655 people aged 65 years and over between 1986 and 1996.

At the 1996 Census, 11.8 per cent of the population of **Sydney** (442,053 people) was aged 65 years and over. **Adelaide** had by far the highest percentage of older people, with **Darwin** and **Canberra** recording proportions well below the national average for the capital cities.

Table 3.6: Proportion of population aged 65 years and over, capital cities

	<i>Per cent</i>								
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra¹	All capitals
1996	11.8	11.5	11.0	14.1	10.8	12.5	5.0	7.1	11.6
1986	10.8	10.2	10.5	12.0	10.0	10.9	3.3	5.2	10.4

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

The proportion of **Sydney's** population aged 65 years and over increased by 21.7 per cent in the ten years from 1986, an increase of 78,954 people. Some comments about the distribution of people within this broad age group are included in the commentary on the following text page (page 26).

Most SLAs north of Sydney Harbour had above average percentages of people aged 65 years and over, with the highest proportion in Wyong (18.0 per cent of its population in this age group). Gosford (17.2 per cent) also had both high proportions and high numbers of older people, with Hunter's Hill recording the highest proportion, of 19.0 per cent.

South of Sydney Harbour, SLAs including Rockdale, Hurstville, Botany and Randwick all had proportions of aged people well above the **Sydney** average.

The lowest percentages were located in SLAs to the east and south of Sydney Harbour, with Penrith and Blacktown to the east, Liverpool and Camden to the south, and Wollondilly in the south-west, all recording below average percentages. Campbelltown, also in the south, had the lowest proportion for this variable with just 5.2 per cent.

The negative association with the percentage of population aged from 0 to 4 years is strong, and whilst Campbelltown had the lowest proportion of aged people, it also had the highest percentage of young children in **Sydney**, with 9.5 per cent.

The only correlations of meaningful significance with this variable at the SLA level were recorded with the variables for Indigenous people and single parent families. The inverse correlations with these variables (-0.61 with Indigenous people and -0.53 with single parent families) indicate that these groups are less likely to live in the same areas as the older population.

Newcastle

In **Newcastle**, 14.2 per cent of the population were aged 65 years and over in 1996 (63,855 people), and of its six SLAs, only Maitland (10.6 per cent) had a proportion of less than the State average of 12.7 per cent.

The proportion of older people in **Newcastle** in 1996 was markedly higher than for **Sydney**, yet the trend over time is similar, increasing from 11.8 per cent in 1986 to 13.1 per cent in 1991, before increasing again by the 1996 Census.

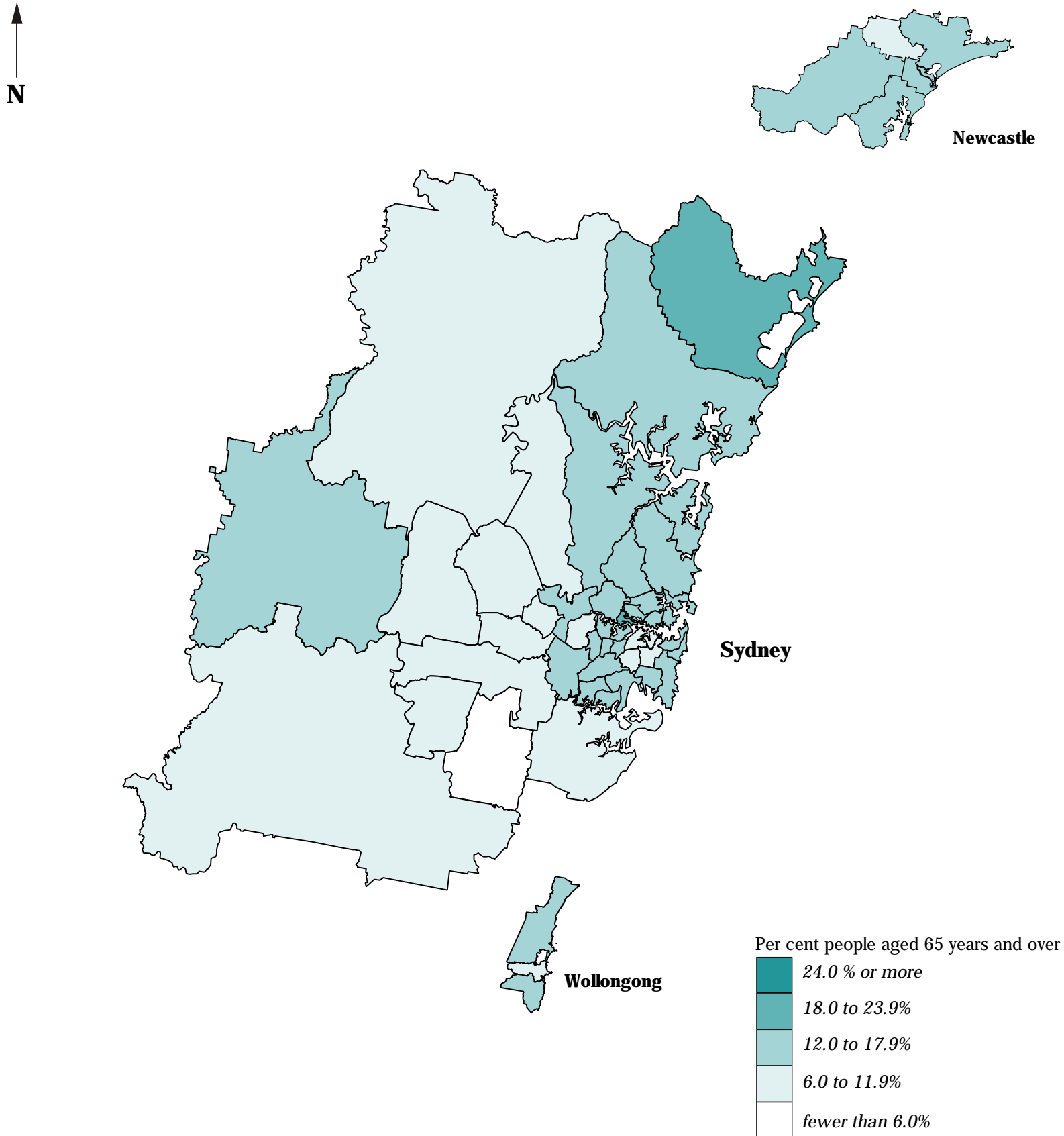
Wollongong

There was a wider range in proportions of the older population at the SLA level in **Wollongong** than was evident in **Newcastle**. Overall, 30,897 people (12.5 per cent of **Wollongong's** population) were aged 65 years and over. At the SLA level proportions varied from 8.9 per cent in Shellharbour, to 13.2 per cent in the City of Wollongong (23,298 people) and to 16.9 per cent in Kiama.

Map 3.3

People aged 65 years and over, Sydney, Newcastle and Wollongong, 1996

as a percentage of the total population in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

People aged 65 years and over, 1996

State/Territory comparison

New South Wales has the highest proportion of people aged 65 years and over located in areas outside of the capital and other major urban centres. As shown in **Table 3.7**, it has almost three times the level recorded in the Northern Territory, where high fertility levels and high rates of net in-migration of youthful populations work to reduce the proportion of older people in the total population. Despite the attraction of Queensland as a retirement destination for older people, it has lower than the average proportion of people in this age group in all but the *Other major urban centres* category, the latter reflecting the high proportion of older people in the population of **Gold Coast-Tweed Heads**. Nation-wide, the most significant increase in the numbers of older people was in the *Rest of State/Territory* areas, with an increase of 36.6 per cent between 1986 and 1996.

Table 3.7: Proportion of population aged 65 years and over, State/Territory

	Per cent								
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	11.8	11.5	11.0	14.1	10.8	12.5	5.0	7.1 ²	11.6
Other major urban centres ³	13.6	13.6	15.9	..	..	..	..	..	14.5
Rest of State/Territory	14.4	13.3	12.2	13.2	9.7	12.2	4.9	- ⁴	12.8
Whole of State/Territory	12.7	12.0	12.0	13.8	10.5	12.3	4.9	7.1	12.1
1986									
Rest of State/Territory	11.6	11.2	10.3	10.5	7.7	10.5	4.1	- ⁴	10.5

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

There has been a steady increase in the number and proportion of the population in this age group in the non-metropolitan areas of New South Wales from the 1986 Census (163,029 people, 11.6 per cent of the population) to 1991 (197,761, 12.9 per cent) and to 1996 (229,952, 14.4 per cent).

The overall pattern of distribution of people aged 65 years and over is one of generally higher proportions in the eastern third of the State, with the highest concentrations nearer the coast (**Map 3.4**). Tweed Heads (26.4 per cent), Great Lakes (24.8 per cent), Maclean (22.8 per cent) and Hastings (21.7 per cent) to the north of **Sydney** and Eurobodalla (21.7 per cent) to the south had the highest percentages. The lowest percentage (4.2 per cent) was that in Snowy River, in the south of the State. Coastal SLAs also had the largest numbers of people aged 65 years and over, the largest populations being in Shoalhaven (13,604), Hastings (12,610), Tweed Heads (10,813) and Coffs Harbour (8,905).

There were correlations of meaningful significance at the SLA level with the variables for low income families (0.64) and

high income families (an inverse correlation of -0.55), indicating an association between high proportions of older people in areas with high proportions of low income families, and few high income families.

Structure of the population 65 years & over: Table 3.8

The 65 years and over group is very broad and includes the 'young aged' (65 to 74 years), who are predominantly independent and in good health, as well as the 'older aged' (75 years and over), who are more likely to be in need of a range of health care services.

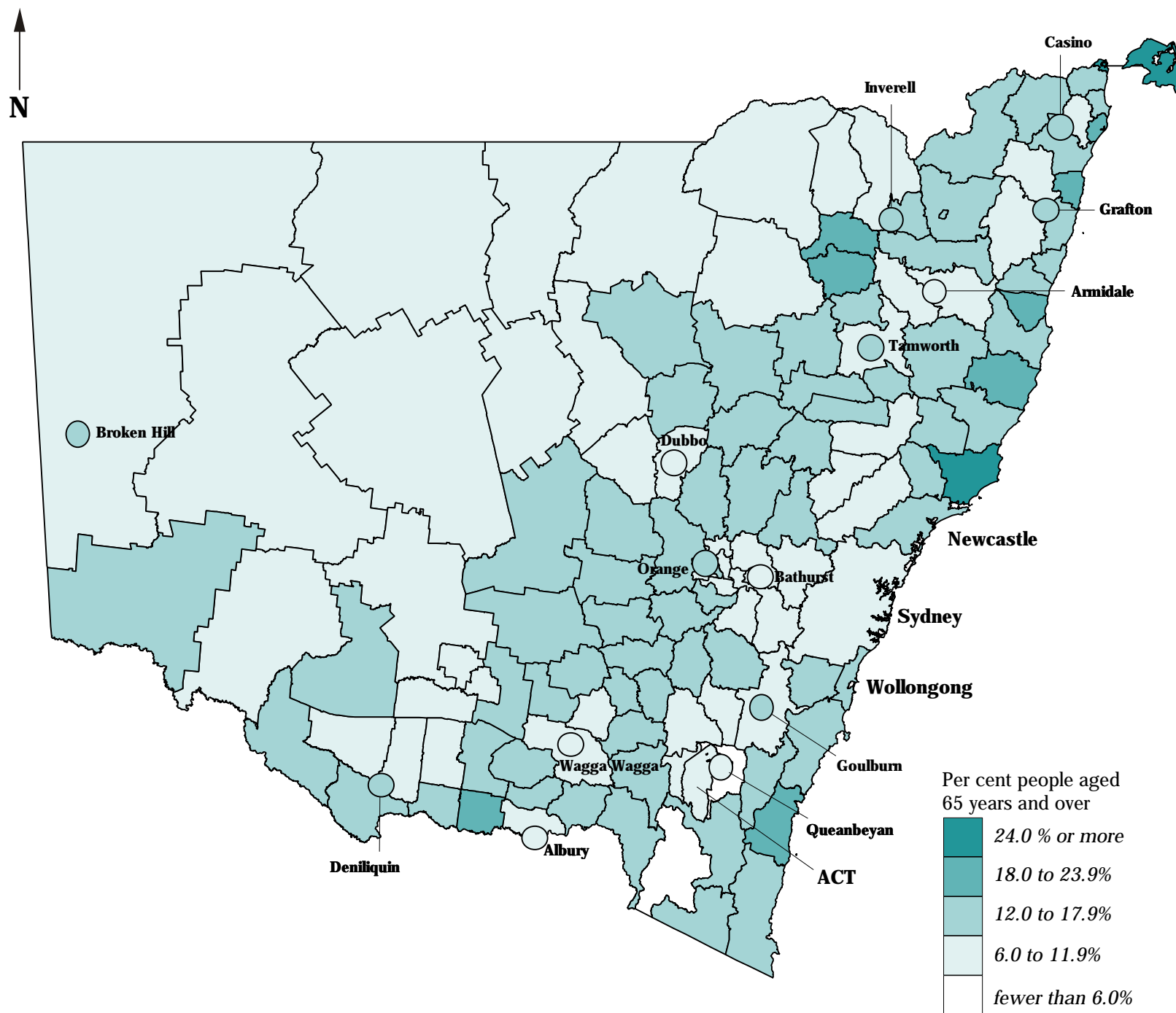
Whilst the higher percentages are in the 'young aged' categories, it is important to note that in the ten years from 1986 the 'older aged' groups increased at a greater rate than the 'young aged' in both **Sydney** and the *Rest of State*. This higher growth rate of people aged 75 years and over has important implications for health related policy. Women make up a higher proportion of the population at older ages, as is evident for both **Sydney** and *Rest of State*, reflecting the fact that they live longer than men.

Table 3.8: Structure of population aged 65 years and over, New South Wales, 1986 and 1996

Age group (years)	People aged 65 years or more				Increase 1986 to 1996		Proportion of females, 1996	
	1986		1996		Sydney	Rest of State	Sydney	Rest of State
	Sydney	Rest of State	Sydney	Rest of State				
65 to 69	33.6	35.7	30.3	32.4	9.7	27.2	52.7	50.5
70 to 74	27.9	28.6	27.2	27.9	18.7	36.6	55.8	52.6
75 to 79	19.3	19.0	19.7	19.3	24.1	42.4	59.1	56.2
80 to 84	11.2	10.1	13.3	12.2	44.1	70.4	63.9	61.9
85 +	8.0	6.7	9.6	8.2	45.9	72.3	72.3	69.8
Total 65+	100.0	100.0	100.0	100.0	21.7	40.1	58.2	55.2

Source: ABS 1986 Census 21 page format Table CO7; 1996 Census Basic Community Profile Table B03

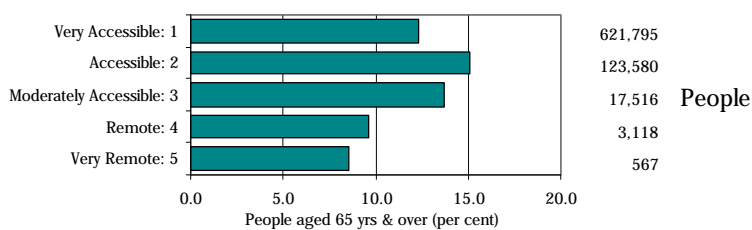
Map 3.4
People aged 65 years and over, New South Wales, 1996
 as a percentage of the total population in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



The largest proportions of people aged 65 years and over live outside of the largest cities, in the areas categorised as Accessible (15.1 per cent) and Moderately Accessible (13.7 per cent), with a lower proportion (but the largest numbers) in the most accessible areas. These results indicate that although older Australians may live in areas away from the heavily populated cities, they place a high value on access to health, welfare and other services.

Source: Calculated on ARIA classification, DHAC
 National Social Health Atlas Project, 1999

Single parent families, 1996

Capital city comparison

Single parent families are defined as all single parent families with dependent children aged less than 15 years; the proportion of single parent families is derived as the percentage of all families. Throughout Australia, the majority of single parent families are characterised by poverty and hardship, have poor health and are major users of public health services. Details of their location are, therefore, of importance to public policy makers and those providing health, education, welfare, housing and transport services.

At the 1996 Census, the proportion of single parent families in Australia's capital cities was 9.7 per cent (**Table 3.9**), varying from 9.1 per cent in **Melbourne**, to 13.8 per cent in **Darwin**.

The increase in the number of single parent families has been one of the most important demographic trends in Australia in recent years. In the ten years from 1986, the proportion of single parent families in Australia as a whole and in each capital city increased substantially. For Australia, the increase was from 324,171 in 1986 (7.8 per cent of all families) to 460,618 single parent families (9.9 per cent of all families) in 1996. The largest increase was recorded in **Hobart**, where proportions for this variable increased from 9.3 per cent in 1986, to 12.1 per cent in 1996. **Melbourne**, **Brisbane**, **Adelaide**, **Darwin** and **Canberra** all recorded increases of more than two percentage points in this ten year period. Whilst **Sydney** recorded a lower increase than the other major cities, it had the largest number of these families at both the 1986 and 1996 Censuses: the largest increase in the number of single parent families occurred in **Melbourne**.

Table 3.9: Single parent families, capital cities
Per cent

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	9.3	9.1	10.5	10.4	10.1	12.1	13.8	11.5	9.7
1986	7.8	6.9	8.3	8.0	9.1	9.3	11.1	9.2	7.9

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

At the 1996 Census, 9.3 per cent of **Sydney's** families were classified as single parent families. This figure was considerably higher than the 7.8 per cent recorded in 1986.

High concentrations of single parent families at the SLA level were in South Sydney (12.6 per cent), and the middle to outer areas of Campbelltown and Blacktown with 15.6 per cent and 13.2 per cent respectively (**Map 3.5**). Wyong, on the north coast, also had a high proportion (12.2 per cent) along with neighbouring Gosford (10.4 per cent). The map also identifies a band of SLAs with high percentages progressing in a westerly direction away from **Sydney**. Fairfield (10.5 per cent), Liverpool (11.4 per cent), Penrith (11.5 per cent) and Blue Mountains (10.3 per cent) comprise this group of SLAs with above average rates of single parent families. Blacktown (8,218 families), Campbelltown (5,892) and Penrith (5,026) were SLAs with both high proportions and large numbers of single parent families.

The inner to middle northern suburbs exhibit the lowest rates of single parent families, with Ku-ring-gai and Baulkham Hills recording relatively low proportions (of 5.4 per cent and 5.5 per cent respectively) within this group. Concord (6.0 per cent), Hornsby (6.3 per cent), Mosman (6.4 per cent) and Hunter's Hill (6.7 per cent) also reflect this tendency.

The distribution of single parent families is strongly associated at the SLA level with a number of indicators of socioeconomic disadvantage: with the variables for Indigenous people (0.88), dwellings rented from the State housing authority (0.74), low income families (0.66), unemployed people (0.62), early school leavers (0.51) and unskilled and semi-skilled workers (0.50).

There were also inverse correlations with the variables for people aged 65 years and over (-0.53), female labour force participation (-0.55) and high income families (-0.61). These results, together with the inverse correlation with the IRSD (-0.70), indicate an association at the SLA level between high proportions of single parent families and socioeconomic disadvantage.

Newcastle

The average proportion of single parent families in **Newcastle** in 1996 was 10.7 per cent, up from 8.2 per cent in 1986. Lake Macquarie, the most highly populated SLA in **Newcastle**, had the largest number of these families, with 4,880 single parent families, but the percentage (10.1 per cent) was below **Newcastle's** average. The highest proportions were in Maitland, where 11.9 per cent of families were single parent families, and in the SLA of Newcastle, with 11.2 per cent.

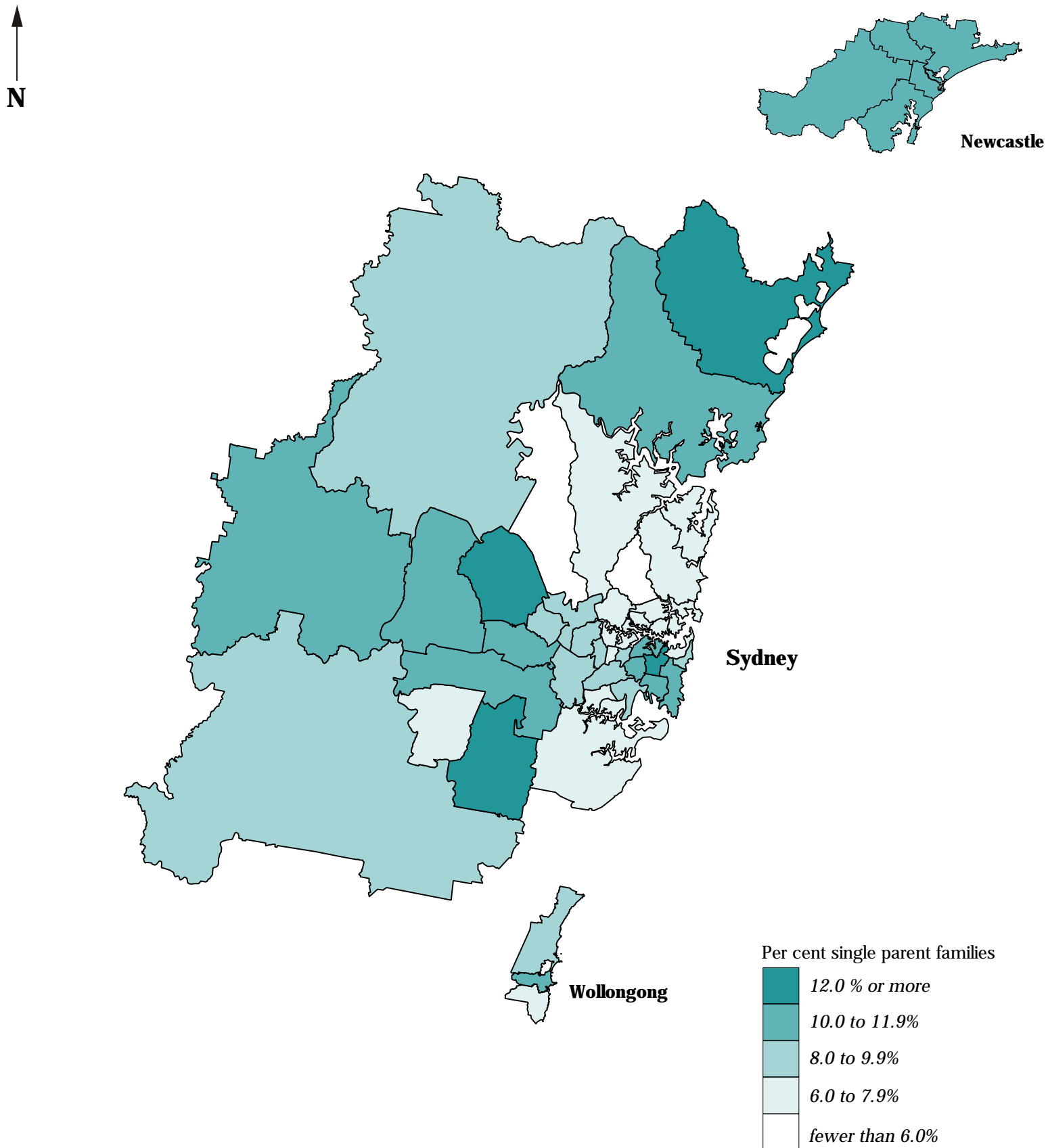
Wollongong

Wollongong also experienced an increase in single parent families over the decade to 1996, rising from 7.7 per cent of all families in 1986 to 9.9 per cent. The highest percentage was in Shellharbour, where 10.8 per cent of families were classified as single parent, with the largest number of these families in the SLA of Wollongong, with 4,735 single parent families. Kiama had the lowest proportion of single parent families, and the lowest number, with 6.9 per cent, 339 families.

Map 3.5

Single parent families, Sydney, Newcastle and Wollongong, 1996

as a percentage of all families in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Single parent families, 1996

State/Territory comparison

In 1996, 10.6 per cent of all families in the non-metropolitan areas of New South Wales were single parent families (defined here as single parent families with dependent children under 15 years of age), compared with 9.3 per cent in **Sydney**. This figure is just above the average of 10.0 per cent across the non-metropolitan areas of Australia (the *Rest of State/Territory* category in **Table 3.10**) and the second highest after the Northern Territory. For most States and the Northern Territory, variations between the *Capital city* and *Rest of State/Territory* totals were minimal, with the largest differences being in South Australia and Tasmania. There has been a steady increase in the proportions of single parent families in all States and Territories since 1986.

Table 3.10: Single parent families, State/Territory

	<i>Per cent</i>								
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	9.3	9.1	10.5	10.4	10.1	12.1	13.8	11.5 ²	9.7
Other major urban centres ³	10.4	10.7	11.2	..	..	..	..	..	10.7
Rest of State/Territory	10.6	9.5	10.1	8.4	9.5	9.6	14.6	— ⁴	10.0
Whole of State/Territory	9.8	9.2	10.4	9.9	10.0	10.6	14.2	11.6	9.9
1986									
Rest of State/Territory	8.0	6.7	7.7	6.5	8.3	7.6	12.1	— ⁴	7.6

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

There were 44,428 single families (10.6 per cent of all families) in the non-metropolitan areas of New South Wales in 1996, a substantial increase on the 30,181 families (8.0 per cent of all families) in this category in 1986. The attraction of the non-metropolitan areas is in part related to the availability of low-rent public housing in these areas (**Map 3.25**). However, the range of health and welfare services used by single parent families, in particular children in these families, is generally not available outside of the capital cities. This raises a number of issues for those involved in policy making and planning.

The distribution of single parent families at the SLA level exhibits a number of clear patterns. A band of SLAs with high proportions of single parent families (**Map 3.6**) extends across the northern central region of the State, from Central Darling in the west (13.3 per cent), through Bourke (14.9 per cent), Brewarrina (19.2 per cent) and Walgett (12.0 per cent) to Moree Plains (13.7 per cent). Similarly high rates were found on the far north coast in SLAs such as Byron (17.5 per cent), Lismore (14.7 per cent), Tweed [Part B] (12.9 per cent) and Kyogle (12.0 per cent). A further cluster of SLAs with high proportions of single parent families was located further south in Bellingen (14.3 per cent), Nambucca and Kempsey (both 13.2 per cent) and Coffs Harbour (12.9 per cent).

The SLA of Unincorporated Far West covers a large area around and to the north of Broken Hill. Despite its size, this SLA had only 235 families in total and just 3 of these were single parent families (1.3 per cent). There was a concentration of areas with low proportions in the southern part of the State near the Victorian border, the lowest in Windouran (2.8 per cent) and Conargo (3.5 per cent). Another cluster of SLAs in the north of the State, including Yallaroi (4.9 per cent), Bingara (5.2 per cent) and Barraba (5.6 per cent), also had lower than average proportions.

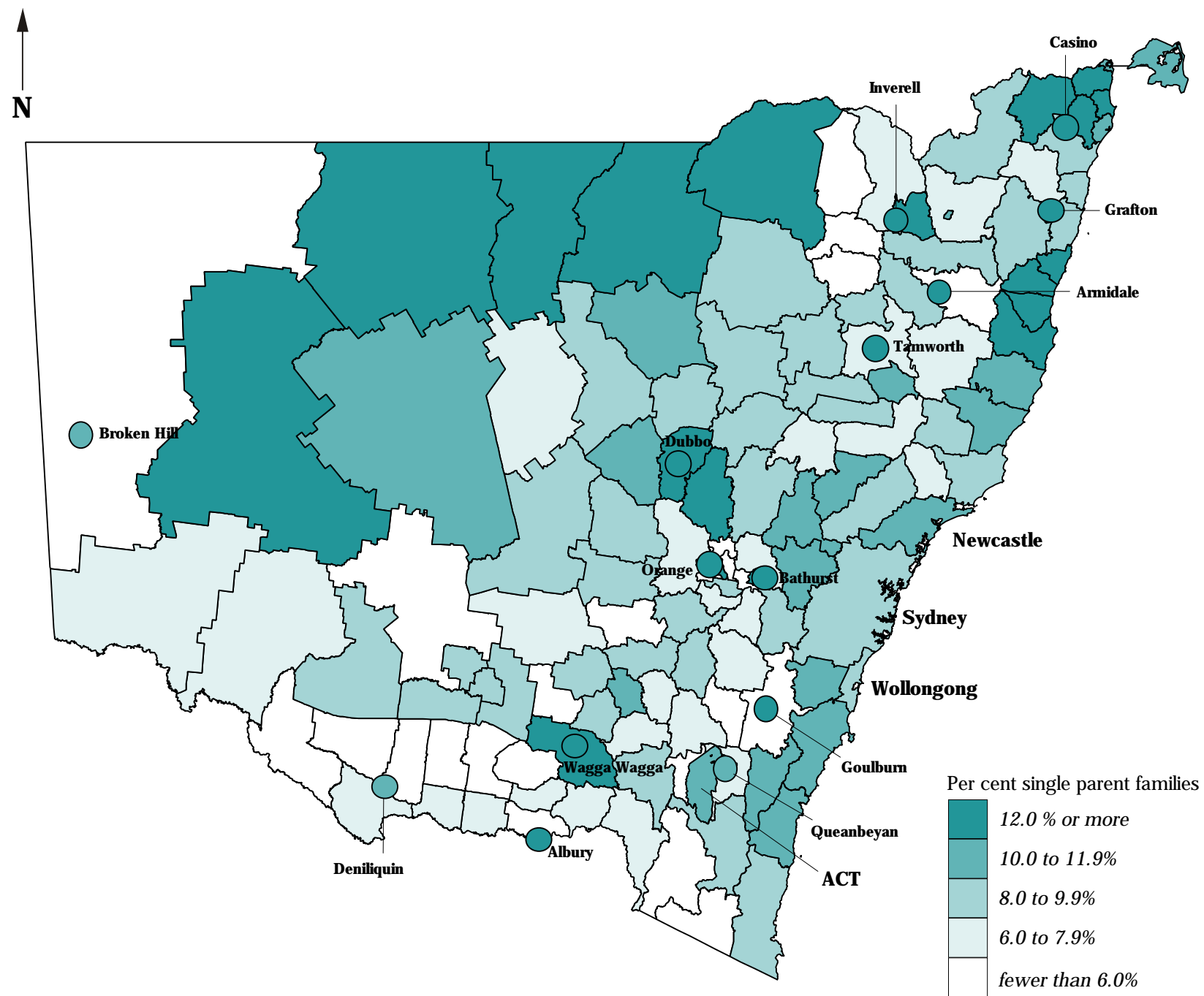
The largest numbers of single parent families were found in Shoalhaven (2,364) and Coffs Harbour (1,967).

There was a correlation of substantial significance at the SLA level with the variable for dwellings with no motor vehicle (0.74), and correlations of meaningful significance with the variables for dwellings rented from the State housing authority (0.66) and unemployed people (0.53). These results, together with the inverse correlation with the IRSD (-0.52), suggest the existence an association at the SLA level between high proportions of single parent families and socioeconomic disadvantage.

Map 3.6

Single parent families, New South Wales, 1996

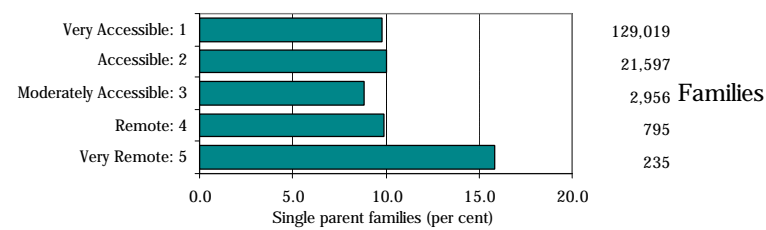
as a percentage of all families in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



The ARIA categories from 1 (Very Accessible) to 4 (Remote) had similar proportions (around 10 per cent) of single parent families, with over fifty per cent more in the ARIA Very Remote category, with 15.8 per cent. The numbers in each category dropped off even more markedly than for the previous variables graphed, with just 235 single parent families in the Very Remote category. The high proportion in the remote areas is likely to be affected by the relatively large Indigenous population in these areas.

Source: Calculated on ARIA classification, DHAC
National Social Health Atlas Project, 1999

Low income families, 1996

Capital city comparison

Low income families, defined as families with annual family incomes of less than \$21,000 (less than \$400 per week), comprised 16.6 per cent of all families in **Sydney** for which income details were obtained at the 1996 Census (**Table 3.11**). The use of low income as a measure of poverty is compromised to an extent by the fact that income is influenced by differences in family size, age structure and housing tenure and costs. While the variable will normally capture most welfare dependent families, it will also include sizeable numbers of families for which low income is linked to their retirement status.

Adelaide had the highest (21.8) percentage of low income families, while **Darwin** (11.1 per cent) and **Canberra** (11.7 per cent) had much lower proportions, reflecting the younger age structures of these cities and the lower proportions of retired families in their populations. Overall, there has been an increase in the proportion of low income families in all capital cities in the ten years from 1986 to 1996. Refer to the footnote to **Table 3.3** on page 18 regarding the interpretation of these comparisons over time.

Table 3.11: Low income families, capital cities

	<i>Per cent</i>								
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra¹	All capitals
1996	16.6	17.2	18.0	21.8	17.7	20.2	11.1	11.7	17.5
1986	15.7	14.3	16.9	19.2	17.4	17.3	10.6	8.8	15.8

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

In 1996 there were 160,289 low income families in **Sydney**. This represented 16.6 per cent of all families in this city, up from 123,444 (15.7 per cent) in 1986.

Map 3.7 shows clusters of SLAs where similar percentages of low income families were found, with below average percentages evident around Sydney Harbour and to the north of it, extending north-west to include Baulkham Hills and Hawkesbury.

The main region containing above average percentages of low income families lies south of Sydney Harbour, and includes Auburn (23.6 per cent), Canterbury (22.8 per cent) and Bankstown (21.1 per cent), all three of which had proportions in excess of 21 per cent. The highest individual proportion was in Wyong (28.8 per cent), with well above average proportions also recorded in Botany (21.6 per cent), Fairfield (23.4 per cent) and Gosford (21.9 per cent).

There were correlations of substantial significance at the SLA level with the variables for unemployed people (0.88) and unskilled and semi-skilled workers (0.78). Not surprisingly there were inverse correlations (of substantial significance) with the variables for high income families (-0.94), managers, administrators and professionals (-0.75) and female labour force participation (-0.74). These results, together with the inverse correlation of substantial significance with the IRSD (-0.94), indicate an association at the SLA level between low income families and socioeconomic disadvantage.

Newcastle

The economic nature of **Newcastle**, with manufacturing as the city's focus, lends itself to high unemployment and, as a result, high percentages of low income families.

This is demonstrated by the fact that in all six of **Newcastle's** SLAs more than 21 per cent of families were low income families, giving an overall figure of 24.1 per cent. This was a total of 29,532 low income families, up from 20,660 (20.9 per cent) in 1986.

Wollongong

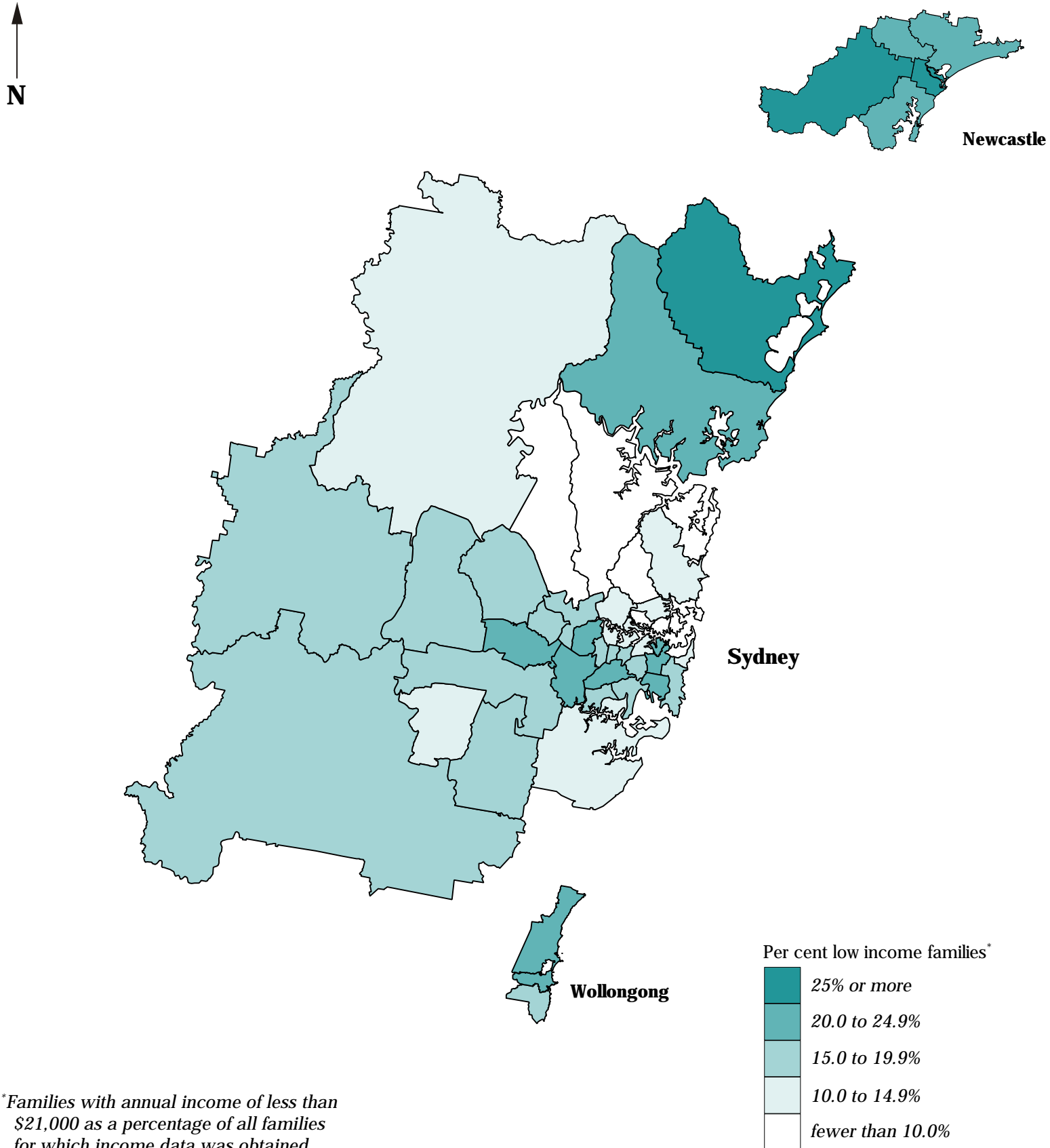
Wollongong had fewer low income families than did **Newcastle**, with 15,111 low income families, or 22.5 per cent of all families in this major urban centre in 1996. In 1986 the comparable figures were 10,745 families and 19.6 per cent.

The majority of these families were situated in the City of Wollongong, where 10,946 families were recorded as having annual incomes of less than \$21,000 (23.0 per cent).

Map 3.7

Low income families*, Sydney, Newcastle and Wollongong, 1996

as a percentage of all families in each Statistical Local Area



*Families with annual income of less than \$21,000 as a percentage of all families for which income data was obtained

Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Low income families, 1996

State/Territory comparison

The proportion of low income families (families with annual family incomes of less than \$21,000) living outside of the capital cities and other major urban centres in New South Wales is, at 26.5 per cent, the highest in Australia (**Table 3.12**). The highest proportions of low income families in all States and the Northern Territory were in the areas outside the capital cities and other major urban centres.

Over the ten years from 1986 to 1996, the proportion of low income families has remained relatively stable as a proportion of all families in New South Wales for each of the categories in the table (the largest variation being the small increase in **Sydney**). This is in contrast to the increase for Australia as a whole, from 18.7 per cent to 20.0 per cent of all families. Refer to the footnote to **Table 3.3** on page 18 regarding the interpretation of these comparisons over time.

Table 3.12: Low income families, State/Territory
Per cent

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	16.6	17.2	18.0	21.8	17.7	20.2	11.1	11.2 ²	17.5
Other major urban centres ³	23.6	22.6	22.4	..	..	..	..	..	23.0
Rest of State/Territory	26.5	24.2	23.6	26.2	20.6	25.7	21.6	— ⁴	24.6
Whole of State/Territory	20.0	19.1	20.8	22.9	18.5	23.5	16.6	11.2	20.0
1986									
Rest of State/Territory	26.7	21.9	25.0	25.9	22.1	22.3	20.5	— ⁴	24.8

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

In the non-metropolitan areas of New South Wales, 26.5 per cent of families reported gross incomes of less than \$21,000 per annum, compared with 16.6 per cent in **Sydney**. This *Rest of State/Territory* figure was the highest in the country, and was consistent with the 26.7 per cent recorded at the 1986 Census. As mentioned on the previous text page, caution must be taken when interpreting these figures.

High levels of low income families in the non-metropolitan areas reflect a range of influences. These may include, for example, the state of the rural economy, where world prices affect not only the incomes of primary producers, but also those of people in service industry employment. Families in receipt of government income support payments of various kinds may also seek residence in rural areas for the lifestyle it provides, as well as the possibility of cheaper accommodation costs.

In 1996, there were 110 SLAs in New South Wales that had over 20 per cent of their families in the low income bracket, with 34 of those recording over 30 per cent.

High percentages were found mainly in the north-east corner of the State, and included the SLAs of Severn, Guyra, Bellingen and Barraba (**Map 3.8**). The SLAs with the largest numbers of low income families were Shoalhaven (6,986), Hastings (5,127) and Coffs Harbour (4,496).

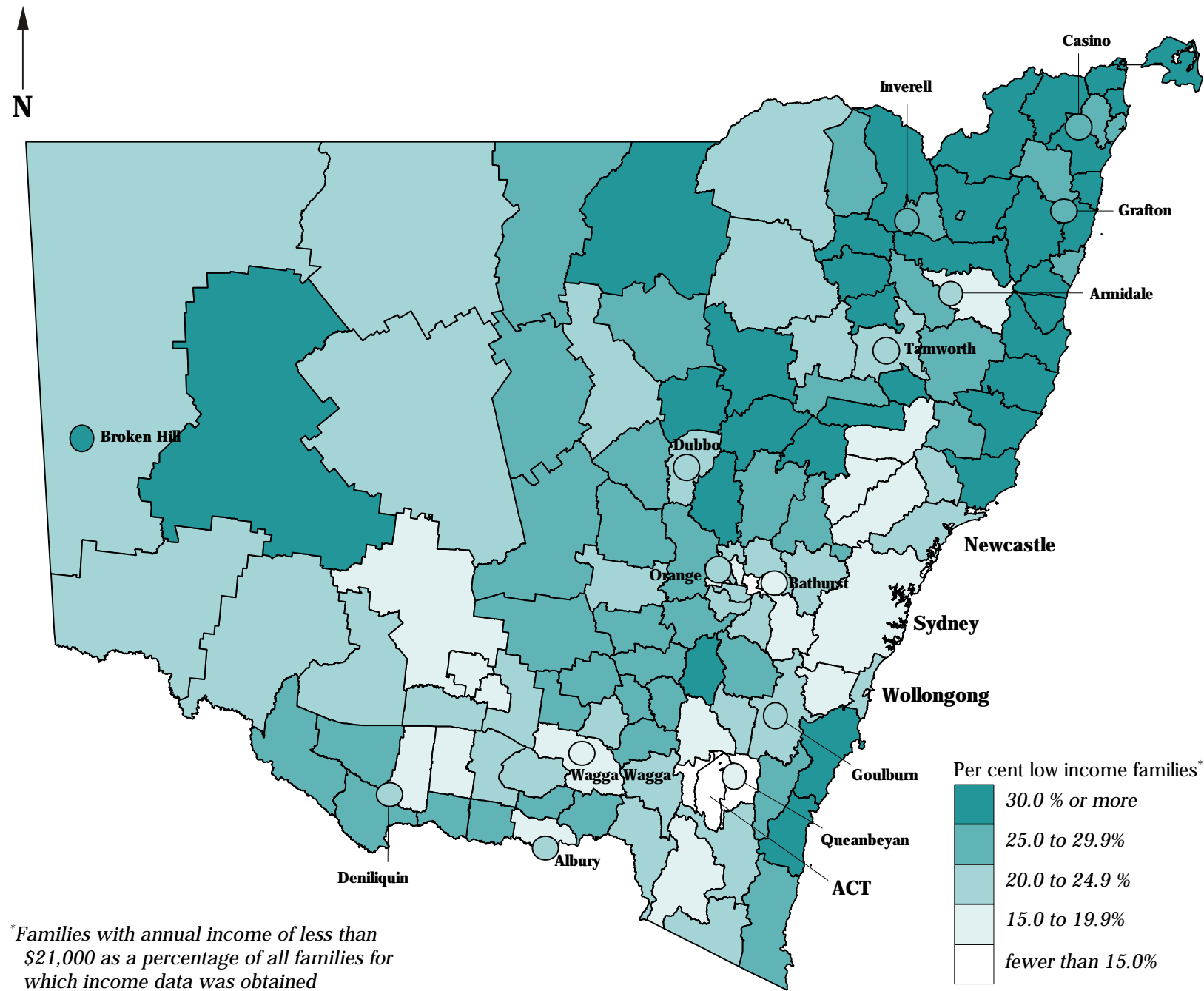
SLAs with lower percentages of low income families were Singleton, Conargo and Evans [Part A], all with below 16.0 per cent, and Yass (17.1 per cent), Jerilderie (17.8 per cent) and Cabonne [Part A] (17.9 per cent).

There was a correlation of substantial significance at the SLA level with the variable for unemployed people (0.75) and correlations of lesser significance with other indicators of socioeconomic disadvantage. As was the case for **Sydney**, the inverse correlations of statistical significance with the variables for high income families (-0.83) and female labour force participation (-0.69) support this association. These results, together with the inverse correlation of substantial significance with the IRSD (-0.71), indicate an association at the SLA level between low income families and socioeconomic disadvantage.

Map 3.8

Low income families*, New South Wales, 1996

as a percentage of all families in each Statistical Local Area

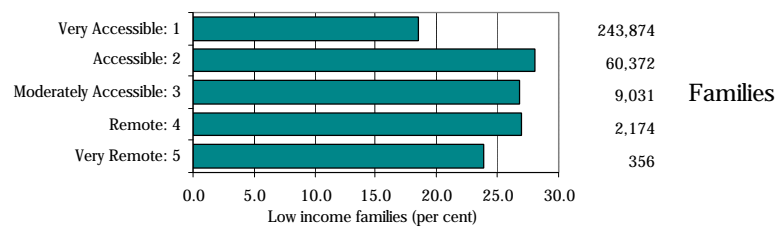


*Families with annual income of less than \$21,000 as a percentage of all families for which income data was obtained

Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



The largest populated centres (the areas categorised as Most Accessible) had the lowest proportion of low income families (18.5 per cent), with the highest proportions in the three middle ARIA categories, with proportions of with 28.1 per cent in the Accessible category, 26.8 per cent in the Most Accessible category and 26.9 per cent in the Remote category. The Very Remote areas also had a relatively high proportion (23.9 per cent).

Source: Calculated on ARIA classification, DHAC National Social Health Atlas Project, 1999

Unskilled and semi-skilled workers, 1996

Capital city comparison

Occupation remains the most important determinant of wealth, social standing and well-being for most people in Australian society. People employed in the Census defined occupations of labourers and related workers, and intermediate production and transport workers, are described generally in this analysis as unskilled and semi-skilled workers. These categories of occupation encompass most lower paid and less skilled, blue collar work and their prevalence therefore forms a useful general measure of low socioeconomic status. The percentages of workers employed in these occupations are calculated as a proportion of the total employed labour force.

The majority of capital cities had near average percentages for this variable, with the lower percentage in **Canberra** a reflection of low levels of manufacturing industry. The proportion in **Sydney** (14.9 per cent) was below that in the other large capital cities (**Table 3.13**).

The 1996 figures for this variable were considerably lower than those from 1986, including a fall from 20.7 per cent in **Sydney** in 1986 to 14.9 per cent in 1996, largely a reflection of the changing nature of employment in Australia's capital cities. The overall decline for Australia's capital cities was from 20.9 per cent of all people with an occupation in 1986, to 17.8 per cent in 1991 and 15.6 per cent in 1996, a net loss 110,506 from these occupations.

Table 3.13: Unskilled and semi-skilled workers, capital cities
Per cent

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	14.9	16.4	16.5	17.3	15.7	14.5	13.2	9.3	15.6
1986	20.7	22.1	21.6	21.6	20.3	19.4	15.1	12.3	20.9

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney¹

At the 1996 Census, 14.9 per cent of **Sydney's** employed labour force was classified as being unskilled and semi-skilled. This represents a decline in the number of these workers of 20.3 per cent over the ten years to 1996, from 300,623 to 249,829.

Map 3.9 shows the spatial distribution of these unskilled and semi-skilled workers in 1996. The distribution has strong correlations with both unemployment and low income families. The majority of SLAs around Sydney Harbour had average or below average percentages of unskilled or semi-skilled workers, with a cluster of SLAs to the north of Sydney Harbour, including Ku-ring-gai, Baulkham Hills and Hornsby, having percentages well below average.

Average or above average percentages characterised **Sydney's** outer SLAs, with the majority of western and south-western SLAs recording between 20 and 30 per cent for this variable.

There were correlations of substantial significance at the SLA level with the variables for early school leavers (0.86), unemployed people (0.82), children aged from 0 to 4 years (0.74) and low income families (0.78). Inverse correlations of substantial significance were recorded with the variables for managers, administrators and professionals (-0.95) and for high income families (-0.90). These results and the inverse correlation of substantial significance with the IRSD (-0.91) indicate an association at the SLA level between unskilled and semi-skilled workers and socioeconomic disadvantage.

¹Because these categories do not appropriately reflect the occupational status of country residents, this variable has not been mapped for areas outside of the major urban centres.

Newcastle

The average proportion of unskilled and semi-skilled workers in **Newcastle** in 1996 was 20.4 per cent, considerably higher than both the average for **Sydney**, of 14.9 per cent. This was despite a decline in numbers from 42,296 to 34,959, or 21.0 per cent, over the ten years to 1996.

Cessnock has by far the highest proportion of unskilled and semi-skilled workers, with 4,657 employees representing 30.4 per cent of **Newcastle's** working population.

Newcastle (9,594) and Lake Macquarie (12,508) had the largest number of workers in this variable, with percentages of 18.4 and 19.1 per cent respectively.

Wollongong

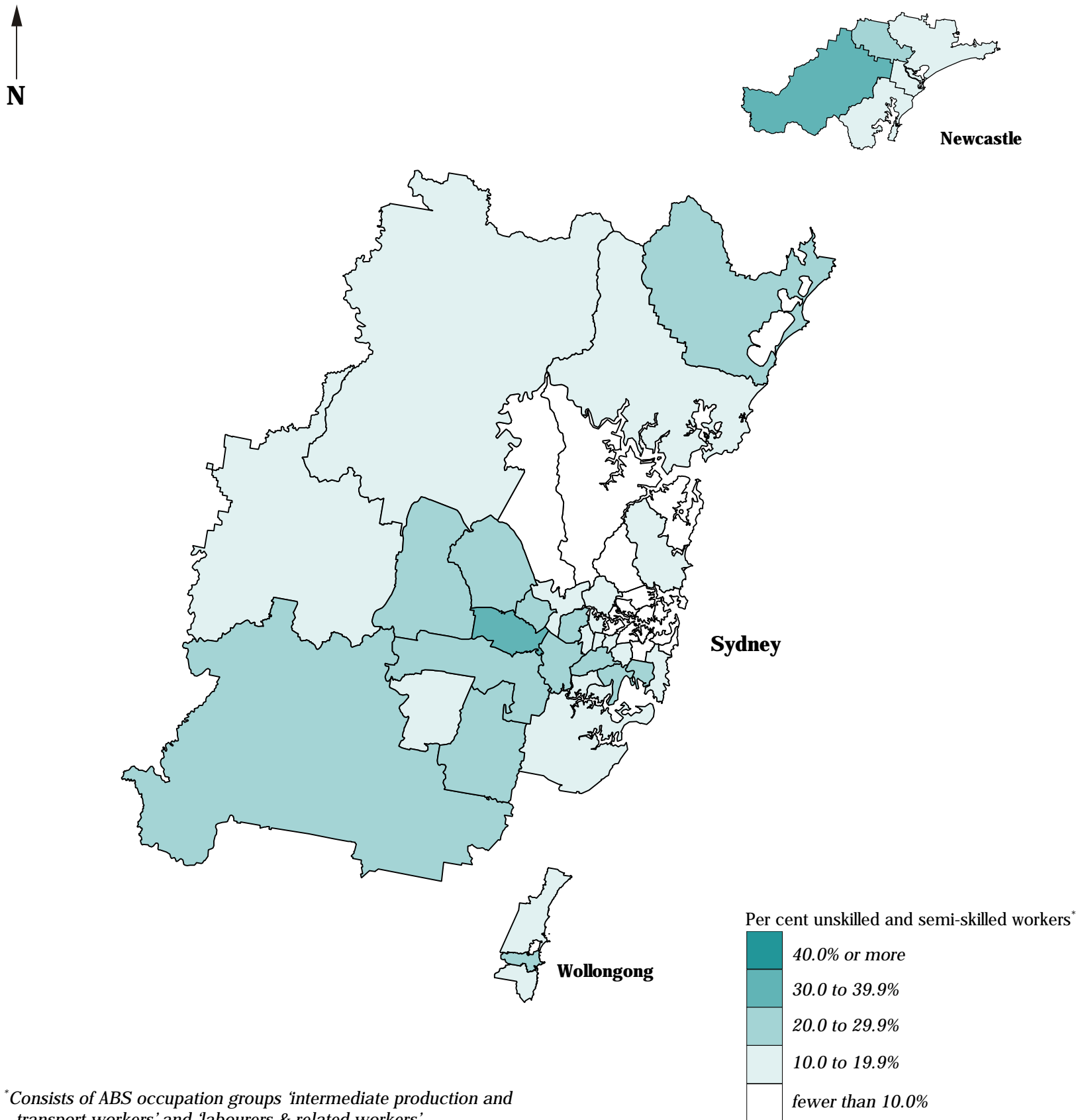
Wollongong, like **Newcastle**, had 20.4 per cent of its employed population in unskilled or semi-skilled work, but experienced a larger decline in this category of worker from 25,833 to 19,154, or a decrease of 25.9 per cent over the ten years to 1996.

The highest percentages were found in Shellharbour, where 25.2 per cent of workers fell into this category. However, the largest numbers were in the City of Wollongong, at 19.7 per cent of the employed labour force.

Map 3.9

Unskilled and semi-skilled workers*, Sydney, Newcastle and Wollongong, 1996

as a percentage of the total employed labour force in each Statistical Local Area



*Consists of ABS occupation groups 'intermediate production and transport workers' and 'labourers & related workers'

Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Unemployed people, 1996

Capital city comparison

At the 1996 Census, 771,972 Australians reported being unemployed and looking for work, of whom 463,429 resided in Australia's capital cities. More than a quarter of the *All capitals* unemployed lived in **Sydney** (134,857 people), 7.4 per cent of **Sydney's** labour force. The unemployment rate in the other capital cities ranged from 7.5 per cent in **Canberra** (13,062 people, and a considerably higher rate than in 1986 when it was 4.8 per cent) to 10.6 per cent in **Adelaide** (51,662 people) (**Table 3.14**). The *All capitals* unemployment figure varied greatly over the ten years to 1996, rising considerably from 8.2 per cent in 1986, to 11.2 per cent in 1991, before declining to the 1996 rate of 8.5 per cent.

It is important to note that these figures can understate the true extent of unemployment because they do not report hidden unemployment and under-employment. Hidden unemployment results from people not recording themselves at the Census as unemployed, as they felt they did not fit the 'looking for work' requirement, often having been discouraged from doing so by the difficulty of obtaining employment. Hidden unemployment is less prevalent at the Census where people 'self-report' than in the official unemployment figures published by the ABS, which are based on data where the 'looking for work' and strict 'availability to work' definitions are applied more rigorously by personal interviewers in the monthly ABS Population Survey. Under-employment refers to those who have jobs but are working fewer hours than they would prefer. Women predominate in both of these categories, as do those who are socioeconomically disadvantaged.

These figures are based on self-report information in the Census. As it is unclear how Indigenous people would record their involvement in CDEP schemes it may be more appropriate to use the information for unemployment beneficiaries, page 94, which includes details of those schemes.

Table 3.14: Unemployed people, capital cities
Per cent

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	7.4	9.1	8.8	10.6	8.3	9.7	7.7	7.5	8.5
1986	8.6	6.6	9.5	9.5	9.5	9.1	9.7	4.8	8.2

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

Levels of unemployment in **Sydney** followed the trend for most Australian capital cities between 1986 and 1996, rising from 8.6 per cent in 1986 to 10.3 per cent in 1991, before falling considerably to 7.4 per cent in 1996. However only **Brisbane**, **Perth** and **Darwin** shared with **Sydney** a return to lower rates in 1996 than prevailed in 1986.

Percentages of unemployment varied greatly within **Sydney**, from 3.2 per cent in Mosman to 16.3 per cent in Fairfield (**Map 3.10**). The majority of low rates can be found in SLAs to the north of Sydney Harbour, extending up the east coast to Pittwater, and west to Hawkesbury. Within this region of low unemployment lie Ku-ring-gai and Warringah (both with 3.5 per cent), Baulkham Hills (3.6 per cent), and the harbourside SLAs of Lane Cove, North Sydney and Mosman, all with unemployment levels of less than 4 per cent.

SLAs recording high levels of unemployment were generally those located to the south and west of Sydney Harbour, and included Fairfield, Auburn and Canterbury, which had some of the highest levels of unemployment in **Sydney**. Wyong (12.5 per cent) and Gosford (8.7 per cent) to the north also had above average levels of unemployment.

In 1996, 17,487 of 15 to 19 year olds were unemployed, a youth unemployment rate of 15.2 per cent, more than double the total unemployment rate for **Sydney**, of 7.4 per cent. More details of unemployment by age, sex and area of State are in **Table 3.16** on page 40, and in the accompanying text.

There were correlations of substantial significance with the variables for low income families (0.88), unskilled and semi-skilled workers (0.82) and people who reported poor proficiency

in English (0.71). The inverse correlation of substantial significance with the IRSD (-0.91) also indicates an association at the SLA level between unemployment and socioeconomic disadvantage. Inverse correlations of substantial significance were also recorded with the variables for female labour force participation (-0.73) and high income families (-0.86), indicating that areas with high proportions of their population with these characteristics have low unemployment rates.

Newcastle

The average unemployment level in **Newcastle** in 1996 was 11.6 per cent, well above the average in **Sydney**. Cessnock and the SLA of Newcastle had the highest percentages, with 13.1 and 12.4 respectively. The lowest percentage, in Maitland, was still quite high, at 10.5 per cent.

Levels of youth unemployment were, at 24.1 per cent of the labour force aged 15 to 19 years, down from 30.7 per cent in 1986. This represented 4,117 young people, the majority of whom resided in Lake Macquarie or Newcastle.

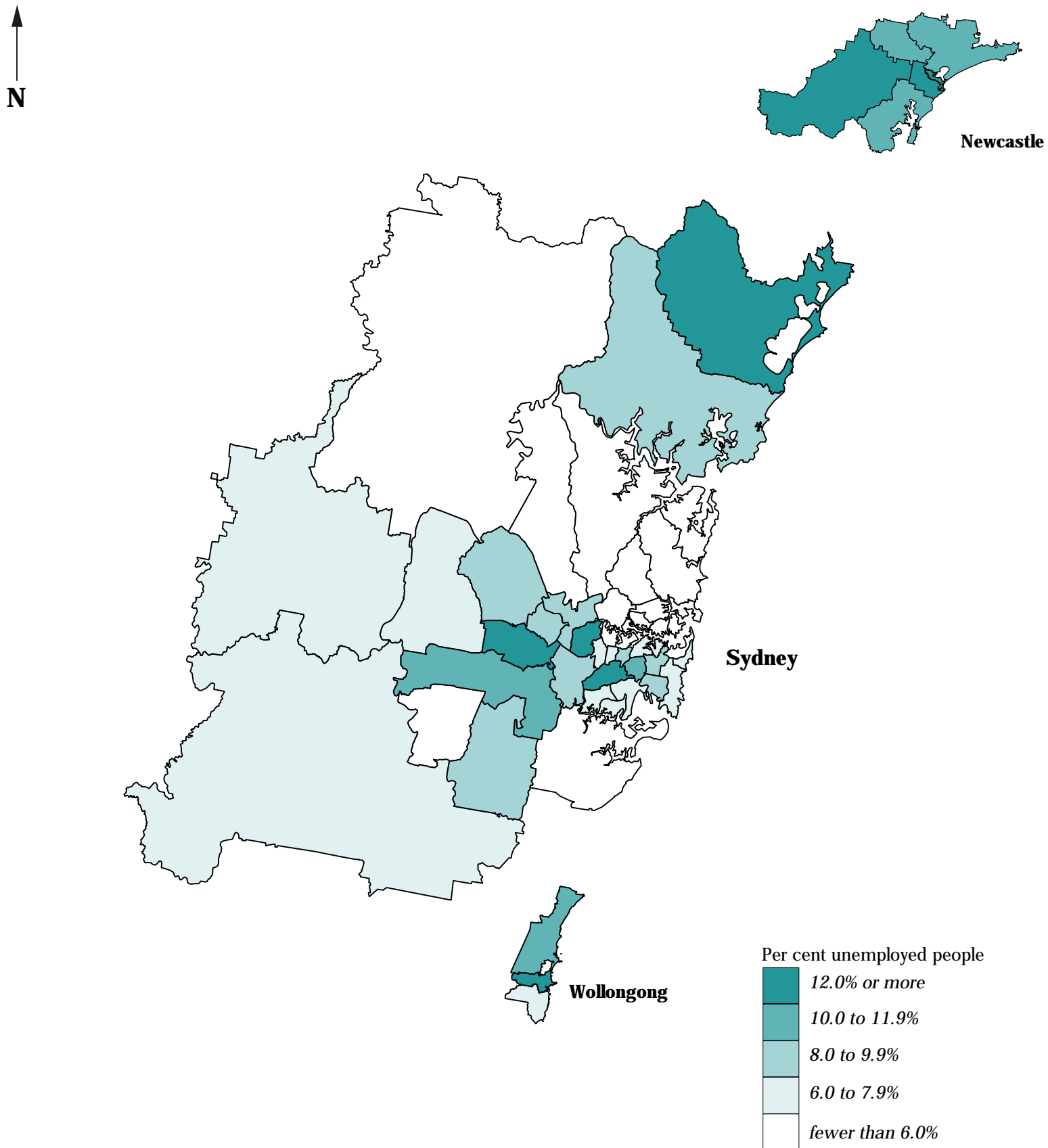
Wollongong

Wollongong's average unemployment level, at 11.6 per cent, was the same as **Newcastle's**, and represented 12,705 unemployed people. Whilst Kiama (7.8 per cent) had a level of unemployment well below the average, both the City of Wollongong (11.5 per cent) and Shellharbour (13.2 per cent) had higher than average levels. Youth unemployment trends mirrored those of **Sydney** and **Newcastle**, with levels considerably higher than the total unemployment percentage. 25.3 per cent of the 15 to 19 year old labour force was unemployed (2,130 people). The rate in 1986 was 30.3 per cent.

Map 3.10

Unemployed people, Sydney, Newcastle and Wollongong, 1996

as a percentage of the total labour force in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Unemployed people, 1996

State/Territory comparison

In 1996, unemployment rates in the *Other major urban centres* category in **Table 3.15** were considerably higher than those recorded for the capital cities and, in New South Wales, higher than the average for the *Rest of State /Territory* areas. Victoria, Queensland and Tasmania also had higher levels of unemployment in the *Rest of State /Territory* areas than in the capital cities, in contrast to the situation in South Australia and Western Australia.

Although the unemployment rate in the *Rest of State /Territory* areas was lower in 1996 (10.1 per cent) than in 1986 (10.8 per cent), the relativities between the States and Territories varied, with the largest declines occurring in the Northern Territory, Queensland and New South Wales, and the largest increase in Victoria.

Table 3.15: Unemployed people, State/Territory
Per cent

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	7.4	9.1	8.8	10.6	8.3	9.7	7.7	7.5 ²	8.5
Other major urban centres ³	11.6	12.0	11.9	..	..	..	..	..	11.7
Rest of State/Territory	11.2	10.1	10.0	9.8	7.5	11.9	7.0	— ⁴	10.1
Whole of State/Territory	8.8	9.4	9.6	10.4	8.1	11.0	7.4	7.3	9.2
1986									
Rest of State/Territory	12.6	8.0	12.2	9.6	9.2	10.6	12.0	— ⁴	10.8

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

Unemployment rates for the *Rest of State* (**Table 3.15**) show that the non-metropolitan areas of New South Wales had considerably higher levels of unemployment than occurred in **Sydney**. This was evident in every age group except for those aged 65 years and over, and occurred for both males and females (**Table 3.16**).

Map 3.11 shows the distribution of *Rest of State* unemployment in New South Wales. High rates of unemployment along the east coast of New South Wales in Ulmarra, Kempsey, Nambucca and Byron (all recording levels of unemployment in excess of 19 per cent) place these SLAs among the top 30 across Australia.

Large regions in the south of the State had lower levels of unemployment, with Lockhart, Conargo, Murrumbidgee and Jerilderie recording percentages well below the State average.

There were correlations at the SLA level with the indicators of socioeconomic disadvantage, and inverse correlations with indicators of high socioeconomic status. These results, and the

correlation of meaningful significance with the IRSD (-0.65), indicate the existence of an association at the SLA level between unemployment and socioeconomic disadvantage.

Unemployment rates: Table 3.16

Males had higher rates of unemployment than females in both **Sydney** and the remainder of New South Wales. Unemployment levels decreased with age, with the exception of the 55 to 64 year age group for females in **Sydney** and for males, reflecting the difficulties for people at these ages in obtaining employment.

Table 3.16 also indicates the severity of youth unemployment, with large percentages evident for people under the age of 25 years, and particularly, for those aged 15 to 19 years. Unemployment rates were higher for males in every age category other than 65 years and over. Youth unemployment in New South Wales was considerably worse in the non-metropolitan areas, with the highest percentages recorded for both males and females in the 15 to 19 year old group, with proportions of 24.5 per cent for males and 21.7 per cent for females.

Table 3.16: Unemployment rates by age, sex and area, New South Wales, 1996

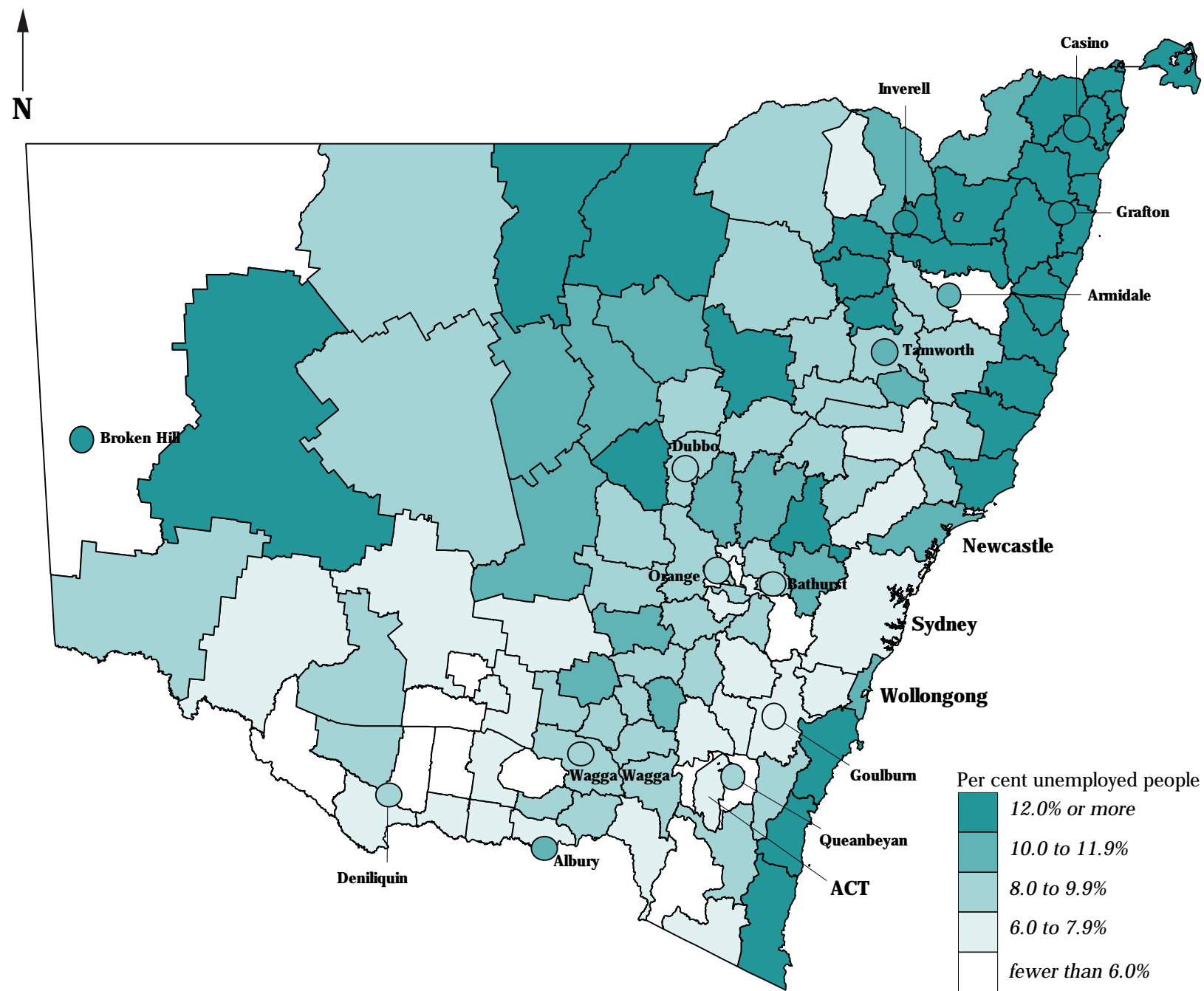
Age group (years)	Per cent male labour force unemployed		Per cent female labour force unemployed	
	Sydney	Non-metro	Sydney	Non-metro
15 to 19	16.5	24.5	13.9	21.7
20 to 24	11.7	19.9	8.8	16.7
25 to 34	7.9	12.9	6.5	10.3
35 to 44	6.4	9.6	5.8	7.7
45 to 54	5.9	8.1	4.7	6.9
55 to 64	8.3	11.5	5.4	6.2
65 +	4.0	2.3	4.5	2.8
Total	8.0	12.2	6.7	10.2

Source: ABS special data services

Map 3.11

Unemployed people, New South Wales, 1996

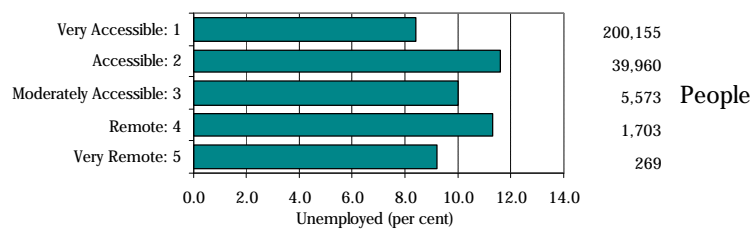
as a percentage of the total labour force in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



The graph of unemployment by ARIA category is similar to that for low income families, with the largest populated centres having the lowest proportion of unemployed people (8.4 per cent in the Very Accessible category), with the highest proportions in the Accessible (11.6 per cent) and Remote (11.3 per cent) ARIA categories. The Moderately Accessible (10.0 per cent) and Very Remote (9.2 per cent) areas also had relatively high levels of unemployment. Again, the number of unemployed people reduces markedly across the remoteness categories.

Source: Calculated on ARIA classification, DHAC

National Social Health Atlas Project, 1999

Female labour force participation, 1996

Capital city comparison

The marked increase in women's participation in paid work has been one of the most significant trends in Australian society in recent years. Women are both remaining in the work force longer (partly by delaying childbirth), and re-entering the workforce after childbirth, because of changes in social perceptions of the role of women and increased economic pressures on families. Female labour force participation is calculated here as the number of females in the labour force (employed plus unemployed and looking for work) as a proportion of all females in the population aged 20 to 54 years. The denominator is limited to the 20 to 54 year age group, as the participation rate for women under the age of 20 years is affected by differences in educational participation rates and for women aged 55 years and over by retirement rates, which are particularly high from age 55 years.

As **Table 3.17** shows, most cities had participation rates close to the average. The highest rates were in **Canberra** (almost seven percentage points higher than the average) and **Darwin**. The participation of women in the labour force in all capital cities increased between 1986 and 1996, with the largest increase occurring in **Brisbane**.

Table 3.17: Female labour force participation, capital cities
Per cent

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	69.3	69.8	69.4	69.1	68.3	68.9	70.7	76.3	69.5
1986	64.5	64.8	61.0	64.3	62.2	62.6	68.5	72.4	64.1

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

In **Sydney**, female labour force participation grew from 64.5 per cent at the 1986 Census to 69.8 per cent in 1991, before declining marginally to 69.3 per cent in 1996 (**Table 3.17**).

SLAs with harbour frontages, and those on the north shore had the highest female labour force participation rates in **Sydney** (**Map 3.12**). Leichhardt, Woollahra, Lane Cove and Waverley all had rates of 76.0 per cent or higher, with North Sydney having the highest rate of 80.2 per cent.

Other SLAs with high rates were Mosman, Willoughby, Warringah, Pittwater and Hunter's Hill north of the harbour; Drummoyne and Randwick on the south side, and Kogarah, to the west of Botany Bay. Many northern and western outer SLAs also had average or above average proportions of females participating in the labour force, with Blue Mountains, Baulkham Hills and Hornsby all having participation rates in excess of 70 per cent.

It should be noted that even in areas with below average participation rates, high proportions are still seen, with only a handful of SLAs recording participation rates below 60 per cent (Auburn, Fairfield, and the City of Sydney). The majority of these lower rates were located to the west and to the south, incorporating the SLAs of Fairfield, Canterbury, Liverpool and Auburn, all with less than 65 per cent. Wyong, in the north-east, was an exception, and had proportions of female labour force participation of 62.9 per cent.

There were correlations of meaningful significance at the SLA level with the variables for high income families (0.70) and managers, administrators and professionals (0.55). The inverse correlations with low income families (-0.74) and unemployed people (-0.73), together with the positive correlation with the IRSD (0.74), indicate that female labour force participation at the SLA level is strongly associated with socioeconomic status.

Newcastle

Like **Sydney**, **Newcastle** witnessed an increase in participation rates for females in the labour force over the ten years from 1986. Rates increased from 55.2 per cent in 1986, to 63.0 per cent in 1991, and 65.2 per cent in 1996.

The 1996 participation rate represents over 71,000 women participating in **Newcastle's** labour force, the majority of whom reside in Lake Macquarie, where 27,135 females represented a rate of 66.1 per cent. The highest rate was recorded in the SLA of Newcastle, with 67.5 per cent.

Wollongong

Wollongong (63.6 per cent) had the lowest participation rates of these three major urban centres in New South Wales, as was the case in 1986 when the rate was 53.2 per cent.

The majority of **Wollongong's** female labour force was situated in the City of Wollongong, with 27,731 females, a rate of 63.7 per cent.

Map 3.12

Female labour force participation*, Sydney, Newcastle and Wollongong, 1996

as a percentage of all females aged 20 to 54 years in each Statistical Local Area



*Labour force participation of females aged 20 to 54 years

Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Female labour force participation, 1996

State/Territory comparison

Female labour force participation is calculated here as the number of females in the labour force (employed plus unemployed and looking for work) as a proportion of all females in the population aged from 20 to 54 years.

The female labour force participation rate for Australia was 68.0 per cent in 1996, with most States and Territories having near average participation rates, ranging from 64.1 per cent in the Northern Territory, to 76.6 per cent in the Australian Capital Territory (**Table 3.18**). Within all of the States and Territories, female labour force participation rates were lower in the non-metropolitan areas than in the capital cities. This differential was particularly evident in the Northern Territory. The participation of women in the labour force increased substantially between 1986 and 1996, with the Australian participation rate increasing from 61.8 per cent in 1986 to 68.0 per cent in 1996. This increase was evident in every State and Territory.

Table 3.18: Female labour force participation, State/Territory
Per cent

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	69.3	69.8	69.4	69.1	68.3	68.9	70.7	76.3 ²	69.5
Other major urban centres ³	64.7	66.8	67.9	..	..	..	..	..	66.1
Rest of State/Territory	65.4	66.5	63.8	66.2	64.6	62.2	58.3	- ⁴	64.8
Whole of State/Territory	67.8	69.0	67.0	68.4	67.3	65.1	64.1	76.6	68.0
1986									
Rest of State/Territory	58.0	60.1	55.3	60.7	56.8	55.4	56.6	- ⁴	57.7

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

Female labour force participation in the non-metropolitan areas of New South Wales increased over the ten years to 1996 from 58.0 per cent at the 1986 Census, to 63.8 per cent at the 1991 Census, and to 65.4 per cent at the 1996 Census.

Map 3.13 shows the distribution of this variable throughout the non-metropolitan areas of New South Wales. It reveals that while the majority of the State had rates of between 60 and 70 per cent, certain groupings of SLAs had higher rates, and individual SLAs scattered throughout New South Wales had rates below 60.0 per cent for this variable.

As was the case in the major urban centres of New South Wales, even the lower participation rates for this variable were quite high, with the lowest rate being 54.1 per cent in Manilla.

Brewarrina, Tenterfield, Kyogle, Ulmarra and Bingara in the north and north-east, Boorowa in the south and Murrurundi and Rylstone in central-eastern New South Wales also had rates of below 60.0 per cent.

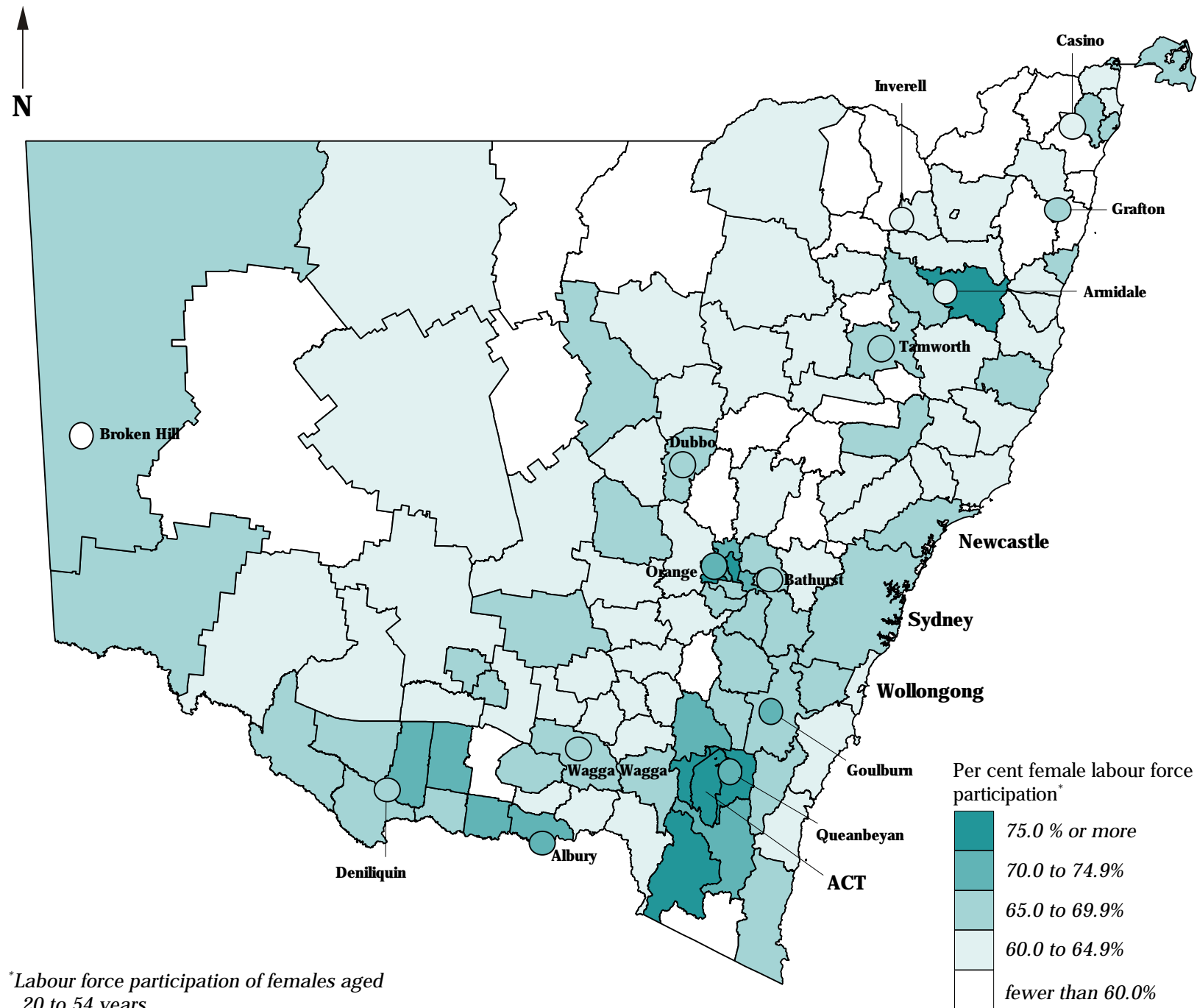
The towns of Albury, Orange, Bathurst and Goulburn had female labour force participation rates of around 70 per cent or higher. The highest rates were recorded in Snowy River (82.4 per cent) and Yarrowlumla [Part B] (80.5 per cent).

As for **Sydney**, there was a correlation of meaningful significance with the variable for high income families (0.60), and inverse correlations of meaningful significance with the variables for low income families (-0.69), early school leavers (-0.68) and unemployed people (-0.52). These results, together with the positive correlation with the IRSD (0.79), indicate the existence of an association at the SLA level between high rates of female labour force participation and high socioeconomic status.

Map 3.13

Female labour force participation*, New South Wales, 1996

as a percentage of all females aged 20 to 54 years in each Statistical Local Area

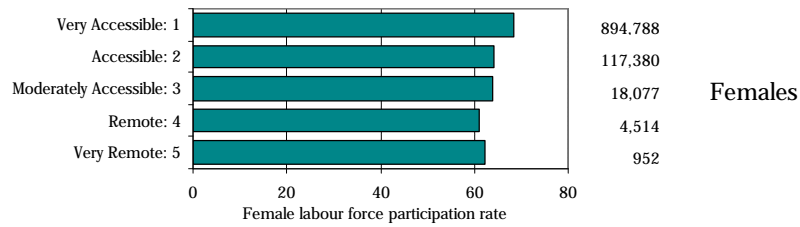


*Labour force participation of females aged 20 to 54 years

Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



There are relatively high levels of female labour force participation across all of the ARIA categories, with the highest in the Very Accessible areas (68.5 per cent). Participation rates decline with increasing remoteness to the lowest level in the Remote category, before increasing marginally in the Very Remote category (although with relatively small numbers).

Source: Calculated on ARIA classification, DHAC National Social Health Atlas Project, 1999

People who left school at age 15 years or less, or did not go to school, 1996

Capital city comparison (Australia as the Standard)

The age at which people cease their formal education does not determine absolutely how they will fare in life, but it does have a strong influence, not only on the ability to gain secure and rewarding employment but also on general life style. Differences in educational participation are examined in this analysis by comparing variations in the extent to which the population left school at age 15 or less, or did not go to school (jointly referred to as early school leavers). This variable has been age-sex standardised to remove differences in participation rates occurring between areas solely because of differences in the age and sex of the population in the areas being studied. A description of this process is on page 17. Among the capital cities, the highest standardised ratio (SR) of early school leavers was recorded in **Perth**, with 12 per cent more early school leavers than expected (an SR of 112**), and the lowest was recorded in **Canberra**, where the ratio of 68** indicated that there were 32 per cent fewer early school leavers than were expected from the Australian rates.

There was relatively little difference in the early school leaver ratios for 1986 and 1996 (**Table 3.19**), with some cities (**Sydney**, **Melbourne** and **Brisbane**) showing a small improvement (relative to the Australian rates) and others (eg. **Hobart** and **Darwin**) showing a relative decline as their rates moved closer to the Australian rates. The ratio for **Hobart** moved from below (in 1986) to above (1996) the *All capitals* ratio.

Table 3.19: People who left school at age 15 years or less, or did not go to school, capital cities
Age-sex standardised ratios

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	89**	82**	110**	98**	112**	98**	92**	68**	92**
1986	92**	85**	112**	98**	112**	92**	88**	69**	94**

¹Includes Queanbeyan (C)

Source: ABS special data services

Statistical significance: * significance at 5 per cent level; ** significance at 1 per cent level

Sydney (New South Wales as the Standard)

The standardised ratios in the following text have been adjusted to show differences from the New South Wales participation rates rather than from the Australian rates as in the *Capital city comparison*, above.

Variations within **Sydney** in educational participation (**Map 3.14**) provide a striking illustration of the links between education and occupation and income, as mapped above. Throughout the lower northern and eastern suburbs, the number of early school leavers was well below the level expected, with SRs of less than 50 in the SLAs of Woollahra (an SR of 38**), Mosman (40**), Kuring-gai (40**), North Sydney (46**) and Lane Cove (50**). Over the past decade, the areas with low participation in education have remained basically the same.

SLAs that were mapped in the middle range (within 15 per cent of the level expected from the State rates) were distributed throughout the northern, western and southern areas. Within this range, SLAs with more early school leavers than expected included Hawkesbury (with an SR of 113**), Holroyd (113**), Bankstown (111**), Fairfield (110**), Gosford (108**), Auburn (104**) and Botany (102).

To the west of the city, elevated ratios were recorded in Penrith (an SR of 121**), Blacktown (119**) and Liverpool (119**) and, in the outer south-western regions, in Campbelltown (120**), Wollondilly (118**) and Camden (117**). The highest ratio was in Wyong, situated on the north coast, where there were 25 per cent more early school leavers than expected from the State rates.

In total, 882,523 people left school at age 15 or less, with the largest numbers in Blacktown (60,306), Sutherland (48,922) and Bankstown (47,210). In the vast majority of SLAs, the number of

female early school leavers exceeded the number of males: the exceptions were the SLAs of South Sydney and Sydney.

There were correlations of substantial significance at the SLA level with the variables for unskilled and semi-skilled workers (0.86) and children aged from 0 to 4 years (0.83); and of meaningful significance with low income families (0.70), the Indigenous population (0.66) and the unemployed (0.60). The strongest inverse correlations were with the variables for managers, administrators and professionals (-0.94) and high income families (-0.84). The inverse correlation of substantial significance with the IRSD (-0.80) also indicates a positive association at the SLA level between the distribution of early school leavers and socioeconomic disadvantage.

Newcastle

Newcastle had the highest ratio of early school leavers among the major urban centres, with 22 per cent more than expected from the State rates (an SR of 122**). All SLAs had elevated ratios, ranging from 139** in Cessnock to 116** in the SLA of Newcastle.

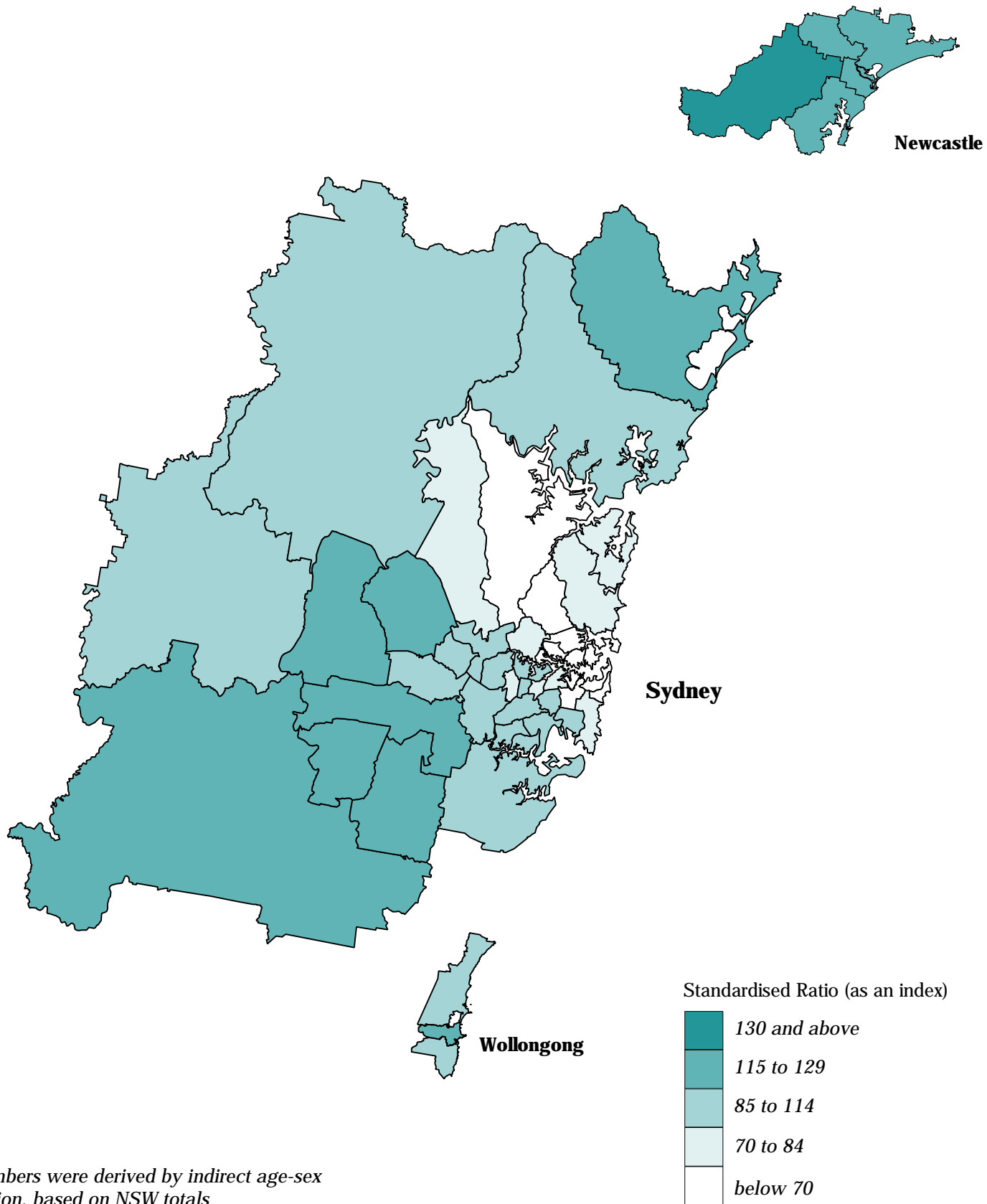
Wollongong

Wollongong also had more early school leavers than expected from the State totals, with a standardised ratio of 111**. Residents of Shellharbour and the City of Wollongong had elevated ratios of 126** and 109** respectively.

Map 3.14

People who left school at age 15 years or less, or did not go to school, Sydney, Newcastle and Wollongong, 1996

Standardised Ratio: number of people in each Statistical Local Area compared with the number expected*



*Expected numbers were derived by indirect age-sex standardisation, based on NSW totals

Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

People who left school at age 15 years or less, or did not go to school, 1996

State/Territory comparison (Australia as the Standard)

A description of the process of age-sex standardisation, used in producing the standardised ratios (SRs) mapped, is provided on page 17. The overall number of early school leavers (people had left school aged 15 years or less, or did not go to school), was 13 per cent higher than expected in the non-metropolitan areas of Australia, compared with eight per cent lower in the capital cities. This relationship was evident in all of the Australian States, with the biggest difference between capital city and non-metropolitan ratios occurring in the Northern Territory. Western Australia (with an SR of 133**) and Queensland (127**) had the highest *Rest of State/Territory* ratios.

There were notably larger differentials (from the Australian rates) in the ratios recorded for the non-metropolitan areas of the Northern Territory, Tasmania and Western Australia in 1996, when compared with the ratios for 1986 (Table 3.20). The higher ratios suggest a decline in educational participation, relative to the Australian experience, over this ten year period.

Table 3.20: People who left school at age 15 years or less, or did not go to school, State/Territory
Age-sex standardised ratios

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	89**	82**	110**	98**	112**	98**	92**	68 ² **	92**
Other major urban centres	114**	95**	106**	..	..	..	..	..	109**
Rest of State/Territory	106**	97**	127**	114**	133**	120**	121**	- ⁴	113**
Whole of State/Territory	96**	86**	116**	102**	118**	111**	108**	64**	100**
1986									
Rest of State/Territory	104**	98**	125**	112**	123**	111**	104**	- ⁴	110**

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Statistical significance: * significance at 5 per cent level; ** significance at 1 per cent level

Rest of State (New South Wales as the Standard)

The standardised ratios in the following text have been adjusted to show differences from the New South Wales participation rates rather than from the Australian rates as in the *Capital city comparison* above.

There were 10 per cent more early school leavers in the non-metropolitan areas of New South Wales than were expected from the State rates, a total of 474,253 people (236,136 males and 238,117 females). This represents a decline over the last decade, down from 501,646 people in 1986.

It can be seen from **Map 3.15** that the separate SLAs of Yarrowlumla [Part A and B] had the lowest ratios for this variable, with 69** and 50* respectively. These SLAs, located in the south-east of the State are adjacent to the Australian Capital Territory, and were the only areas to be mapped in the lowest range. Low ratios were also recorded in the northern SLAs of Dumaresq and Armidale: this result is not surprising considering that Armidale is the regional administrative centre and a university town.

The highest ratio (of 131) was that in Ulmarra, situated on the mid north coast, with 31 per cent more early school leavers than expected in comparison to the State rates. Ratios elevated by 25 per cent or more were recorded in Broken Hill and Central Darling, located in the far north-west; Casino and Richmond River, in the north-east; and to the north of the city in the SLA of Dungog. A high proportion of SLAs (87 SLAs) had ratios in the middle range mapped (ranging from 85 to less than 115).

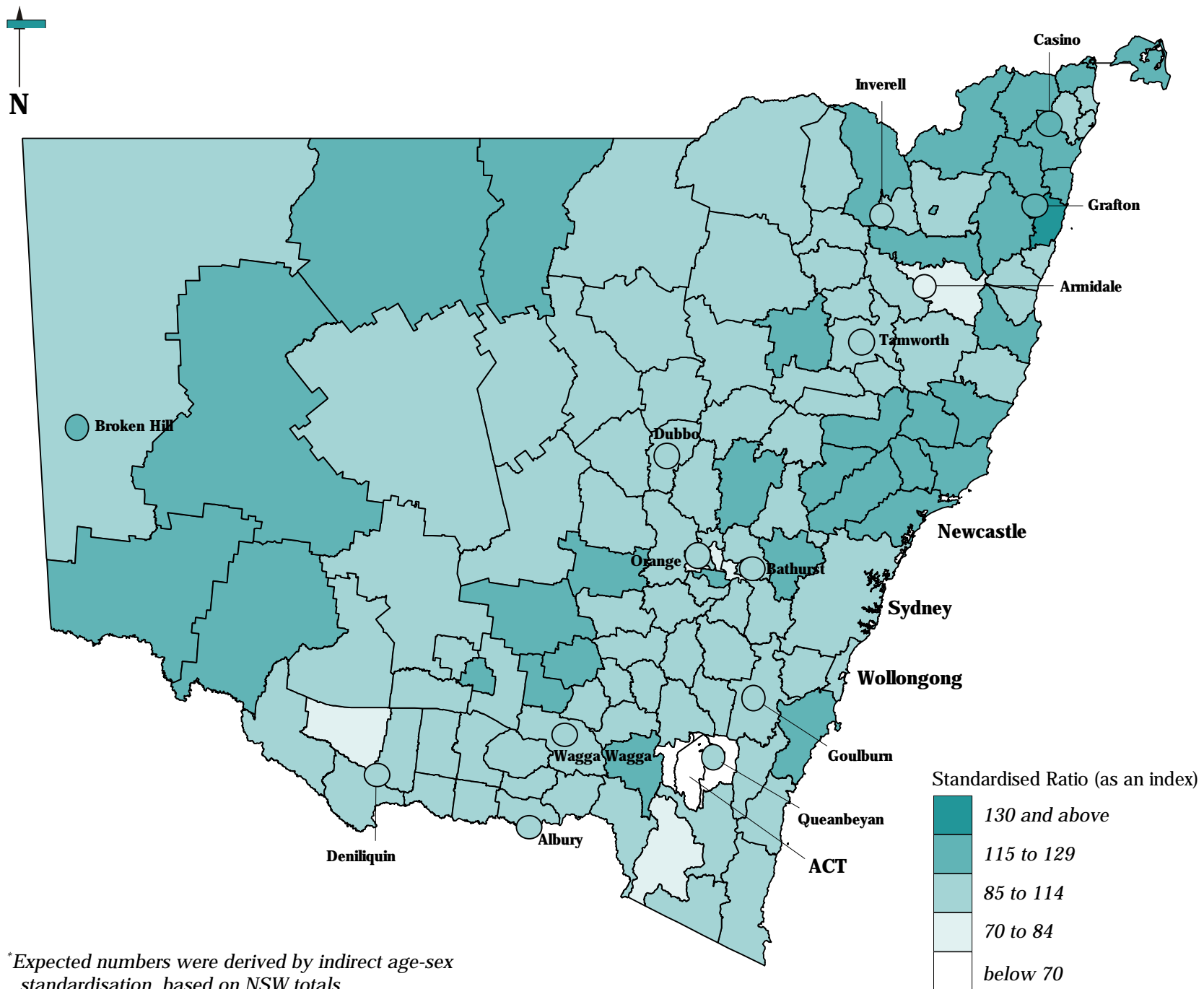
At the 1996 Census, the largest numbers of early school leavers were recorded in Shoalhaven, Hastings and Coffs Harbour, with 26,415, 20,527, and 17,791 people respectively. In contrast, fewer than 100 early school leavers were recorded in Yarrowlumla [Part B] and Windouran.

There were weak correlations at the SLA level in the non-metropolitan areas of New South Wales with the variables for low income families (0.47) and the unemployed (0.42), and an inverse correlation of meaningful significance with female labour force participation (-0.68). These results, and the inverse correlation of substantial significance with the IRSD (-0.77), indicate an association at the SLA level between the distribution of early school leavers and socioeconomic disadvantage.

Map 3.15

People who left school at age 15 years or less, or did not go to school, New South Wales, 1996

Standardised Ratio: number of people in each Statistical Local Area compared with the number expected*

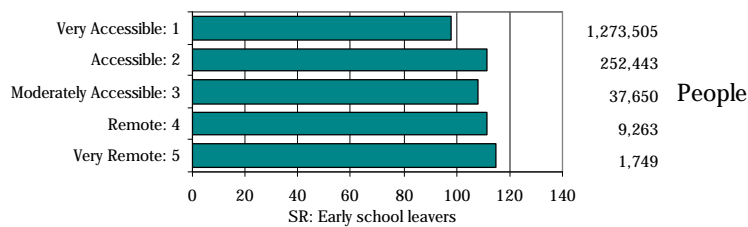


*Expected numbers were derived by indirect age-sex standardisation, based on NSW totals

Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



People living in the areas classified as Very Accessible had the highest rates of educational participation (the lowest rates of people who left school at age 15 or earlier, or did not go to school, an SR of 98). As accessibility reduces and remoteness increases, people are increasingly likely to have left school early. The areas classified as Accessible do not follow this pattern, with an SR of 112, similar to those in the Remote category (111). The highest ratio is in the Very Remote category, an SR of 115.

Source: Calculated on ARIA classification, DHAC National Social Health Atlas Project, 1999

Aboriginal and Torres Strait Islander people, 1996

Capital city comparison

The percentages of people identifying as Aboriginal and Torres Strait Islanders in the 1996 Census were low, with the *All capitals* average at 1.0 per cent (**Table 3.21**). The exceptions were **Hobart** and **Darwin**, where Indigenous people comprised 2.5 per cent and 8.6 per cent of the population, respectively. The lowest percentage was recorded in **Melbourne** (0.3 per cent), with **Sydney** and **Adelaide** the next lowest, both with 0.9 per cent. However, some 36.6 per cent of Australia's Indigenous people (108,557 people) lived in the capital cities at the 1996 Census, with the largest numbers in **Sydney** (34,432 Indigenous people).

The proportion of Indigenous people recorded in Australia's capital cities increased in the ten years from 1986, rising from 0.6 per cent in 1986, to 0.7 per cent in 1991 and to 1.0 per cent in the 1996 Census. The number of Indigenous Australians rose by 47,945 in the same period. This substantial increase largely reflects changes over time in the preparedness of people to identify themselves as Indigenous on the Census form. The increase was greatest in New South Wales, and particularly marked in the non-metropolitan areas of the State, with a population of 56,474 in 1996 compared with 35,907 in 1986. Additional information about these increases is provided on pages 16 and 17 (see *Data quality of Indigenous population counts*).

Table 3.21: Aboriginal and Torres Strait Islander people, capital cities
Per cent

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	0.9	0.3	1.5	0.9	1.4	2.5	8.6	1.1	1.0
1986	0.6	0.2	1.0	0.6	1.0	1.2	7.6	0.6	0.6

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

In 1986, there were 18,589 Indigenous people in **Sydney**. By the 1996 Census, this number had risen to 34,432, an 85 per cent increase. Despite this increase, Indigenous Australians still comprised just 0.9 per cent of the population of **Sydney**.

Despite the marked increase in numbers, the pattern of spatial distribution in 1996 is similar to that in 1986. **Map 3.16** shows a large concentration of Indigenous people was located in the adjoining SLAs of Campbelltown, Blacktown, Penrith and Liverpool, an area in which 13,191 Indigenous people resided. The majority of the SLAs south of Sydney Harbour and north of Botany Bay also had above average proportions of Indigenous people. In this area, the SLAs of South Sydney (2.0 per cent), Botany (1.4 per cent) and Randwick (1.2 per cent) had some of the higher percentages.

Associations with certain other variables (unemployment, low income families) were strong, with a common area of low percentages north of Sydney Harbour and south of the Hawkesbury river. This region includes Ku-ring-gai, North Sydney and Mosman, where Indigenous Australians make up less than 0.3 per cent of the population.

There were correlations with the variables for single parent families (0.88), early school leavers (0.66), dwellings rented from the State housing authority (0.66), unskilled and semi-skilled workers (0.57), low income families (0.56), children aged from 0 to 4 years (0.53) and unemployed people (0.52). Inverse correlations were recorded with the variables for managers, administrators and professionals (-0.57), high income families (-0.60) and people aged 65 years and over (-0.61). These results, together with the inverse correlation of meaningful significance with the IRSD (-0.66), indicate an association at the SLA level between Indigenous people and socioeconomic disadvantage.

Newcastle

The proportion of Indigenous Australians in **Newcastle's** population in 1996 was 1.6 per cent. This figure represented 7,346 people, the majority of whom lived in either Lake Macquarie (2,774 people) or Newcastle (1,881 people).

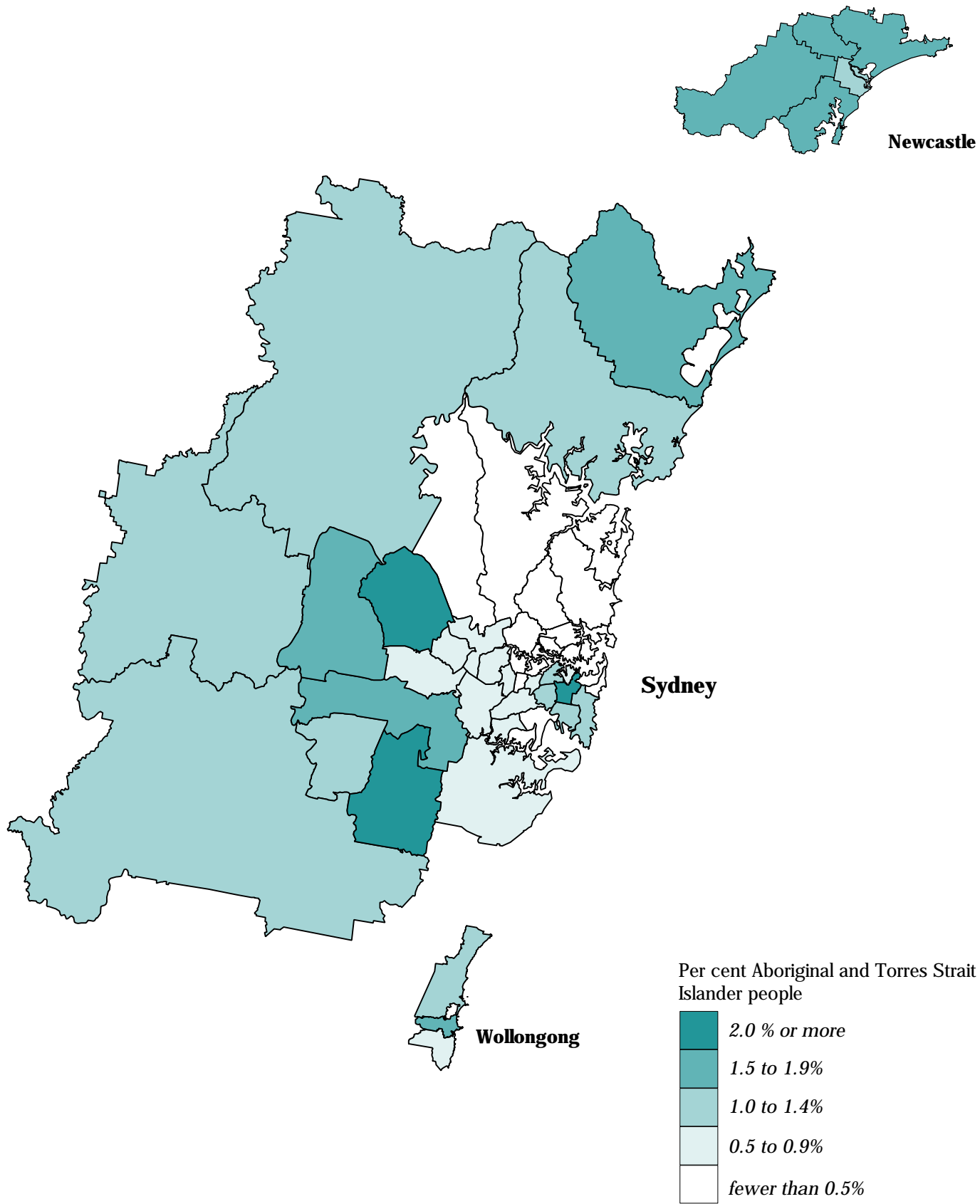
Wollongong

In 1996, 1.3 per cent of **Wollongong's** population were Indigenous people, varying at the SLA level from 0.9 per cent in Kiama to 1.8 per cent in Shellharbour. The City of Wollongong had 1.2 per cent of its population in this category, accounting for 2,138 of **Wollongong's** 3,226 Indigenous people.

Map 3.16

Aboriginal and Torres Strait Islander people, Sydney, Newcastle and Wollongong, 1996

as a percentage of the total population in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Aboriginal and Torres Strait Islander people, 1996

State/Territory comparison

At the 1996 Census, some two thirds of those who identified themselves at the Census as being Aboriginal and/or Torres Strait (Indigenous) Islander people lived in inland and remote areas of Australia, away from major urban centres and other highly populated areas. There were wide variations between States and Territories, from a high of 23.7 per cent in the Northern Territory to a low of 0.5 per cent in Victoria; similar variations occurred in the non-metropolitan areas (**Table 3.22**). While Indigenous people accounted for just 3.5 per cent of the population in the non-metropolitan areas of New South Wales, compared with 35.6 per cent in the non-metropolitan areas of Northern Territory, the population was much larger (56,648 Indigenous people, compared to 38,893 people, respectively).

The number of Indigenous people recorded in New South Wales as a whole increased from 59,011 in 1986 to 101,652 in 1996. These changes represent an increase of 72.0 per cent, presumably because of changes over time in the preparedness of people to identify themselves on the Census form. Additional information about these increases is on pages 16 and 17.

Table 3.22: Aboriginal and Torres Strait Islander people, State/Territory

	<i>Per cent</i>								
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	0.9	0.3	1.5	0.9	1.4	2.5	8.6	1.1 ²	1.0
Other major urban centres ³	1.5	0.5	1.9	..	..	..	..	..	1.5
Rest of State/Territory	3.5	0.9	4.6	2.9	7.0	3.4	35.6	— ⁴	4.2
Whole of State/Territory	1.7	0.5	2.8	1.4	2.9	3.0	23.7	1.0	2.0
1986									
Rest of State/Territory	2.6	0.6	3.7	2.3	6.7	1.8	35.7	— ⁴	3.3

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

The distribution of the Indigenous population shown in **Map 3.17** supports the points made above, with higher proportions of Indigenous people located away from the more heavily populated areas in the major cities and coastal regions.

In Brewarrina, the 1,170 Indigenous people made up 53.4 per cent of the population, the highest proportion of any SLA. The four SLAs with the highest proportions of Indigenous people were situated together, with Brewarrina (53.4 per cent), Bourke (24.7 per cent) and Walgett (20.6 per cent), in north central New South Wales; and Central Darling (25.3 per cent) in the north-west.

The majority of SLAs had proportions of below 5 per cent and, as a result, much of **Map 3.17** takes on the lightest shading. Snowy River, Wingecarribee, Byron and Young were SLAs with both relatively large total population (10,000 people and over) and low proportions of Indigenous Australians (each with a proportion of or below 1.3 per cent).

Between 1986 and 1996, the proportion of Indigenous people increased from 2.6 per cent to 3.5 per cent of the *Rest of State* population in New South Wales. This increase represented 20,741 more Indigenous people.

There was a weak association in the correlation analysis at the SLA level with indicators of socioeconomic disadvantage, with the strongest correlations recorded with the variable for dwellings with no motor vehicle (0.59), single parent families (0.46), housing authority rented dwellings (0.36) and early school leavers (0.24).

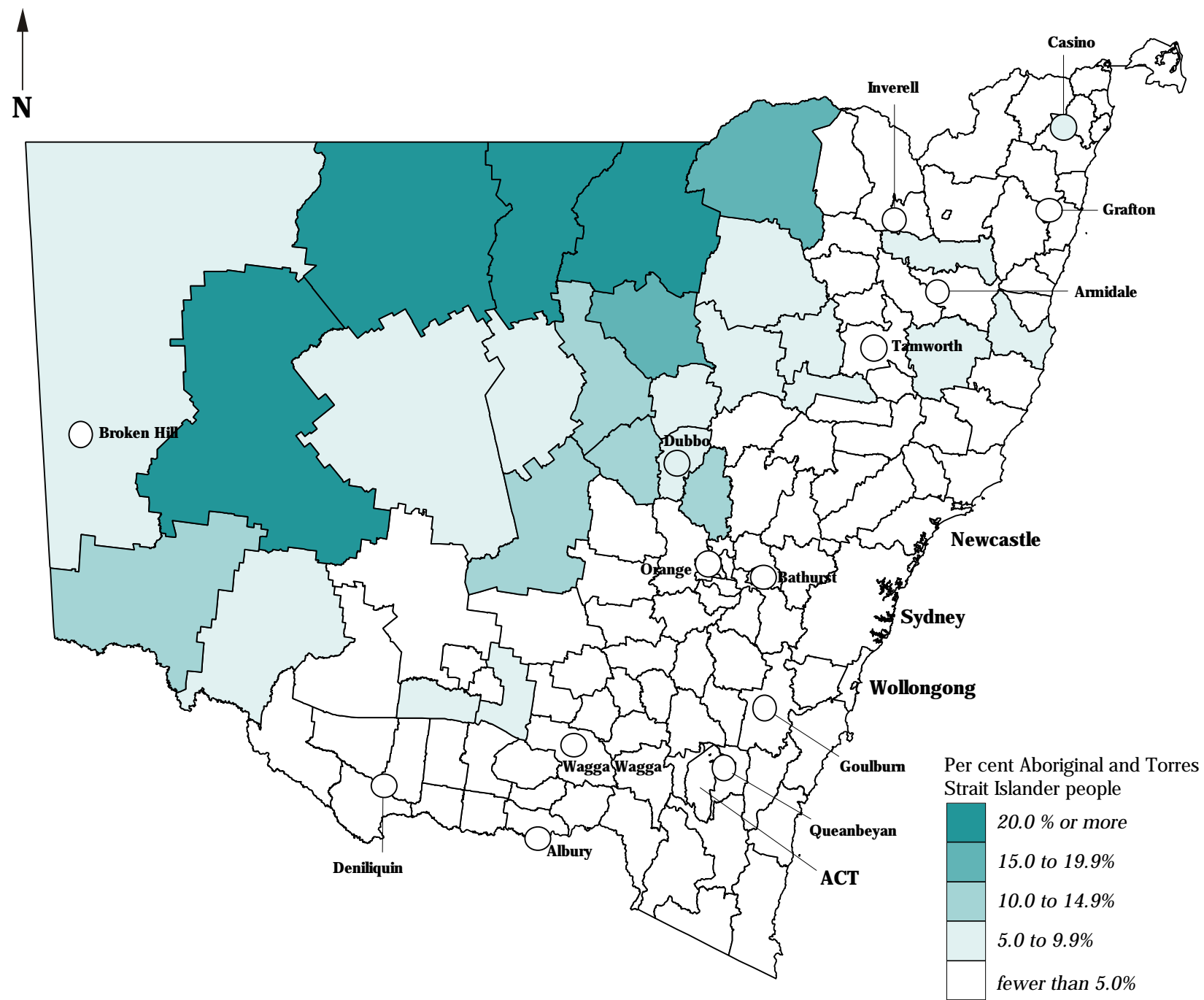
These results, together with the correlation of meaningful significance with the IRSD (-0.52), indicate an association at the SLA level between Indigenous people and socioeconomic disadvantage.

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Map 3.17

Aboriginal and Torres Strait Islander people, New South Wales, 1996

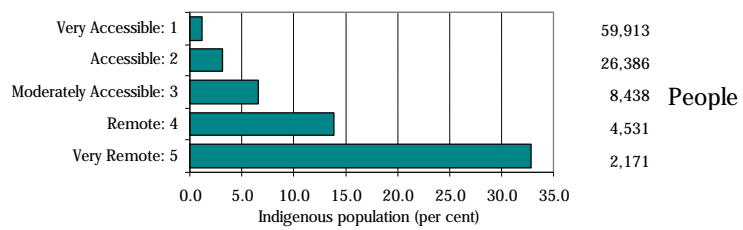
as a percentage of the total population in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



Indigenous people have the most striking distribution under the ARIA categorisation of any of the variables examined in this chapter. The graph shows a clear gradient in the proportion of the population represented in each ARIA category, from 1.2 per cent in the Very Accessible category, to 32.8 per cent in the Very Remote category. The numbers associated with the graph highlight the distribution of Indigenous people throughout the State, including in the most remote areas.

Source: Calculated on ARIA classification, DHAC National Social Health Atlas Project, 1999

People born in predominantly non-English speaking countries and resident in Australia for five years or more, 1996

Capital city comparison

Migrants in this category arrived in Australia from predominantly non-English speaking countries in or before 1991. As a substantial proportion will have been resident in Australia for many years, their distribution is often widespread within urban areas, especially the capital cities. Of the Australian capital cities, **Sydney** has the second highest proportion of its population in this category (**Table 3.23**), while **Hobart** has the lowest (4.3 per cent). This characteristic, of a strong over representation of non-English speaking migrants, has been a feature of New South Wales' demography during the post-war period. There were 666,190 people in this category in **Sydney** in 1996 (17.8 per cent of the population), well above **Melbourne's** population of 568,565 people. This represents a major change from the situation in 1986, when **Melbourne** had 456,686, just 15,177 less than in **Sydney**.

Table 3.23: People born in predominantly non-English speaking countries and resident in Australia for five years or more, capital cities

	<i>Per cent</i>								
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra¹	All capitals
1996	17.8	18.1	7.5	11.1	11.7	4.3	10.7	11.4	14.8
1986	14.0	16.1	6.0	10.5	10.5	4.2	10.2	10.8	12.7

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

In 1996, there were 666,190 people (17.8 per cent of the population) in **Sydney** who were born in predominantly non-English speaking countries and had been resident in Australia for five years or more. This represented a marked increase from the 471,863 people recorded at the 1986 Population Census (14.0 per cent of the population). **Map 3.18** shows that the highest proportions of people in this population group are found in the middle SLAs, radiating from east to west to include Auburn, Bankstown, Fairfield, and Liverpool.

Fairfield and Auburn, near where migrant hostels were located until the 1980s, had comparatively high proportions of residents from non-English speaking countries. In 1996 they had proportions of 41.2 per cent (74,817 people) and 35.8 per cent (18,239) respectively. Fairfield and Auburn had more people in this category than any other SLAs in Australia. Canterbury had a similarly high proportion of 35.8 per cent, representing 47,373 people.

The lowest proportions of this population were spread through the metropolitan area with, for example, the outer northern SLAs of Wyong (3,986 people) and Gosford (5,897 people) recording the relatively low measures of 3.4 per cent and 4.1 per cent, while Wollondilly had 5.3 per cent.

The largest numbers of residents who originally came from predominantly non-English speaking countries were located in Fairfield (74,817 people), Canterbury (47,373), Blacktown (45,551) and Bankstown (39,176). The smallest numbers were located in Hunter's Hill with 1,299 people, and Wollondilly with 1,772 people.

As would be expected, there were correlations of substantial significance with the other variables for people born in predominantly non-English speaking countries, of 0.95 with those who reported poor proficiency in English and of 0.78

with those resident for less than five years. There were also correlations of meaningful significance with many of the indicators of socioeconomic disadvantage, including with the variables for unemployed people (0.57) and unskilled and semi-skilled workers (0.52). These results, and the inverse correlation of meaningful significance with the IRSD (-0.51), indicate an association at the SLA level between people in this population group and socioeconomic disadvantage.

Newcastle

Newcastle had a much lower proportion for this variable than **Sydney** at the 1996 Census, with only 4.2 per cent of the population having a birthplace in a predominantly non-English speaking country.

The SLA of Newcastle had the highest proportion, with 6.0 per cent (7,973 people) of its population in this category. The outer SLA of Cessnock had the lowest proportion with 2.2 per cent and 987 people, while Maitland also had a comparatively low figure with 3.1 per cent of its population from predominantly non-English speaking countries and resident for greater than five years.

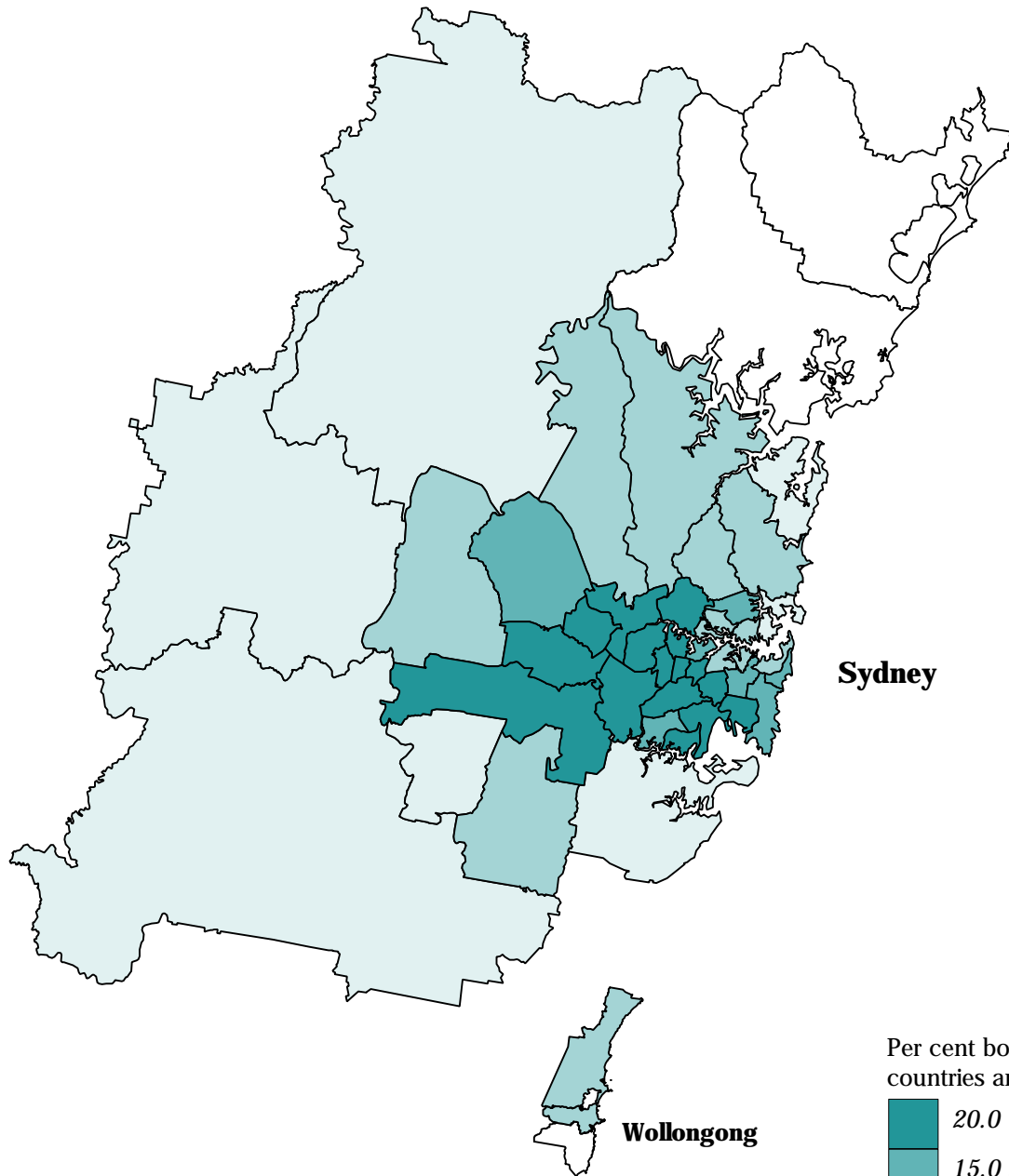
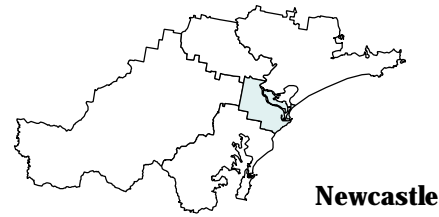
Wollongong

12.2 per cent of the population of **Wollongong** was from a predominantly non-English speaking country and had been resident for five years or more. This measure was lower than that recorded for **Sydney** but markedly higher than that in **Newcastle**. Kiama had a substantially lower proportion than the other SLAs in **Wollongong** with 3.7 per cent (651 people). The City of Wollongong and the SLA of Shellharbour had 13.4 per cent and 11.1 per cent, with the City of Wollongong having the vast majority of residents from non-English speaking countries 23,759 compared with 5,781 in Shellharbour.

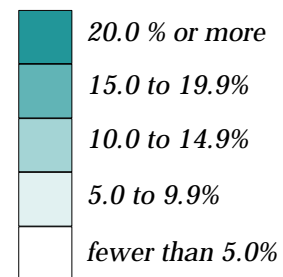
Map 3.18

People born in predominantly non-English speaking countries and resident in Australia for five years or more, Sydney, Newcastle and Wollongong, 1996

as a percentage of the total population in each Statistical Local Area



Per cent born in non-English speaking countries and resident for five years or more



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

People born in predominantly non-English speaking countries and resident in Australia for five years or more, 1996

State/Territory comparison

The proportion of migrants born in predominantly non-English speaking countries, who arrived in Australia in or before 1991 and resided in the non-metropolitan areas at the 1996 Census, was highest in Victoria and Western Australia. However, as is shown in **Table 3.24**, the proportion of migrants in this category located in the non-metropolitan areas of the States is low relative to capital city rates. An important social process is suggested when **Tables 3.24** and **3.26** (of more recently arrived migrants) are compared. As migrants born in predominantly non-English speaking countries become more proficient in English, and adapted to the host country's economic and social systems, they are more prepared to leave the capital cities to access opportunities available in the more rural areas.

Between 1986 and 1996, there was an increase in the proportions of people born in non-English speaking countries and resident for five years or more in all States and Territories except the Northern Territory, where there was a small decline. The Australian average increased from 9.5 per cent in 1986 to 10.9 per cent in 1996. The proportion across the *Rest of State/Territory* areas was 3.5 per cent at both Censuses.

Table 3.24: People born in predominantly non-English speaking countries and resident in Australia for five years or more, State/Territory
Per cent

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	17.8	18.1	7.5	11.1	11.7	4.3	10.7	11.4 ²	14.8
Other major urban centres ²	7.0	10.0	6.1	..	..	..	..	..	7.0
Rest of State/Territory	3.1	3.9	3.7	3.8	3.9	2.6	3.2	— ⁴	3.5
Whole of State/Territory	12.7	14.3	5.7	9.2	9.5	3.3	6.5	11.3	10.9
1986									
Rest of State/Territory	2.8	4.1	3.6	4.1	4.6	2.4	3.8	— ⁴	3.5

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

Despite having a relatively low proportion (3.1 per cent) of people born in predominantly non-English speaking countries and resident for five years or more, the non-metropolitan areas of New South Wales had the largest population of all the States and Territories, with 49,217 people. This represents an increase from the 1986 figure of 39,731 (2.8 per cent).

The highest proportions were in Queanbeyan (located adjacent to **Canberra**) with 12.1 per cent, and in Griffith in central New South Wales, with 11.3 per cent. Also of note was the high proportion in Cooma-Monaro in the south-east of the State, with 7.5 per cent.

The lowest proportions were generally recorded in the central and the far western parts of the State (**Map 3.19**). Areas such as Warren and Lachlan in central New South Wales had 0.6 per cent and 0.8 per cent respectively, and Guyra in the north had 0.9 per cent.

The largest numbers of people in rural New South Wales who were from predominantly non-English speaking countries and had been resident for five years or more were located in Queanbeyan and neighbouring Shoalhaven, which had 3,316 people and 3,085 people respectively. Griffith (2,446 people), Coffs Harbour (2,265 people) and Albury (1,866 people) also had relatively large numbers of people in this category.

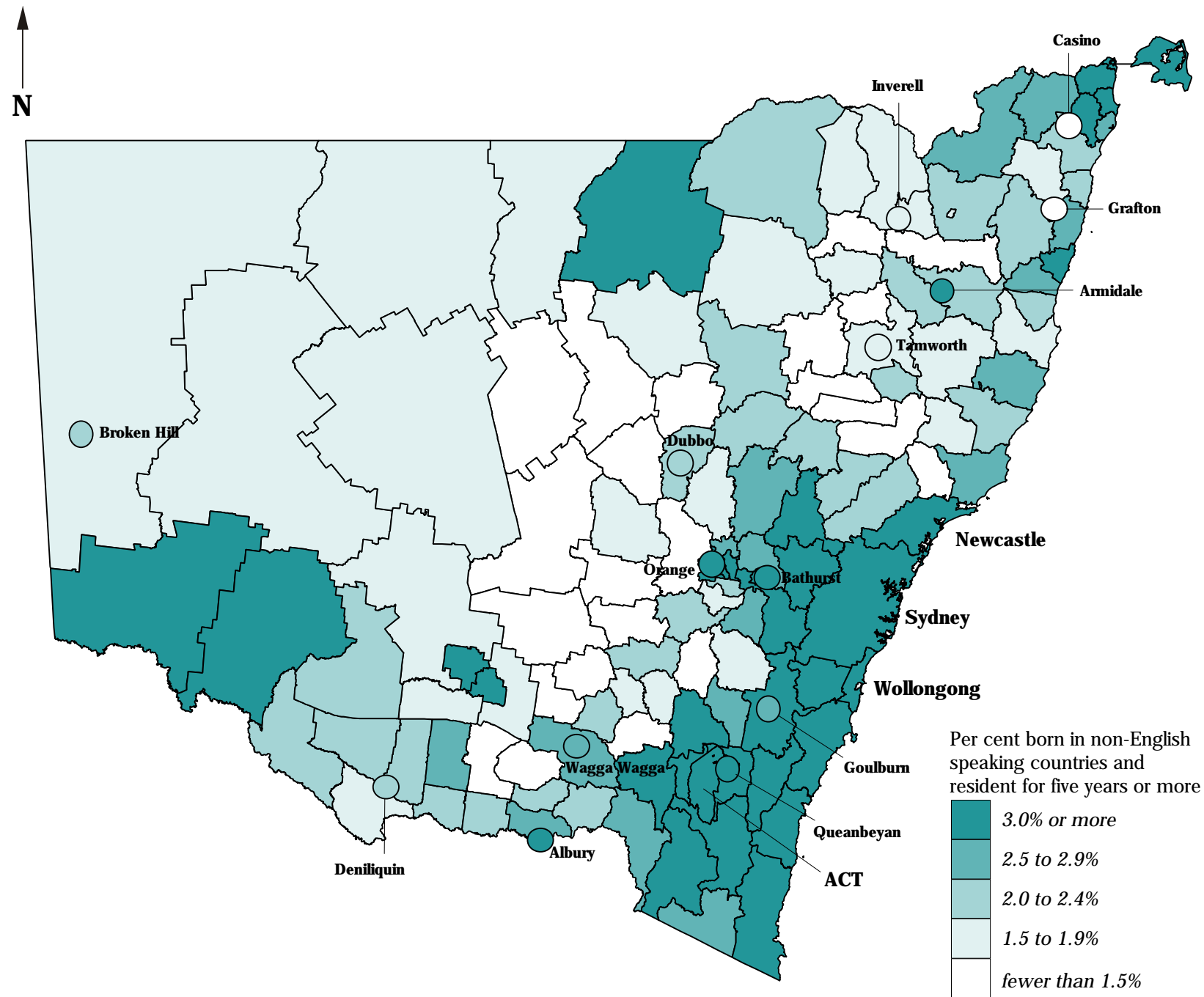
SLAs with the smallest numbers of people in this category were generally in the less populated, more remote regions. Examples are Unincorporated Far West (the area around and to the north of Broken Hill, with 17 people in this category) and Windouran in the State's south-west (with 9 people). Urana, also in the south-west of the State, had just 16 who were from predominantly non-English speaking countries and had been resident for five years or more.

There was a correlation of substantial significance with the variable for people who reported poor proficiency in English (0.81) and a correlation of meaningful significance with recently arrived migrants from predominantly non-English speaking countries (0.52). There were weak correlations with the variables for high income families (0.39) and female labour force participation, and weak inverse correlations with most of the indicators of socioeconomic disadvantage. These results, and the weak correlation with the IRSD (0.26), suggest the existence of an association at the SLA level between high proportions of people born in predominantly non-English speaking countries and resident for five years or more and high socioeconomic status.

Map 3.19

People born in predominantly non-English speaking countries and resident in Australia for five years or more, New South Wales, 1996

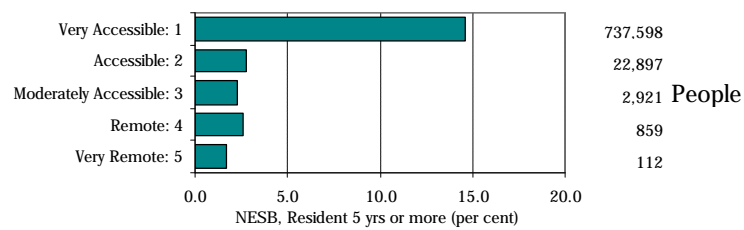
as a percentage of the total population in each Statistical local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



This graph of the proportional distribution of the population born in predominantly non-English speaking countries and resident in Australia for five years or more is almost the reverse of that for the Indigenous population (see above). The highest proportion is in the Very Accessible category (14.6 per cent of the population) and the lowest in the Very Remote category (1.7 per cent), with the proportions in the last four ARIA categories all being similar. It is unlike most other variables discussed so far, in that the highest proportion is in the category with the largest numbers.

Source: Calculated on ARIA classification, DHAC

National Social Health Atlas Project, 1999

People born in predominantly non-English speaking countries and resident in Australia for less than five years, 1996

Capital city comparison

For migrants arriving from non-English speaking countries, the initial years of settlement are the most difficult. The settlement process is often further exacerbated by limited English proficiency. For these migrants, obtaining employment may be difficult, type of employment may be restricted, and income levels may be low. In this context, the largest capital cities hold wider prospects for employment and they also have the most culturally diverse populations. **Sydney** is the major initial destination for migrants from predominantly non-English speaking countries, with 138,009 people (3.7 per cent of its population) having arrived in Australia in the previous five years (**Table 3.25**). **Melbourne** was the second largest destination, attracting 88,673 people in this population group, 2.8 per cent of its population at the 1996 Census.

The proportion of recent immigrants in Australia's capital cities increased slightly from 2.5 per cent in 1986 to 2.7 per cent in 1996. This was largely due to the growth in numbers in **Brisbane**, **Sydney** and **Melbourne**. Although the proportion remained the same, there was an increase in absolute terms in **Perth** over the same period of time. **Darwin**, **Canberra** and **Adelaide** experienced a decline in both proportions and numbers in this population group.

Table 3.25: People born in predominantly non-English speaking countries and resident in Australia for less than five years, capital cities

	<i>Per cent</i>								
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	3.7	2.8	1.7	1.4	2.3	0.7	1.7	1.9	2.7
1986	3.1	2.6	1.4	1.6	2.3	0.7	3.1	2.2	2.5

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

The number of people arriving in **Sydney** in the previous five years from predominantly non-English speaking countries increased by one third (33.2 per cent) over the ten years from 1986 to 1996, from 103,607 (3.1 per cent of the population) to 138,009 (3.7 per cent). This trend confirms that **Sydney** is the major initial destination for people entering Australia.

The distribution of recently arrived migrants from predominantly non-English speaking countries (those who have arrived in the five years prior to the Census, **Map 3.20**) is similar to the pattern evident for those immigrants who have been resident for more than five years (**Map 3.18**). One obvious difference is that the concentrations are significantly reduced because of a large reduction in the numbers of migrants entering Australia in recent years.

Auburn, with 5,264 people (10.3 per cent of the population), had the highest percentage for any **Sydney** SLA of recently arrived people from non-English speaking countries. Sydney (2,295 people), Ashfield (3,242), Fairfield (14,028) and Canterbury (10,069) also had relatively high proportions, with 9.2 per cent, 8.1 per cent, 7.7 per cent and 7.6 per cent respectively.

The SLAs of Fairfield and Canterbury had the most new residents from predominantly non-English speaking countries of any Australian SLA, with 14,028 and 10,069 people respectively. On the other hand, Wollondilly had just 88 people, with Camden and Hunter's Hill recording 149 and 169 people respectively.

A ring of outer SLAs – Wollondilly (88 people), Blue Mountains (282), Hawkesbury (336), Gosford (553) and Wyong (301) – all recorded proportions below 1.0 per cent.

As would be expected, there were correlations of substantial significance with the other variables for people born in predominantly non-English speaking countries, of 0.80 with those who reported poor proficiency in English and of 0.78 with those resident for five years or more. There was a correlation of meaningful significance with the variable for dwellings with no motor vehicle (0.61), and weaker correlations with most of the indicators of socioeconomic disadvantage, including unemployed people (0.47) and low income families (0.37). These results, together with the weak inverse correlation with the IRSD (-0.37), suggest an association at the SLA level between people in this population group and socioeconomic disadvantage.

Newcastle

A very low 0.5 per cent of the population of **Newcastle** were from non-English speaking countries and had arrived between 1991 and 1996.

Cessnock (50 people), Maitland (111), Port Stephens (114), and Lake Macquarie (450) had proportions that were below the average ranging between 0.1 per cent and 0.3 per cent. The highest proportion was in the SLA of Newcastle (1,644 people), with 1.2 per cent of its population in this category.

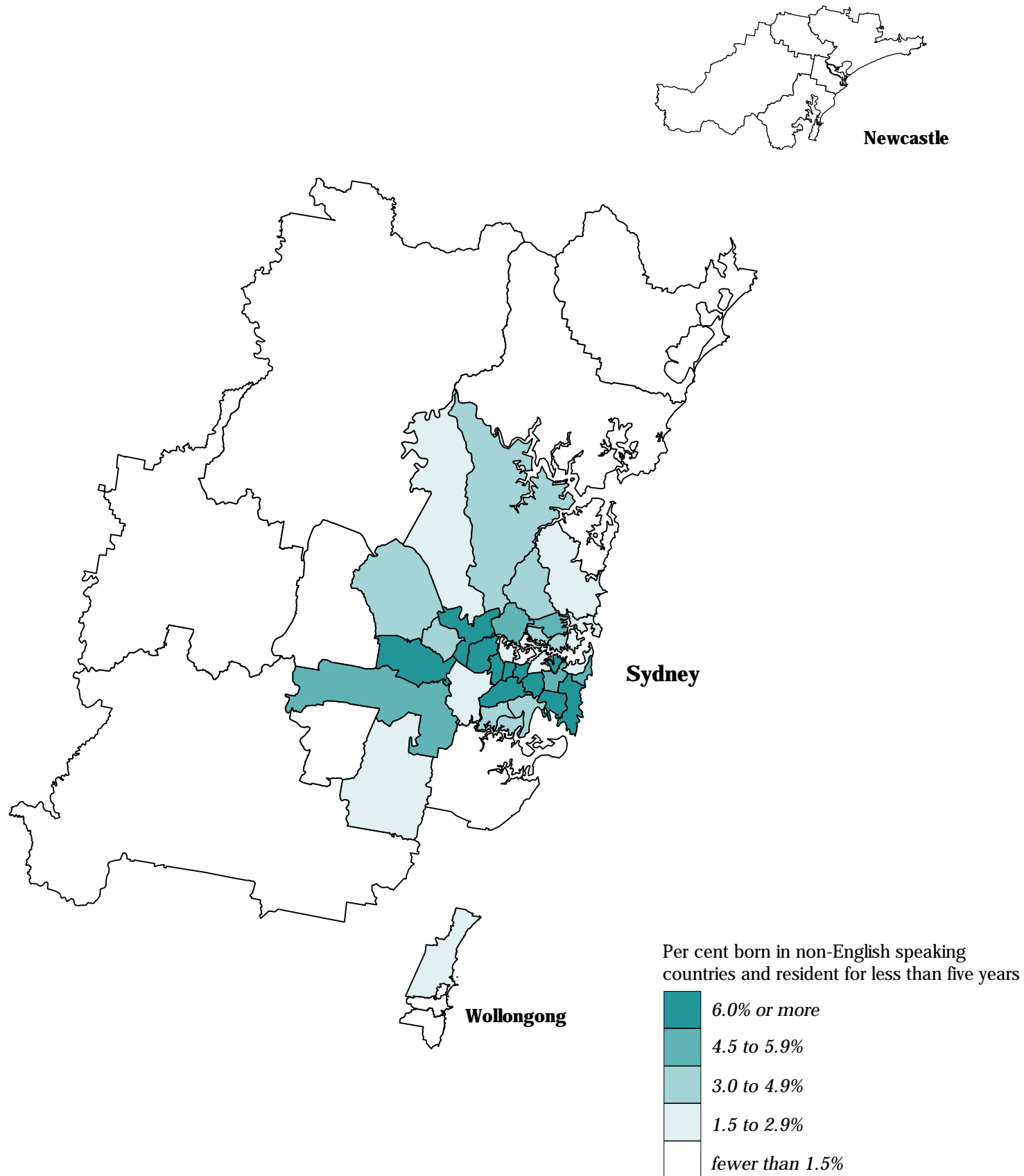
Wollongong

At the 1996 Census, 1.5 per cent of **Wollongong's** population (3,710 people) had recently emigrated from predominantly non-English speaking countries. Kiama (38 people) and Shellharbour (234) had lower proportions, with 0.2 per cent and 0.4 per cent respectively, with the City of Wollongong (3,438 people), recording 1.9 per cent of its population in this category.

Map 3.20

People born in predominantly non-English speaking countries and resident in Australia for less than five years, Sydney, Newcastle and Wollongong, 1996

as a percentage of the total population in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

People born in predominantly non-English speaking countries and resident in Australia for less than five years, 1996

State/Territory comparison

Recently arrived migrants from predominantly non-English speaking countries have a strong preference for capital city residence, as is clear from **Table 3.26** (see comments on previous text page). The proportion of the population in the non-metropolitan areas of all of the States and the Northern Territory has declined between the periods shown.

The slight increase in the proportion of people born in predominantly non-English speaking countries, from 1.7 to 1.9 per cent of the population of Australia between 1986 and 1996, was due mainly to increases in New South Wales, Victoria and Queensland. South Australia and the Northern Territory experienced a decline in both numbers and proportions over this ten year period.

Table 3.26: People born in predominantly non-English speaking countries and resident in Australia for less than five years, State/Territory

	<i>Per cent</i>								
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	3.7	2.8	1.7	1.4	2.3	0.7	1.7	1.9 ²	2.7
Other major urban centres ³	0.9	1.0	1.2	..	..	..	..	..	1.0
Rest of State/Territory	0.3	0.3	0.5	0.2	0.4	0.4	0.5	.. ⁴	0.4
Whole of State/Territory	2.5	2.1	1.2	1.0	1.8	0.5	1.0	2.0	1.9
1986									
Rest of State/Territory	0.4	0.4	0.6	0.4	0.8	0.4	1.0	.. ⁴	0.5

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

At the 1996 Census, 5,407 people in the non-metropolitan areas of New South Wales were from predominantly non-English speaking countries and had been resident in Australia for less than five years. This figure was equivalent to 0.3 per cent of the population.

The highest proportions of this population group were in Armidale (3.0 per cent), to the north of Sydney, and Griffith (1.9 per cent), in central New South Wales (**Map 3.21**). These towns were the only two SLAs in the non-metropolitan areas of New South Wales with proportions of more than 1.0 per cent.

A total of 25 SLAs had no people from a non-English speaking country who had arrived within the last five years, while another 45 SLAs had proportions of just 0.1 per cent.

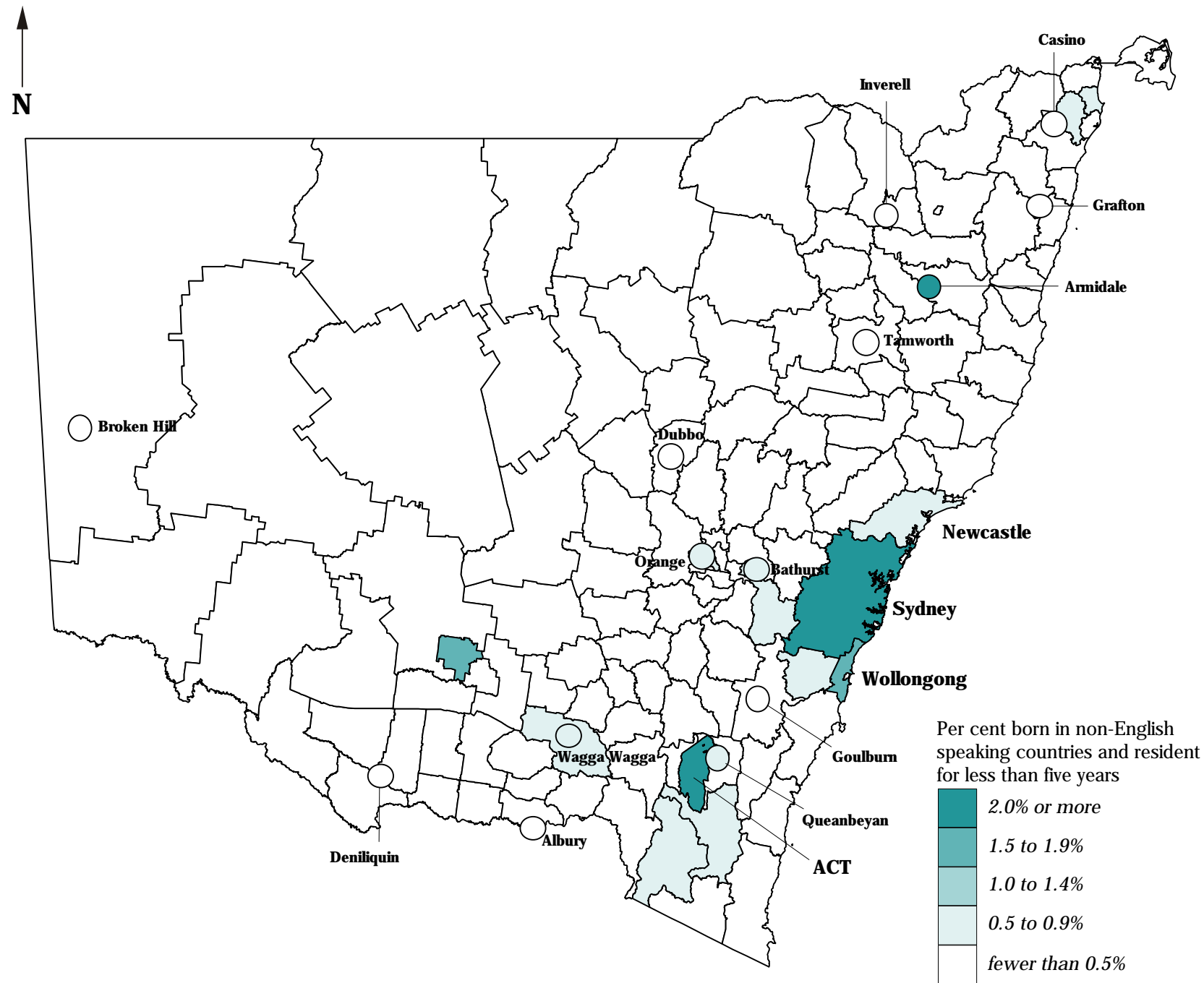
The largest numbers of recently arrived residents from predominantly non-English speaking countries were in Armidale (635), with comparatively high numbers of people in this category also located in Wagga Wagga and Griffith, with 479 and 408 respectively.

There was no consistent evidence in the correlation analysis of an association at the SLA level between high proportions of people in this population group and socioeconomic status. There were, however, correlations of meaningful significance at the SLA level with the variables for people born in predominantly non-English speaking countries and resident for five years or more (0.52) and with people who reported poor proficiency in English (0.56).

Map 3.21

People born in predominantly non-English speaking countries and resident in Australia for less than five years, New South Wales, 1996

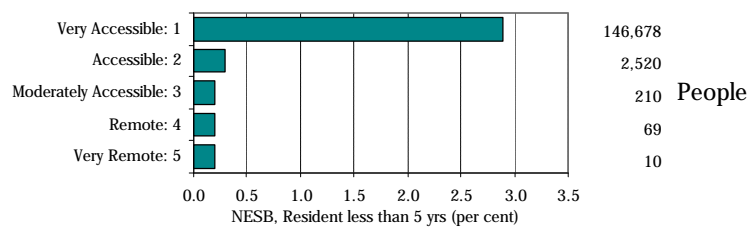
as a percentage of the total population in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



This graph of the distribution of the population born in predominantly non-English speaking countries and resident in Australia for less than five years has the same profile as that for longer term resident migrants (see above). However, the percentages are around one fifth of those in the earlier graph, as are the absolute numbers for the Very Accessible category. As was the case for longer term resident migrants, the highest proportions are also in categories with the largest numbers.

Source: Calculated on ARIA classification, DHAC

National Social Health Atlas Project, 1999

Proficiency in English, 1996

Capital city comparison

For migrants from non-English speaking countries, the rate at which they adapt to live in the host country is directly related to the rate at which they achieve proficiency in English. Their level of proficiency in English has profound implications for the ease with which they are able to access labour markets, develop social networks, become aware of and utilise services, and participate in many aspects of Australian society. From a health service provision viewpoint, the location of migrants with limited English proficiency may indicate areas within the city where different approaches might be taken to ensure that these residents are aware of the health services available. In the provision of health services for women and older people, these distributions are perhaps even more relevant, as many migrants from European countries who arrived in Australia in the 1950s and 1960s have not developed English language skills (especially females), or have returned to using the language of their birthplace as they have aged (both females and males).

Poor proficiency in English of people aged five years and over and born overseas in predominantly non-English speaking countries was determined when people within this category reported speaking English 'not well' or 'not at all' (**Table 3.27**). The percentages shown are calculated on the total population aged five years and over, not just those born overseas. **Melbourne** and **Sydney** have the highest proportions of migrants with poor proficiency in English at 5.0 and 4.9 per cent respectively. These high levels are due largely to the fact that **Melbourne** and **Sydney** have been the principal destinations for migrants from South-East Asia during the last two decades, following the major influx of people from European countries in the 1950s and 1960s. However, since the 1986 Census, there has been a trend across most Australian cities towards increasing numbers of people who are not fluent in English. While proportions may have fluctuated, numbers increased in most cities. **Darwin** was the only capital city to record a fall in both proportions and numbers.

Table 3.27: Poor proficiency in English of people aged five years and over and born in predominantly non-English speaking countries, capital cities
Per cent

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	4.9	5.0	1.4	2.5	2.1	0.6	2.0	1.7	3.7
1986	4.0	4.8	1.2	2.7	2.1	0.6	2.6	1.9	3.4

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

Between 1986 and 1991 there was a marked increase in the number of people in **Sydney** who reported poor proficiency in English. The increase was from 124,207 people (4.0 per cent of the population aged five years and over) in 1986, to 160,235 (4.9 per cent) in 1991. This figure increased to 168,970 people at the 1996 Census, remaining at 4.9 per cent.

High proportions of people reporting poor proficiency in English lived in **Sydney's** inner areas (**Map 3.22**). Marrickville (12.6 per cent), Canterbury (14.1 per cent) and Auburn (15.9 per cent) had especially high proportions. However, the highest proportion was recorded in Fairfield, where 18.1 per cent of the population (over 30,000 people) reported poor proficiency in English. Other SLAs to record well above average rates included Bankstown, Rockdale, Strathfield, Botany, Burwood and Ashfield, where proportions were all above 7.5 per cent.

A high proficiency in English was evident in the majority of outer SLAs, with **Sydney's** five most outer SLAs recording proportions no higher than 0.5 per cent: these were Wyong, Blue Mountains and Gosford (all 0.3 per cent), and Hawkesbury and Wollondilly (both 0.5 per cent). SLAs situated closer to the Harbour and also with high rates of English proficiency included Mosman, Lane Cove and North Sydney.

The largest numbers of people reporting poor proficiency in English were in Fairfield (30,197 people), Canterbury (17,142 people) and Bankstown (11,212 people).

As would be expected, there were correlations of substantial significance at the SLA level with the variables for people born in

non-English speaking countries (0.80 for those who had been resident for less than five years, and 0.95 when resident for five years or more). There was also a correlation of substantial significance with unemployed people (0.71), and correlations of meaningful significance with unskilled and semi-skilled workers (0.59) and low income families (0.55). These results, together with the inverse correlation with the IRSD (-0.61), indicate the existence of an association at the SLA level between high proportions of people reporting poor proficiency in English and socioeconomic disadvantage.

Newcastle

In 1986 2,564 people in **Newcastle** reported poor proficiency in English, 0.7 per cent of the population aged five years and over. These figures remained reasonably stable through to 1991 where the same proportion was recorded despite an increase in the population to 2,722. By 1996, the number had declined to 2,545 people and 0.6 per cent. Proportions ranged from 0.2 per cent in Port Stephens to 1.3 per cent in the City of Newcastle, which also had the largest numbers (1,674 people).

Wollongong

The number of people in **Wollongong** who reported poor proficiency in English increased from 7,153 in 1986 to 7,440 in 1991, before declining to 6,609 (2.9 per cent of the population aged five years and over) in 1996. The majority of these people (5,718; 3.5 per cent) lived in the City of Wollongong. Shellharbour and Kiama had proportions of 1.8 per cent and 0.3 per cent, respectively.

Map 3.22

Proficiency in English of people aged five years and over and born in a non-English speaking country, Sydney, Newcastle and Wollongong, 1996

as a percentage of the total population aged five years and over in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Proficiency in English, 1996

State/Territory comparison

Poor proficiency in English of people aged five years and over and born overseas in predominantly non-English speaking countries was determined when people within this category reported speaking English 'not well' or 'not at all'. Migration research has consistently demonstrated a propensity for migrants to locate in the major cities of the States and Territories, especially the capital cities. **Table 3.28** shows that this tendency is evident, possibly more so, for migrants reporting a poor proficiency in English. Outside of **Sydney** (and, to a lesser extent, **Newcastle** and **Wollongong**), the incidence of migrants with poor English speaking skills is very low, a characteristic shared by each of the States. For these migrants to move away from the capital city and seek employment and residence elsewhere requires an ability to interact with the wider community. Poor proficiency in English restricts this capacity. Consequently, until English proficiency improves, they generally remain restricted to areas where they have the security of their language community, including longer term resident migrants with better English skills who can represent them in their interactions with the labour market, schools, health services and government authorities.

There has been an increase (at the whole of Australia level) in both the proportions and numbers of people reporting poor proficiency in English in the ten years from 1986 (when 2.4 per cent of Australia's population aged over five years did not speak English fluently) to 1996 (2.6 per cent). This increase took place in the capital cities as there was a slight decline in the *Rest of State/Territory* areas.

Table 3.28: Poor proficiency in English of people aged five years and over and born in predominantly non-English speaking countries, State/Territory
Per cent

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	4.9	5.0	1.4	2.5	2.1	0.6	2.0	1.7 ²	3.7
Other major urban centres ³	1.4	2.1	0.8	..	..	..	..	..	1.2
Rest of State/Territory	0.3	0.4	0.4	0.4	0.3	0.2	0.2	— ⁴	0.4
Whole of State/Territory	3.3	3.7	0.9	2.0	1.6	0.3	1.0	1.7	2.6
1986									
Rest of State/Territory	0.4	0.6	0.5	0.6	0.7	0.2	0.4	— ⁴	0.5

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

Over the ten year period from 1986, there was an overall decline in the number of people in the non-metropolitan areas of New South Wales who reported poor proficiency in English. At the 1986 Census, 5,207 people had low levels of English proficiency (0.4 per cent of the population aged five years and over) but by 1991, this had risen to 5,505 (the proportion remaining at 0.4 per cent) before falling to the 1996 level of 4,941 (0.3 per cent).

Map 3.23 shows that the highest rates were those in the SLAs of Griffith (4.1 per cent), Queanbeyan (2.6 per cent), Balranald (1.1 per cent) and Leeton (1.1 per cent). These four SLAs were the only ones to record rates in excess of 1.0 per cent. The next highest proportions of poor English proficiency were in Cabonne [Part B], Walgett, Armidale, Cooma-Monaro, Wentworth, Rylstone and Wingecarribee, which all had between 0.5 per cent and 1.0 per cent.

Given that the highest proportions are still very low, it is no surprise that several SLAs recorded zero per cent for this variable. Coolah, Gilgandra, Guyra, Lockhart and Warren were SLAs with populations in excess of 3,000 people, which recorded 0.0 per cent for this variable.

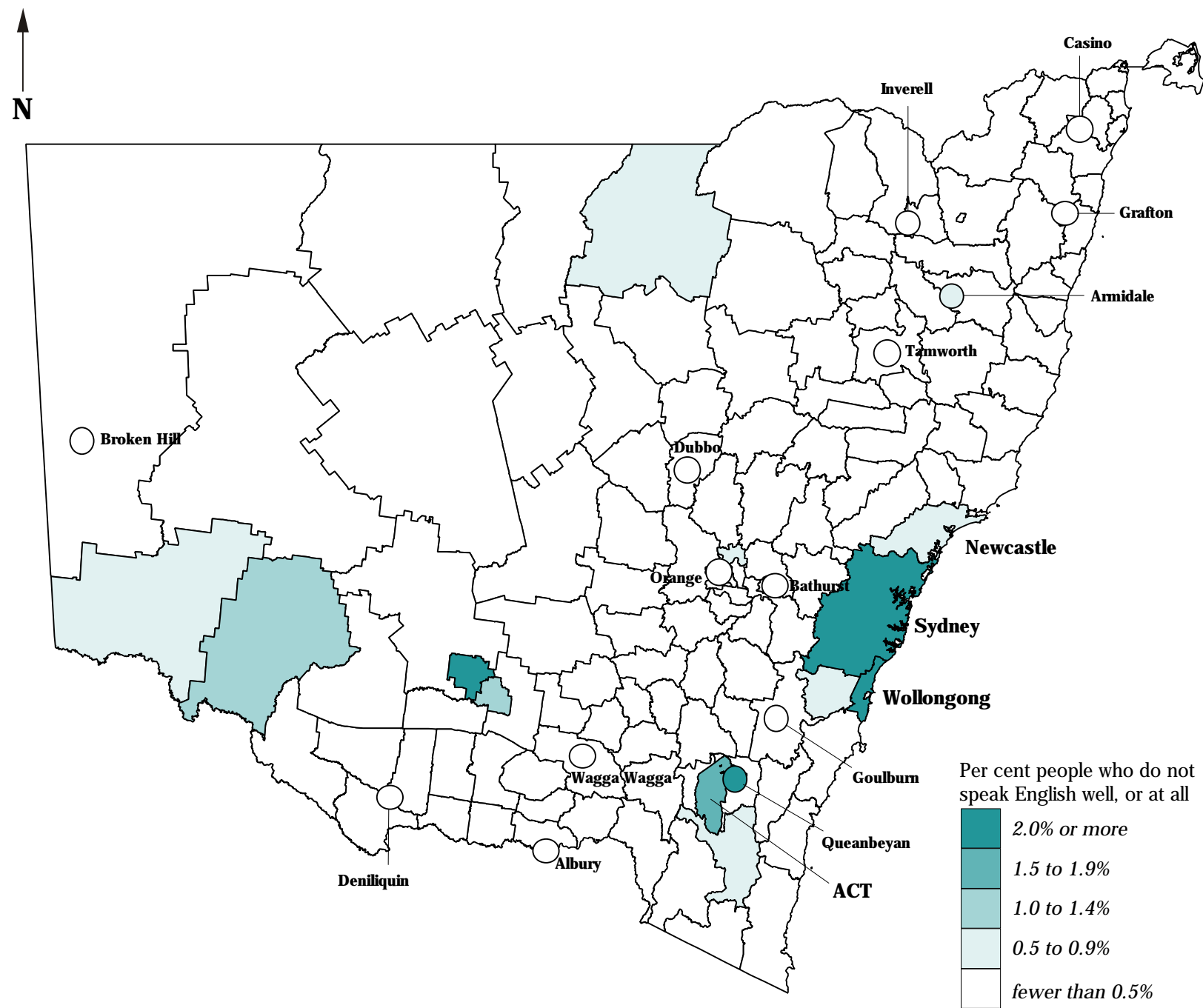
The SLAs with the largest number of people with poor proficiency in English were Griffith (805 people) and Queanbeyan (641 people).

There was no consistent evidence in the correlation analysis of an association at the SLA level between high proportions of people in this population group and socioeconomic status. As for **Sydney**, there was, however, an association with the variables for people born in predominantly non-English speaking countries: of substantial significance with the variable for those who had been resident for five years or more (0.81) and of meaningful significance with the variable for recently arrived migrants from non-English speaking countries (0.56).

Map 3.23

Proficiency in English of people aged five years and over and born in a non-English speaking country, New South Wales, 1996

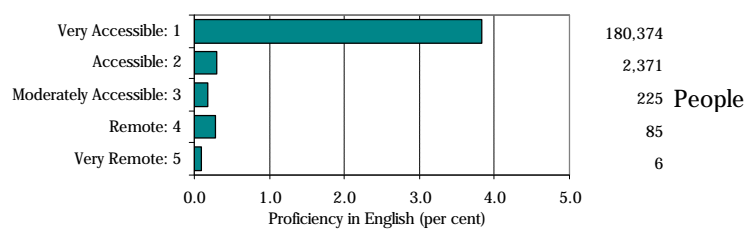
as a percentage of the total population aged five years and over in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



Not surprisingly, the proficiency in English of the population has a distribution that is markedly similar to that for people born in predominantly non-English speaking countries and now resident in Australia. The highest proportion is in the Very Accessible category (3.8 per cent of the population) and the lowest in the Very Remote category (0.1 per cent). Again, the highest proportion of people reporting poor proficiency in English is also in the category with the largest number of people.

Source: Calculated on ARIA classification, DHAC

National Social Health Atlas Project, 1999

Dwellings rented from the State housing authority, 1996

Capital city comparison

The Census collects data on dwellings rented from the New South Wales Department of Housing: in this analysis, rented dwellings are expressed as a proportion of all occupied private dwellings. (Note: Private dwellings exclude special dwellings such as hotels and boarding houses.) The distribution of housing authority dwellings is an indicator of the distribution of single parents, unemployed, aged, disabled and Indigenous people, as these groups are given waiting list priority for public housing which has become increasingly scarce since the 1970s.

The proportion of the dwelling stock rented from the State housing authority is just above the national average for both **Sydney** and New South Wales (**Table 3.29**). In comparison, **Darwin**, **Adelaide** and **Canberra** have above average proportions of dwelling stock rented from State government housing authorities. Although the proportion of dwellings in this category increased only slightly, from 5.2 per cent (at the 1986 Census) to 5.5 per cent (at the 1996 Census) of all dwellings in **Sydney**, the 1996 figure represented an additional 13,766 dwellings. The largest relative increase in the number of State housing authority dwellings in the ten years from 1986 to 1996 was recorded in **Brisbane**, and the largest decreases were recorded in **Darwin** and **Canberra**.

Table 3.29: Dwellings rented from the State housing authority, capital cities
Per cent

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	5.5	2.9	4.8	9.7	4.6	8.3	15.8	9.7	5.3
1986	5.2	2.9	3.9	10.5	5.3	10.0	21.9	11.5	5.3

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

To a large extent, the pattern of the distribution of housing authority rented dwellings in **Sydney** is the same in 1996 as it was in 1986. Some of the highest concentrations in 1986 still existed in 1996, with Campbelltown, Blacktown and Liverpool all having in excess of 11.5 per cent of the dwelling stock in this category (**Map 3.24**). Campbelltown and Blacktown had the largest number of these dwellings in both 1986 and 1996. The variables for children aged 0 to 4 years, unemployment and Indigenous Australians are strongly associated with high concentrations of housing authority rented dwellings in Campbelltown, Blacktown and Liverpool.

However, the 1996 Census figures show that, unlike in 1986, certain inner city SLAs had the highest proportions of housing authority rented dwellings, with South Sydney (15.2 per cent) and Sydney (11.1 per cent) signifying some change in the spatial distribution for this variable. The high percentage in Sydney represents a relatively small number of dwellings (697). South Sydney in 1996 had over 5,500 of these dwellings, giving it the fourth largest numbers for this variable.

The lowest percentages for this variable were to the north and north-west of the harbour, and included the SLAs of Pittwater (0.0 per cent), Ku-ring-gai (0.1 per cent), Mosman (0.6 per cent) and Baulkham Hills (0.8 per cent). Several inner city SLAs also had less than 2.0 per cent of their dwelling stock in housing authority rented dwellings, and the outer suburbs of Hawkesbury, Blue Mountains, Wollondilly, Wyong and Gosford all had levels below the **Sydney** average.

There were correlations with a number of indicators of socioeconomic disadvantage at the SLA level, including single parent families (0.74), Indigenous Australians (0.66) and low income families (0.54). The inverse correlation of meaningful significance with the IRSD (-0.62) also indicates a positive association between the distribution of these dwellings and areas comprising the most disadvantaged populations. Not surprisingly, an inverse correlation was also recorded with the variable for female labour force participation (-0.54).

Newcastle

In 1996, **Newcastle** had 10,488 dwellings rented from the State housing authority. This represented 6.3 per cent of all occupied private dwellings. The two SLAs with the largest populations, Lake Macquarie and Newcastle, had near average proportions with 6.3 and 6.9 per cent respectively.

Whilst 1996 percentages for this variable were similar to those of 1986, the number of housing authority rented dwellings rose from 8,636 to 10,560 in this ten year period.

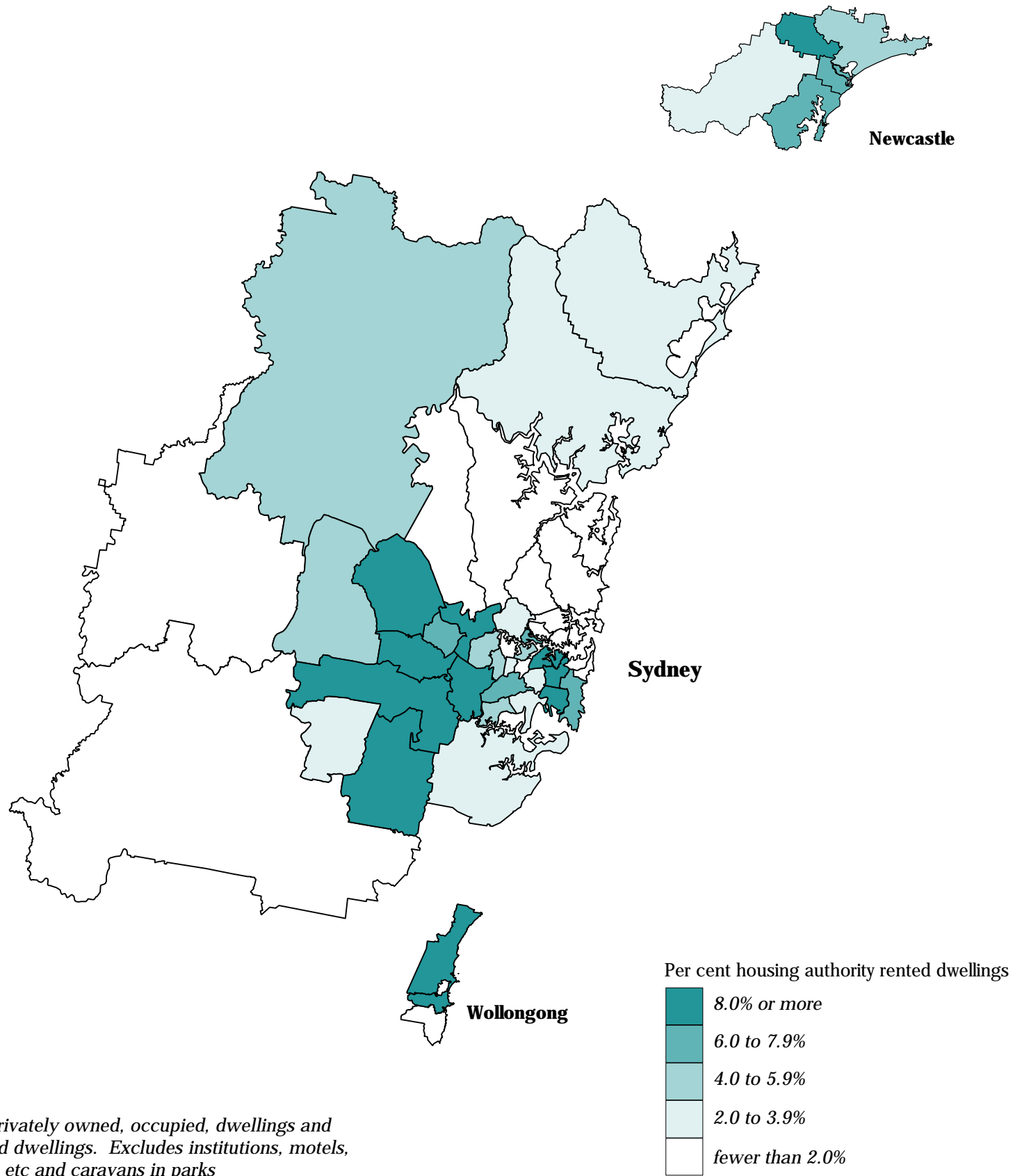
Wollongong

Wollongong had 9.1 per cent of its dwellings in this category in 1996, well above **Sydney's** 5.5 per cent. The majority of these were in the City of Wollongong, where 6,381 of **Wollongong's** 8,175 housing authority rented dwellings were situated. The 1996 figure was up on that recorded in 1986, when there were 7,368 dwellings in this category.

Map 3.24

Dwellings rented from the State housing authority, Sydney, Newcastle and Wollongong, 1996

as a percentage of all occupied private dwellings* in each Statistical Local Area



*Includes all privately owned, occupied, dwellings and private rented dwellings. Excludes institutions, motels, guest houses etc and caravans in parks

Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Dwellings rented from the State housing authority, 1996

State/Territory comparison

The Census collects data on dwellings rented from the New South Wales Department of Housing: in this analysis, rented dwellings are expressed as a proportion of all occupied private dwellings. (Note: Private dwellings exclude special dwellings such as hotels and boarding houses.) In 1996, the Northern Territory had the highest proportion of housing authority rented dwellings outside the capital cities (**Table 3.30**). The lowest levels were recorded in the non-metropolitan areas of Queensland and Victoria. With the exception of Queensland, these rental dwellings declined as a proportion of all occupied private dwellings in all non-metropolitan areas between 1986 and 1996.

The non-metropolitan areas of New South Wales had just below the national average proportion of these dwellings (4.3 per cent), well below the level in the non-metropolitan areas of Northern Territory (10.5 per cent) and South Australia (9.0 per cent). Although the number of public rented dwellings rose from 22,914 in 1986 to 25,377 in 1996, their proportion of all occupied private dwellings in these areas in New South Wales declined from 4.9 per cent to 4.3 per cent. This indicates that the stock of public rental dwellings is not keeping pace with the total stock of dwellings.

Table 3.30: Dwellings rented from the State housing authority, State/Territory
Per cent

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	5.5	2.9	4.8	9.7	4.6	8.3	15.8	9.7 ²	5.3
Other major urban centres ³	7.3	5.0	3.3	..	..	..	..	..	5.5
Rest of State/Territory	4.3	3.9	2.9	9.0	5.7	6.2	10.5	— ⁴	4.6
Whole of State/Territory	5.4	3.2	3.8	9.5	4.9	7.1	13.0	10.1	5.1
1986									
Rest of State/Territory	4.9	4.5	1.7	12.4	7.5	6.9	13.4	— ⁴	5.1

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

Due to the low proportion of dwellings rented from the housing authority in the non-metropolitan areas of New South Wales, the majority of SLAs in **Map 3.25** are mapped in the lowest category (below 5 per cent), with the remaining SLAs all with proportions below 10 per cent.

The map shows the spatial distribution of dwellings rented from the housing authority to be clustered, with groups of SLAs sharing similar percentages. This is most evident throughout north and central New South Wales, where many adjoining SLAs had higher percentages. Groupings of SLAs with lower percentages were evident throughout the west, and along much of the south and east coasts.

Most of the larger urban centres in New South Wales had much higher percentages than the *Rest of State* average, with the highest in Brewarrina and Orange, with 8.4 per cent and 8.9 per cent respectively, and Goulburn, with 9.3 per cent.

Several SLAs had proportions well below the *Rest of State* average of 4.4 per cent, with 14 SLAs recording zero per cent of dwellings rented from the housing authority.

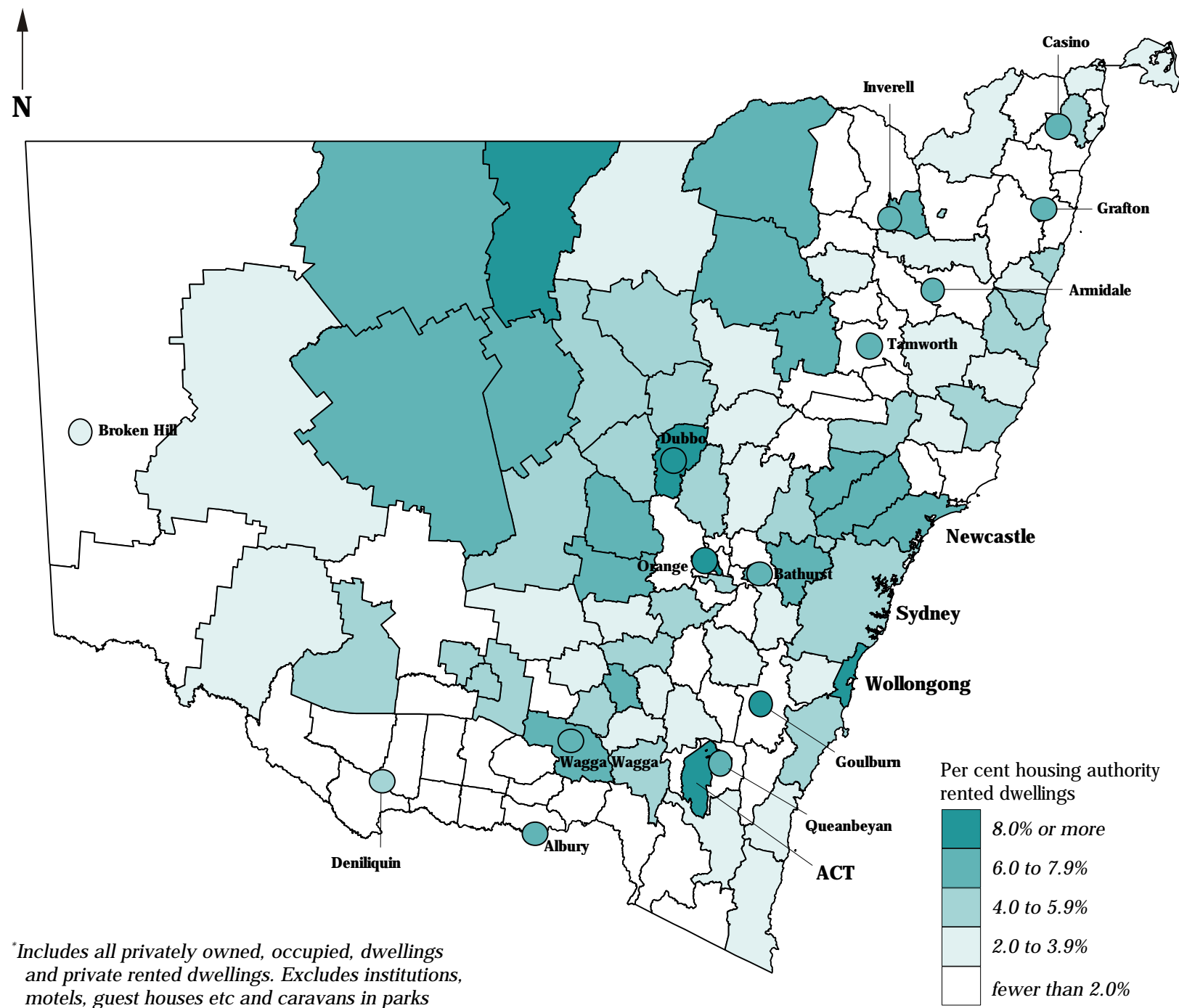
Many SLAs with low percentages of housing authority rented dwellings also had low percentages for the variables of low income families, unemployed and Indigenous people. The SLAs of Cabonne [Part A and B], Evans [Part A and B] and Dumaresq are examples.

The only correlation of substantial significance for this variable was with the variable for dwellings with no motor vehicle (0.74). However a correlation of meaningful significance was recorded with the variable for single parent families (0.66), and an inverse correlation of meaningful significance with managers and administrators, and professionals (-0.62). Overall, there appears to be an association at the SLA level between high proportions of housing authority rented dwellings and socioeconomic disadvantage.

Map 3.25

Dwellings rented from the State housing authority, New South Wales, 1996

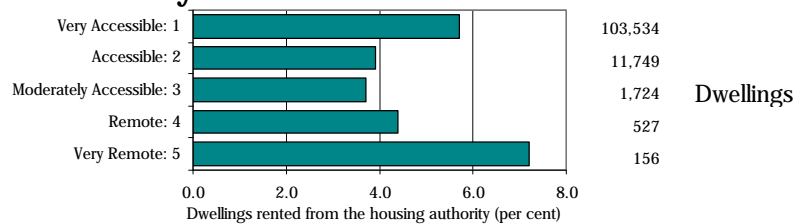
as a percentage of all occupied private dwellings* in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



The majority (90.9 per cent) of dwellings rented from the State housing authority are in the Very Accessible category, where they represent 5.7 per cent of all occupied private dwellings. However, the highest proportion of these dwellings is in the Very Remote category (7.2 per cent), with proportions of around 4 per cent in the middle ARIA categories.

Source: Calculated on ARIA classification, DHAC National Social Health Atlas Project, 1999

Dwellings with no motor vehicle, 1996

Capital city comparison

People living in households without cars face many disadvantages in gaining access to jobs, services and recreation, especially if they are in low-density outer suburbia. In 1996, 15.4 per cent of all occupied private dwellings in **Sydney** had no motor vehicle parked or garaged overnight (**Table 3.31**), the highest percentage for the capital cities. The lowest percentage was in **Canberra**, with 8.8 per cent.

Comparisons with 1986 data show that, on average, there has been a decline in the proportion of dwellings without motor vehicles in the capital cities in the ten years to 1996. However, although the *All capitals* figure fell from 13.8 per cent in 1986 to 12.5 per cent in 1996, and a decrease was recorded for all capital cities except **Darwin** and **Canberra** (increases of 1.0 and 1.1 percentage points respectively), the absolute number of dwellings with no motor vehicle increased.

Table 3.31: Dwellings with no motor vehicle, capital cities
Per cent

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	15.4	11.2	11.6	12.5	9.5	12.2	10.2	8.8	12.5
1986	16.8	12.7	12.9	13.2	10.6	13.4	9.2	7.7	13.8

¹Includes Queanbeyan (C)

Source: ABS special data services

Sydney

As shown in **Map 3.26**, the majority of **Sydney's** inner suburbs had high proportions of dwellings with no motor vehicle, particularly on the south side of the harbour. The SLAs of Sydney (?? per cent) and South Sydney (41.6 per cent, 15,335 dwellings) had the highest proportions of dwellings without a motor vehicle on Census night in 1996.

Many other inner suburbs had proportions in excess of 20 per cent for this variable, including Randwick, Waverley and Burwood to the south of the harbour, and North Sydney to the north. These inner suburban areas are generally better served by public transport and are frequently in close proximity to other services.

Low percentages were more common in middle and outer suburbs, where the need for private transport is increased due to less adequate public transport systems. Of these middle and outer SLAs, there were regions in which percentages were just below average, and regions where percentages were well below average.

A band of SLAs spreading west from Sydney Harbour, including Blacktown, Penrith, Liverpool and Blue Mountains, all had proportions of dwellings with no motor vehicle of between 10 and 15 per cent. Similarly, a band of SLAs stretching north-west from Sydney Harbour represents a region in which percentages for this variable are extremely low. This region includes the SLAs of Ku-ring-gai, Hornsby, Baulkham Hills and Hawkesbury. These patterns are also evident in maps of other variables, most notably low income families.

More than 10,000 dwellings with a motor vehicle were recorded in the SLAs of South Sydney (15,335 dwellings) and Randwick (10,778 dwellings).

There was a correlation of meaningful significance with the variable for people who were born in predominantly non-English speaking countries and had been resident for less than five years (0.61), indicating that this population group has low levels of access to a motor vehicle. There was an inverse correlation of meaningful significance with children aged from 0 to 4 years (-0.60), indicating that households with young children were

more likely to have cars. Although only weak, there were positive correlations with the indicators of socioeconomic disadvantage and inverse correlations with the indicators of high socioeconomic status. These results, together with the weak inverse correlation with the IRSD (-0.25), suggest the existence of an association at the SLA level between high proportions of dwellings with no motor vehicle and socioeconomic disadvantage.

Newcastle

The proportion of **Newcastle's** dwellings with no motor vehicle was 13.6 per cent in 1996, down from 14.5 per cent in 1986. This 1996 percentage represented 22,846 dwellings, almost half of which were in the SLA of Newcastle (10,553 dwellings, 19.4 per cent).

Below average percentages were recorded in Cessnock, Maitland, Lake Macquarie and Port Stevens, which all had less than 12 per cent of their respective dwellings without a motor vehicle.

Wollongong

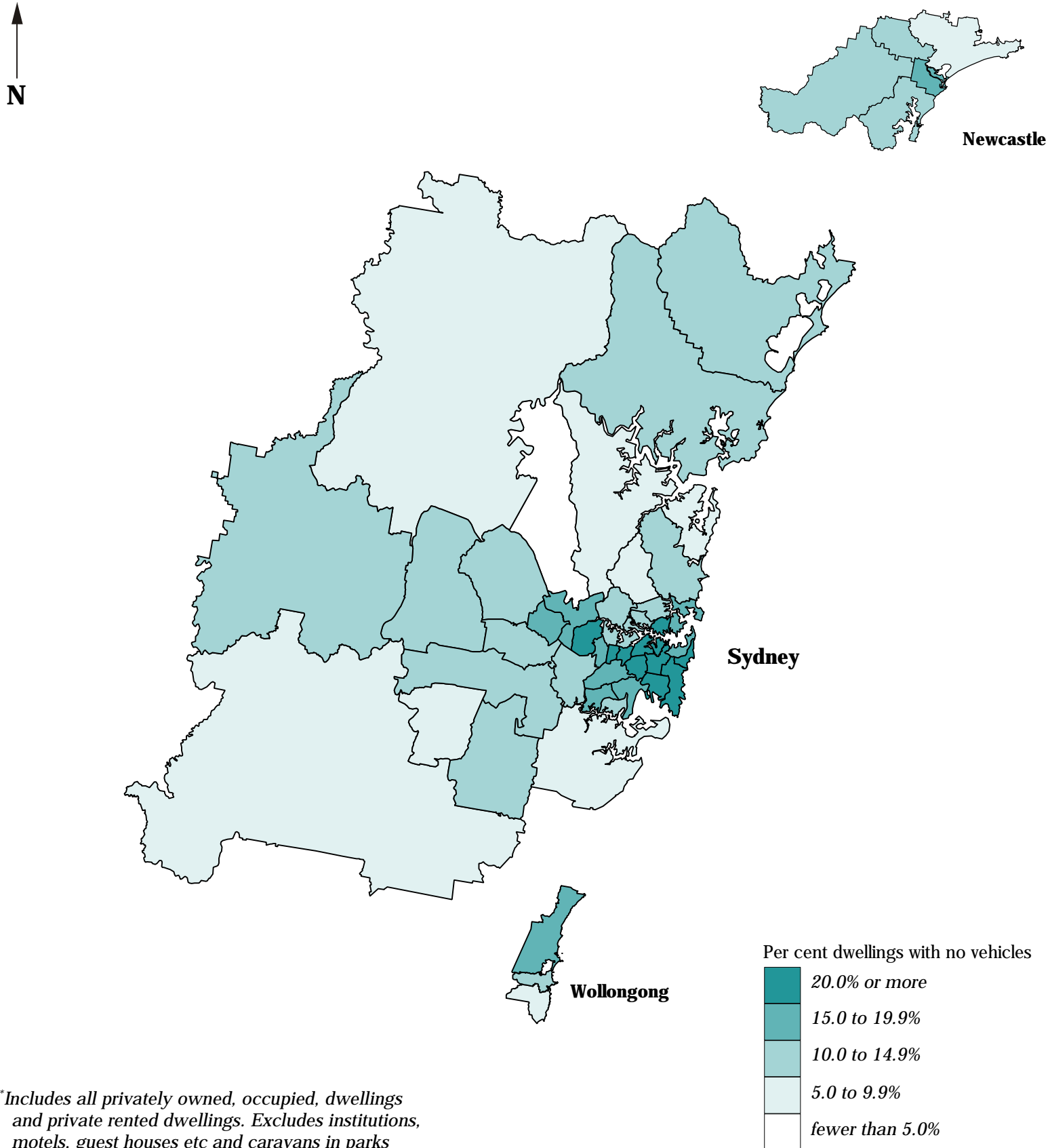
12,642 of **Wollongong's** dwellings were without motor vehicles at the time of the 1996 Census, representing 14.1 per cent of all dwellings. The 1986 figure was similar, with 13.8 per cent of dwellings without motor vehicles (10,443 dwellings).

The highest percentage was in the City of Wollongong (15.9 per cent), where more than 80 per cent of **Wollongong's** dwellings without motor vehicles were located.

Map 3.26

Dwellings with no motor vehicle, Sydney, Newcastle and Wollongong, 1996

as a percentage of all occupied private dwellings* in each Statistical Local Area



*Includes all privately owned, occupied, dwellings and private rented dwellings. Excludes institutions, motels, guest houses etc and caravans in parks

Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Dwellings with no motor vehicle, 1996

State/Territory comparison

The phenomenon of higher car ownership in non-metropolitan relative to urban areas was apparent within all the States and Territories other than the Northern Territory. Rates varied considerably across the nation, from 7.8 per cent of occupied private dwellings with no motor vehicle in Western Australia to 18.3 per cent in the Northern Territory, with most States and Territories recording between 8 and 10 per cent (**Table 3.32**). The Northern Territory had the highest percentages for both the *Rest of State* and *Whole of State/Territory* categories, ahead of New South Wales.

The average across all *Rest of State/Territory* areas was 9.6 per cent at both the 1986 and 1996 Censuses.

Table 3.32: Dwellings with no motor vehicle, State/Territory
Per cent

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	15.4	11.2	11.6	12.5	9.5	12.2	10.2	8.8 ²	12.5
Other major urban centres ³	13.8	11.7	10.8	..	..	..	..	..	12.4
Rest of State/Territory	10.7	8.3	9.8	8.2	7.8	9.5	18.3	— ⁴	9.6
Whole of State/Territory	14.0	10.5	10.7	11.4	9.0	10.7	14.4	8.5	11.6
1986									
Rest of State/Territory	10.6	8.6	9.7	8.1	8.1	10.2	19.8	— ⁴	9.6

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Rest of State

In the non-metropolitan areas of New South Wales as a whole, only 10.7 per cent of dwellings were without motor vehicles in 1996, compared with 15.4 per cent in **Sydney** (**Table 3.32**), but almost the same as in 1986.

High levels of car ownership are to be expected, given the low population densities typical of rural New South Wales and the long distances many people must travel for social interaction, to gain access to services and facilities, and in connection with employment.

As in **Sydney**, the significance of variations in levels of access to motor vehicles in country New South Wales is that dwellings without motor vehicles in a car-oriented society tend to suffer from isolation, over-dependence on others and poor access to services and facilities. These problems can clearly be acute in sparsely populated rural areas. As the numbers of aged people and the welfare-dependent population increase, health and welfare service delivery agencies will need to be increasingly aware of the specific needs of older households without access to a motor vehicle.

SLAs across most of central and northern New South Wales had average to high proportions of dwellings without a motor vehicle. **Map 3.27** shows that the SLAs with the highest proportion of dwellings without motor vehicles were in the north and north-west – in Brewarrina (21.7 per cent), Bourke (18.9 per cent), Central Darling (18.3 per cent), Walgett (15.7 per cent) and Coonamble (15.9 per cent). These SLAs also had the highest proportions of Indigenous Australians in New South Wales, and the overall correlation between these two variables is noticeable throughout the State.

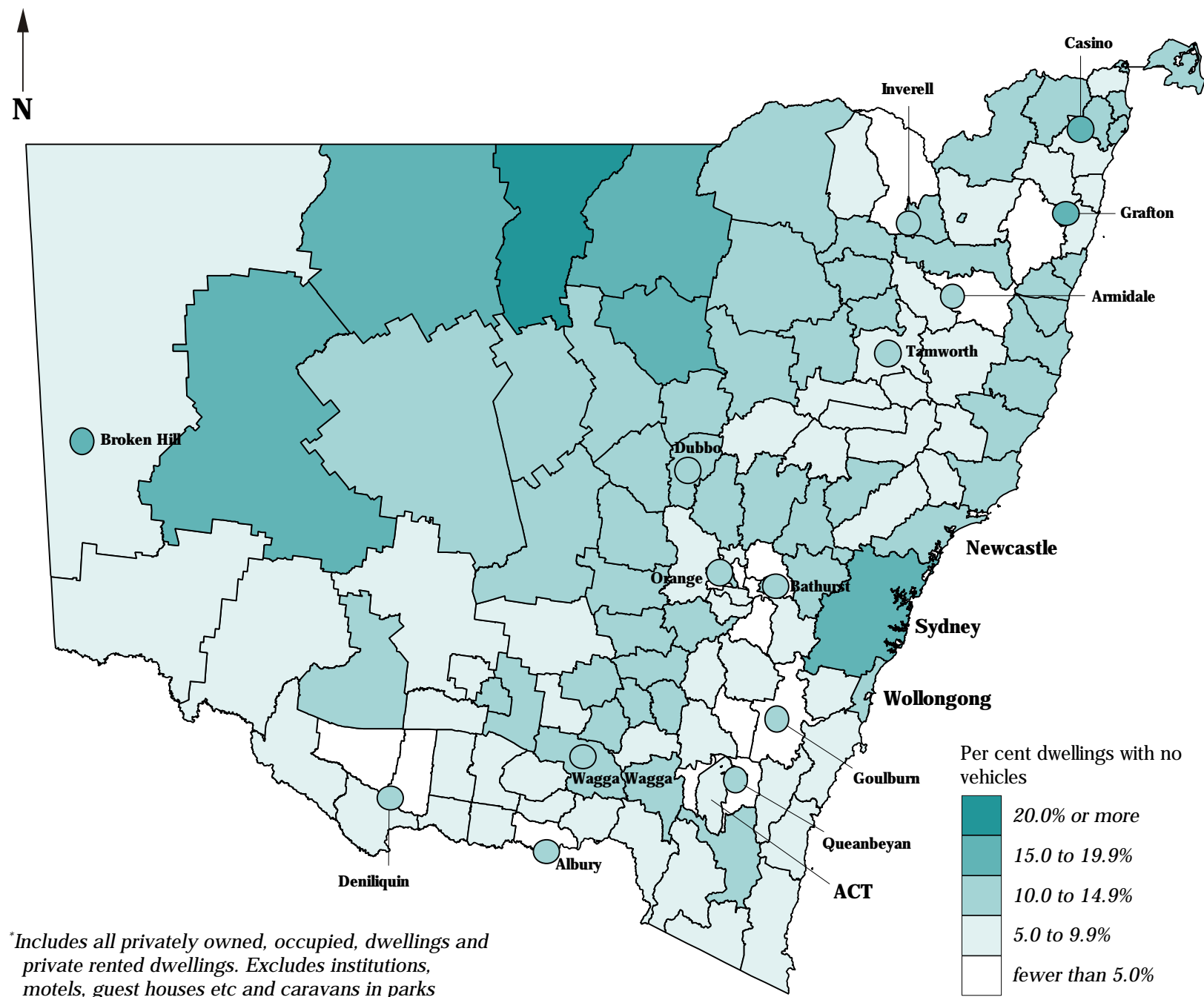
SLAs with high levels of car ownership were scattered throughout the State, with clusters along the east and south coasts spreading inland. A grouping of SLAs situated west of **Sydney**, including Cabonne [Part A and B] and Evans [Part A and B], had some of the lowest proportions of dwellings without motor vehicles, with percentages between 0.8 per cent and 5.2 per cent.

There were correlations of substantial significance at the SLA level in New South Wales with the variables for single parent families (0.74) and dwellings rented from the State housing authority (0.74), and of meaningful significance with the Indigenous population (0.59). These results, together with the inverse correlation with the IRSD (-0.72), indicate an association at the SLA level between the distribution of dwellings without a motor vehicle and socioeconomic disadvantage.

Map 3.27

Dwellings with no motor vehicle, New South Wales, 1996

as a percentage of all occupied private dwellings* in each Statistical Local Area

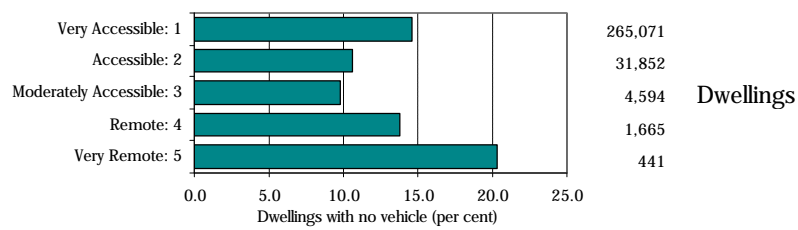


*Includes all privately owned, occupied, dwellings and private rented dwellings. Excludes institutions, motels, guest houses etc and caravans in parks

Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



The distribution of dwellings without a motor vehicle is similar to that for housing authority rented dwellings, with the highest proportion in the Very Remote (20.3 per cent) and the lowest in the Moderately Accessible (9.8 per cent) areas. Areas in the Accessible category had the next lowest proportion (10.6 per cent), with similar, middle level, proportions in the Very Accessible and Remote categories. The high proportion in the remote areas is likely to be affected by the relatively large Indigenous population in these areas.

Source: Calculated on ARIA classification, DHAC

National Social Health Atlas Project, 1999

SEIFA Index of Relative Socio-Economic Disadvantage, 1996

Capital city comparison (Australia equals 1000)

A description of the SEIFA Index of Relative Socio-Economic Disadvantage (IRSD), and comments as to its use in comparisons between Censuses, is provided on page 17. Briefly, the IRSD score measures the relative socioeconomic disadvantage of the population of an area in comparison with the average for Australia as a whole. High index scores indicate least disadvantage and low index scores indicate greater disadvantage. At the 1996 Census, **Canberra** had the highest IRSD score, of 1084, showing its population to have the least relative disadvantage, or highest socioeconomic status, and **Adelaide** the lowest, with 992, showing its population to have the most relative disadvantage, or lowest socioeconomic status (**Table 3.33**). Between 1986 and 1996, the IRSD scores in **Sydney**, **Perth** and **Darwin** all increased relative to the Australian score of 1000: scores for the other capital cities declined or remained relatively stable.

Table 3.33: SEIFA Index of Relative Socio-Economic Disadvantage, capital cities
Index values (Australia equals 1000)

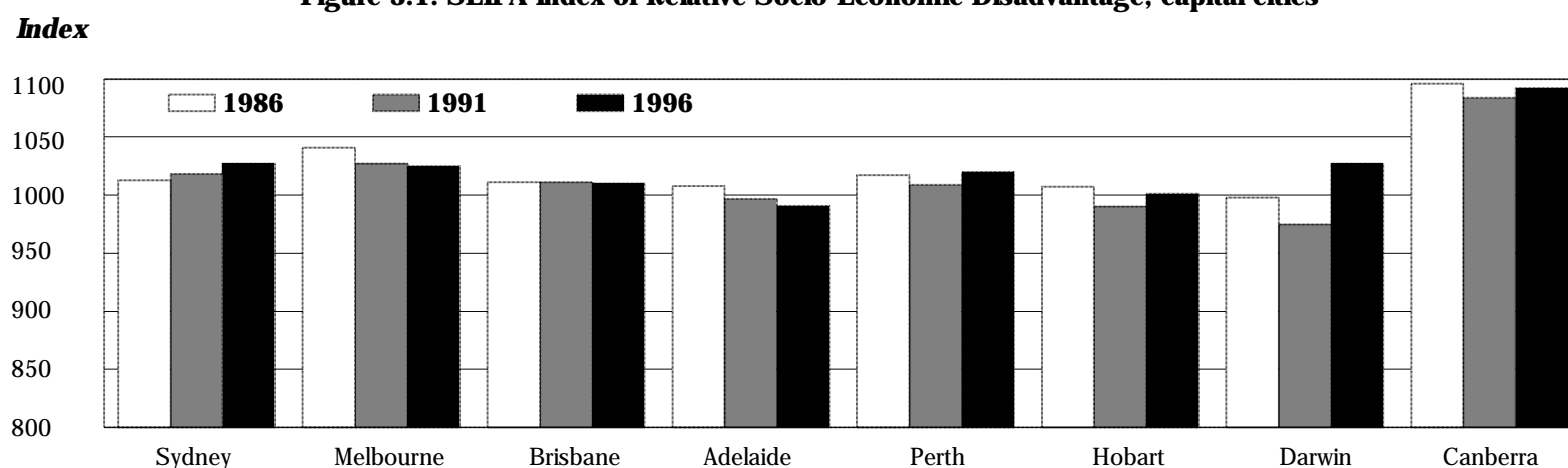
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra ¹	All capitals
1996	1027	1025	1010	992	1020	1001	1027	1084	1021
1986	1013	1041	1011	1008	1017	1007	998	1089	1021

¹Includes Queanbeyan (C)

Source: ABS special data services

Figure 3.1 indicates the steady increase over each of the last three Censuses (1986, 1991, 1996) in the scores for **Sydney**; the steady decline for **Adelaide**; the stable situation in **Brisbane**; the slowing of the decline in **Melbourne**; and the turnaround experienced by the other capital cities, following a decline in index scores from 1986 to 1991. **Adelaide** had the lowest score of the capital cities for the first time in any of these three periods.

Figure 3.1: SEIFA Index of Relative Socio-Economic Disadvantage, capital cities



Source: ABS special data services

Sydney (New South Wales equals 1000)

At the 1996 Census, the SEIFA Index of Relative Socio-Economic Disadvantage (IRSD) score calculated for **Sydney** was 1021 (when the index score for New South Wales was 1000).

As would be expected, the lowest scores, indicating the most disadvantaged areas, were recorded in the inner, western and south-western SLAs (**Map 3.28**). These were Fairfield (with a score of 900), Auburn (926), Liverpool (950, although mapped as less than 950 on the unrounded index value of 949.8) and Blacktown (958). Many south-western SLAs also had low scores, including Canterbury, with an index of 945, Campbelltown (958) and Bankstown (963). Wyong, to the north, with an IRSD score of 943, was also in this group.

A group of northern SLAs had the highest index scores, indicating the least disadvantaged areas. These were Ku-ring-gai (1167), Mosman (1158), Lane Cove (1136), North Sydney (1134), Hunter's Hill (1122), Baulkham Hills (1121) Hornsby (1119), and Willoughby (1114). To the east of **Sydney**, Woollahra also had a very high IRSD, of 1141.

The IRSD was, understandably, highly inversely correlated with many of the individual variables mapped, including those for low income families (-0.94), unskilled and semi-skilled workers (-0.91), unemployed people (-0.91) and early school leavers (-0.80). These relationships indicate a positive association at the SLA level between this aggregate measure of socioeconomic disadvantage and the individual indicators analysed.

Newcastle

The IRSD score calculated for **Newcastle** was 964. Each of the 5 SLAs recorded scores of below 1000, ranging from 975 in Lake Macquarie to 918 in Cessnock.

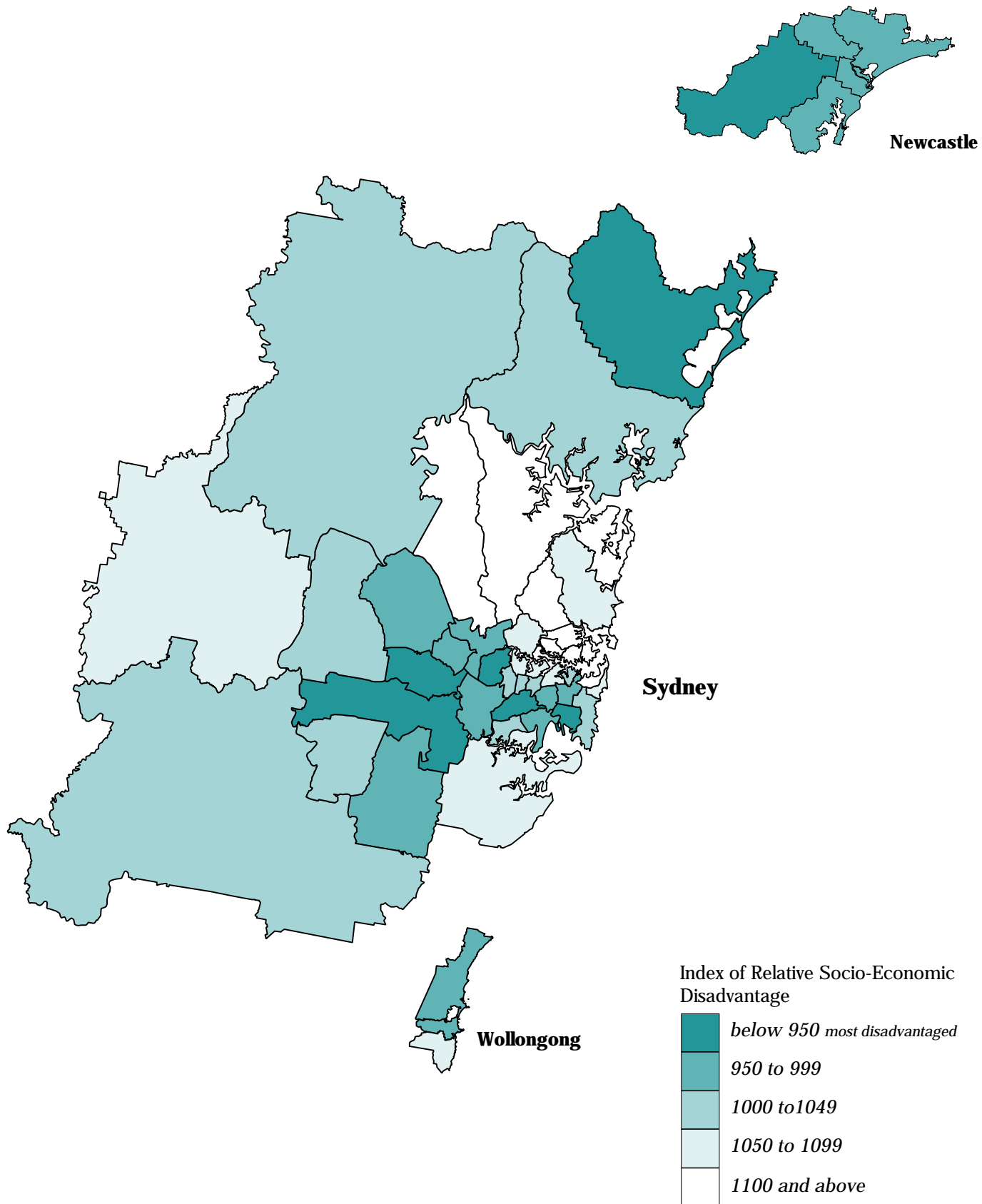
Wollongong

Wollongong also had a relatively low IRSD score at the 1996 Census, with an IRSD of 974. The only SLA to record an index score of above 1000 was Kiama, with 1059. Wollongong and Shellharbour had scores of 972 and 950 respectively.

Map 3.28

ABS Index of Relative Socio-Economic Disadvantage, Sydney, Newcastle and Wollongong, 1996

IRSD index number for each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

SEIFA Index of Relative Socio-Economic Disadvantage, 1996

State/Territory comparison (Australia equals 1000)

A description of the SEIFA Index of Relative Socio-Economic Disadvantage (IRSD), and comments as to its use in comparisons between Censuses, is provided on page 17. The *Whole of State/Territory* index scores ranged from a low of 962 in the Northern Territory to a high of 1091 in the Australian Capital Territory. Between 1986 and 1996 index scores for the non-metropolitan areas of Australia declined for each State and the Northern Territory (Table 3.34), although the score in Western Australia was almost stable.

Table 3.34: SEIFA Index of Relative Socio-Economic Disadvantage, State/Territory
Index values (Australia equals 1000)

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	1027	1025	1010	992	1020	1001	1027	1084	1021
Other major urban centres	973	980	985	..	..	..	..	..	978
Rest of State/Territory	973	995	965	963	970	955	909	- ⁴	972
Whole of State/Territory	1007	1016	989	984	1006	974	962	1091	1000
1986									
Rest of State/Territory	981	1026	972	986	971	988	917	- ⁴	999

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

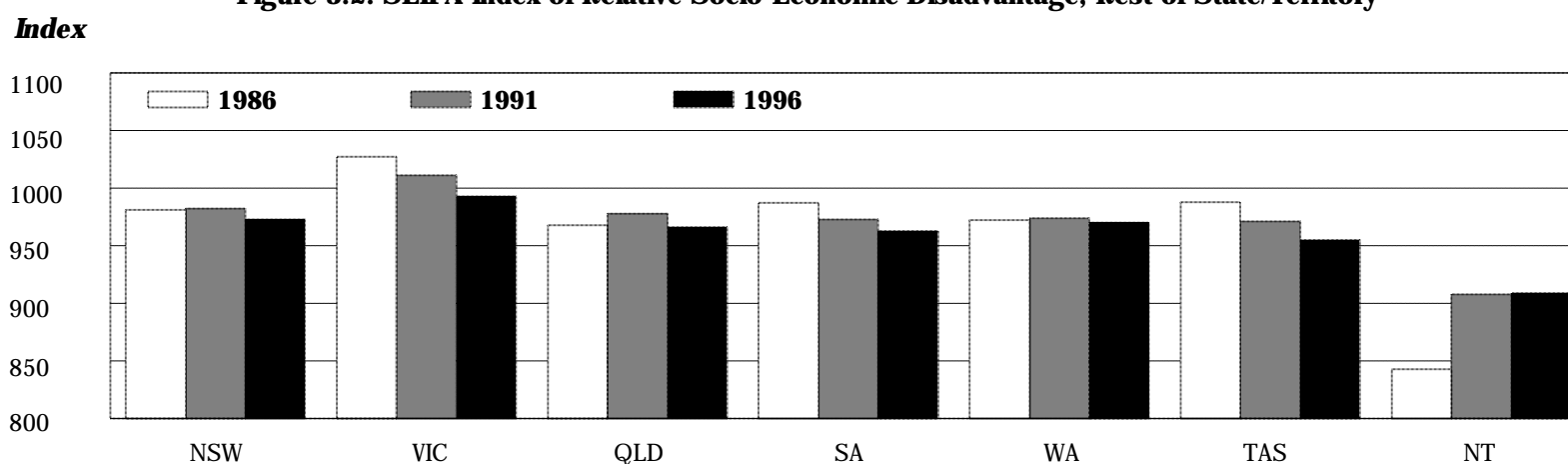
³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data included with ACT total

Source: ABS special data services

Figure 3.2 indicates the steady decline over the last three Censuses (1986, 1991, 1996) in the scores for South Australia and Tasmania; the marked increase in the Northern Territory (although remaining as the lowest score) and the small increase in New South Wales; the slowing of the decline in Victoria; and the turnaround experienced by the Australian Capital Territory and Western Australia, following the decline from 1986 to 1991. The scores in Queensland were remarkably stable over this period.

Figure 3.2: SEIFA Index of Relative Socio-Economic Disadvantage, Rest of State/Territory



Source: ABS special data services

Rest of State (New South Wales equals 1000)

At the 1996 Census, the non-metropolitan areas of New South Wales had a SEIFA Index of Relative Socio-Economic Disadvantage (IRSD) score of 967 (when the index score for New South Wales was 1000). This was considerably lower than the score recorded for **Sydney** (of 1021, when the score for New South Wales was 1000), indicating a greater degree of disadvantage in these non-metropolitan SLAs relative to New South Wales as a whole.

Outside of **Sydney** (Map 3.29), the most disadvantaged areas were located in the far north-west of the State, with the lowest index score, of 856, recorded in Walgett. Ratios of below 900 were also recorded in Brewarrina (an index of 861), and in Central Darling (866).

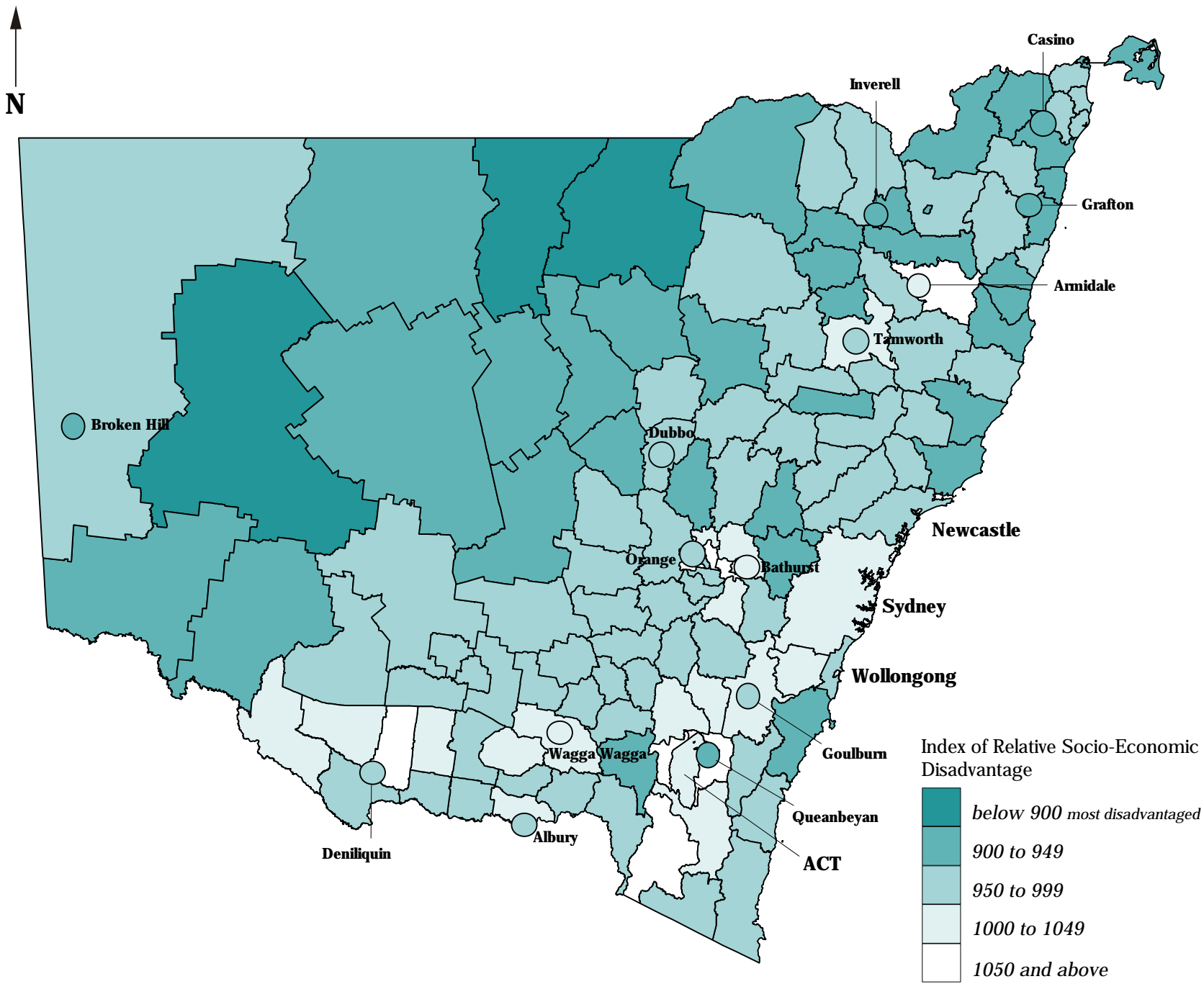
At the other end of the scale, the least disadvantaged SLA was Yarrawlumla [Part B], with an index score of 1136. Yarrawlumla [Part A] (1110), Dumaresq (1094), Snowy River (1086), Cabonne [Part A] (1077), Evans [Part A] (1068) and Conargo (1063) all recorded relatively high index scores.

The IRSD was, understandably, highly inversely correlated with many of the individual variables mapped, including those for early school leavers (-0.77), dwellings with no motor vehicle (-0.72) and low income families (-0.71). These relationships indicate a positive association at the SLA level between this aggregate measure of socioeconomic disadvantage and the individual indicators analysed.

Map 3.29

ABS Index of Relative Socio-Economic Disadvantage, New South Wales, 1996

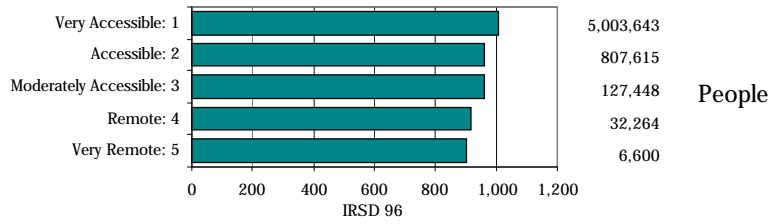
IRSD index number for each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



The graph of the ABS Index of Relative Socio-Economic Disadvantage shows a step-like variation across the ARIA categories, with the highest index scores (indicating the most advantaged areas) in the Very Accessible category (1008); middle level scores in the Accessible and Moderately Accessible categories; and the lowest scores in the Remote (916) and Very Remote (903) categories.

Source: Calculated on ARIA classification, DHAC National Social Health Atlas Project, 1999

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