

# **Housing affordability, occupation and location in Australian cities and regions**

authored by

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## EXECUTIVE SUMMARY

Recently has there been a revival of interest among policymakers in Australia in exploring the impact of escalating house prices on low to medium paid workers. This marks a distinctive change in the focus of the contemporary housing policy debate. In the recent past, concern over the provision of affordable housing has primarily focused on developing rental options for those on the lowest incomes. As a result, Australian housing assistance policy today is almost solely targeted on supporting rental housing.

Nevertheless, the growing failure of home ownership, once perceived as basically available to all working age Australians, to successfully accommodate those in the economic mainstream, has become something of a policy dilemma. This concern has arisen primarily in the context of the impact on first home owners of the high, record property prices in Sydney and Melbourne. It has also been informed by anecdotal information that some jobs are becoming more difficult to fill in certain higher cost areas and that this has been a direct result of the loss of lower cost housing in these areas. The implication is that there is a growing spatial divide between the locations that lower to moderately paid workers can afford to live in and the location of job opportunities, especially those located in areas of higher housing costs.

The result is the emergence of what might be called the key, or essential, worker “syndrome”: Basically these are lower paid workers in occupations considered important to the proper functioning of the city, particularly those in lower paid service occupations, although not exclusively so, whose jobs are in areas of high housing costs. There are concerns that employers are experiencing recruitment and retention problems for certain kinds of jobs in these areas. Most importantly, these are people who are ineligible for public housing (if it exists in these areas), yet do not earn enough to afford to buy a home and who may have affordability problems in the private rental market in a location relatively convenient to their workplace.

The concern is that it is only within the last two decades that gentrification has pushed affordable housing out of Australian inner cities. Jobs, however, remain concentrated in city centre locations, unlike many US cities. One potential outcome is that, as a result, many lower paid workers find their housing options have been pushed further from their workplaces. This, in turn, contributes to an increasing socio-spatial polarisation of Australian cities, and, by implication, longer and more costly commutes for these people as they follow the more affordable housing further into the suburbs.

The literature from overseas on this issue points to a number of conclusions:

- Early key worker formulations in the UK focused on public sector workers in housing ‘hot spots’ such as London and parts of South East England. The policy response has been a publicly funded program to create an “intermediate housing market” comprising below market cost housing for rental or sale to assist in the recruitment and retention of key public sector occupations.

- Younger workers were particularly affected, especially those in early career positions where salaries were still low.
- The definition of what constitutes a key worker has shifted to a broader conceptualisation in which income and occupation is mediated by gender and by employment conditions, such as shift working. The distinction between public and private sectors has also become much more blurred.
- In the US the problem is seen much more broadly than in the UK, with lower income working families particularly identified as falling outside the system of welfare supports, yet suffering increased housing costs and/or much longer commutes. The resulting focus has been on the development of strategies to supply “workforce” housing for these lower income workers.
- A number of Australian studies have been exploring this area. Findings have confirmed that there is an apparent widening of the spatial gap between more affordable housing opportunities and workplace locations for low to moderate income households, but the picture is complex.

A number of observations can be made from the review of the relatively limited evidence to date on the interactions between housing and labour market outcomes for workers in what might be called ‘indicator’ occupations.

The first is that it is important to identify the extent to which shortages are national and due to general labour market shortages, rather than regional or local and due to housing market constraints. These issues will be discussed in more detail in the Final Report for this study. The literature signals that the focus of the study should be on regions with high housing costs.

A second arises from the evidence that difficulties described here apply to working households, particularly younger workers, who aspire either to independent living or who are constrained in their ability to purchase rather than rent. This signals the importance of focussing on age, household structure and tenure. These issues also will be addressed in more detail in the Final Report.

A third observation is that useful generalisations can be drawn if the analysis is limited to a broad categorisation of workers - defined either or both by having incomes within a defined range or as belonging to some well defined occupational grouping. Once an attempt is made to distinguish between outcomes for workers with one occupation or another, outcomes are likely to be affected by the specifics of the occupation or the location of the industry which is the key employer of workers within that occupational grouping. This is particularly problematic for a national study where the definition of essential workers will differ depending on the characteristics of the region. Whilst this level of detail is of critical importance at a local level, it is likely to render analysis intractable at a national level.

In addition, recent conceptualisations of key workers have shifted away from occupational groups *per se*, towards the employment conditions workers endure, especially shift and part-time work. These issues will influence the choice of which ‘indicator’ occupations or income groups are used to define the scope of this study.

Finally, all of the studies reviewed point to problems faced by workers in specific occupations in urban areas. None focus on issues for workers in areas outside of large metropolitan regions. This strongly suggests that, whilst this study is to be undertaken at a national level, its focus is likely to be limited to specific high cost regions within the nation. These, in turn, are likely to be limited to urban areas.

## Defining Indicator Groups

Which groups might form an appropriate basis for this project? Drawing on previous research, there seem to be several criteria on which a choice could be made. However, there are no clear cut answers:

- **Public or private sector occupations:** Given the limited number of occupational categories that lie totally within one or other sector, it seems this criterion is somewhat spurious. The issue of which occupations could be seen as essential to the functioning of the economy is unresolved and is likely to vary across regions. Moreover, should the focus be on “essential” workers at all, given the conceptual difficulty in defining what these might be?
- **National or local skill shortages:** The some information that is available at a national scale on the jobs for which skill shortages exist, suggests many shortages are in areas where housing is relatively affordable. It provides no indication that shortages are specifically related to areas of high housing costs. There is little information on local skills shortages that can be drawn on.
- **Income:** Most of the literature on this subject focuses on lower to middle income groups.
- **National or local wage rates:** Whether an occupational group has nationally set wages will affect their capacity to compete in high cost locations.
- **Gender:** It might be preferable to choose contrasting occupations in which either men or women predominate to explore any potential gender differences. An alternative might be to include occupational groupings with more balanced gender profiles.
- **Single or dual earner households:** This will clearly have a major impact on the market capacity of a household, and therefore the locational trade off between job (or jobs) and home.
- **Workplace location:** The distribution of workplaces also needs to be considered in selecting occupational groups for the study. Occupational groups with more concentrated workplace locations make it easier to analyse the job-home relationship.



- **Employment conditions:** Whether someone works full or part time, shift workers, or unsocial hours will affect their capacity to undertake commutes that involve long or multi-modal journeys.
- **Level of spatial disaggregation:** The literature suggests use of sub-regions within the larger capital cities in Australia to test the impact that affordability might have on shortage.

Rather than getting tied into a potentially flawed analysis based on essential worker concepts, the objective for this project is to test the impact of high housing costs on the workplace-home relationship for all workers. The task at this stage therefore is to identify “indicator” groups in the workforce that might be seen to be typical of workers who are likely to experience real constraints on their residential location choices as a result of high cost housing in or around the places they work. Income, gender, employment conditions and locational concentration could all play a part in this.

# 1 INTRODUCTION

## 1.1 Background

“Recent economic prosperity has benefited many, but working families in need of affordable housing are not necessarily among the beneficiaries. In some parts of the country where economic growth is the strongest, the labor force critical to sustaining the economy either cannot find housing that is reasonably priced or cannot locate within an appropriate commuting distance of their jobs. While there is some anecdotal information at the local level, to date, little research has been done on a nationwide level. We do not know to what extent families who live by the rules and work the equivalent of a full-time job have critical housing needs.” (Lipman, Newman and Harkness, 2001, p1)

This quote, from a report on Housing American Working Families, raises the issues that are the focus of this research project. The report by Lipman et al (2001) is the first of a number reports from the US that have followed initial and highly influential work undertaken by Stegman et al (2000). These reports are covered in more detail in chapter 2.

Stegman and his co-authors observed that federal housing policy in the US over much of the past 20 years implicitly or explicitly has linked the housing problems of American families to issues of poverty and welfare dependency. Lipman and her co-authors concluded that, "while the poor have by far the highest incidence of housing needs, an exclusive focus on very low income families fails to appreciate the full extent of the country's affordable housing problem." They showed that many low and moderate income families had critical housing needs despite working the equivalent of a full time job; having a job does not guarantee a decent place to live at an affordable cost; excessive housing costs (rather than poor housing conditions) account for the majority of critical housing needs; home owners account for the majority of working families with critical housing needs; families need more than one working adult to keep them out of serious housing stress; minimum wage workers are particularly at risk; workers tied to old economy (blue collar) jobs are struggling; and vital municipal workers (teachers and police officers) are increasingly vulnerable.

Whilst recognising the difficulty in generalising from anecdotal accounts, the authors relied upon local press accounts, planning studies and employer surveys to express a concern that a lack of decent affordable housing increasingly is being seen as a significant impediment to local economic growth (Lipman et al, 2001, p14). These impediments arise because localities are unable to attract firms to high cost areas and because housing market booms have priced working families out of the market. Many of those affected are essential workers such health workers in hospitals, teachers, police officers and other municipal employees. Similar concerns have been strongly

voiced in the UK in the recent past, leading to direct government interventions to address perceived shortfalls of affordable housing in high cost areas for workers in key public sector occupations.

The need to examine the links between housing and labour markets was well established well over a decade ago, as illustrated, for example, in Allen and Hamnett (1991). It has become progressively more so as housing and labour markets have become increasingly polarised. However, only recently has there been a revival of interest among policymakers in Australia in exploring the impact of escalating house prices on the position of low to medium paid workers, as opposed to people on benefits and pensions. The driver for this has been the growing recognition that many younger households (including those from middle class families) are failing to access home ownership in areas in which they prefer to live. This marks a distinctive change in the focus of the contemporary housing policy debate. In the recent past, concern over the provision of affordable housing has primarily been focused on developing rental options for those on lowest incomes. As a result, Australian housing assistance policy today is almost solely targeted on supporting rental housing particularly for those who do not work.

Nevertheless, the growing failure of home ownership, once perceived as basically available to all working age Australians, to successfully accommodate those in the economic mainstream, has become something of a policy dilemma. While this concern has arisen primarily in the context of the impact on first home owners of the record property prices in Sydney and Melbourne, it has also been informed by anecdotal information that some jobs are becoming more difficult to fill in certain higher cost areas and that this has been a direct result of the loss of lower cost housing in these areas. The implication is that there may be a growing spatial divide between the locations in which lower to moderately paid workers can afford to live and the location of job opportunities. This is especially so when jobs are increasingly concentrated in areas of higher housing costs.

## **1.2 Housing stress amongst working households in Australia**

One of the first aims of this research project is to determine the extent to which the problems identified for working families in the US and other countries also arise for working households in Australia. The analysis will be extended from families to a broader household definition so that it includes single persons and those for whom one solution to latent affordability problems has been not to have children. An associated aim is to determine whether these issues have occupational and locational characteristics.

In Australia, the fact that a significant number of households have affordability problems has been well documented (Yates et al, 2004). Many of those with the greatest affordability problems, however, are single person or sole parents who are on benefit levels of income and who, for a number of reasons, are not in the labour force. In Australia, little is known about the housing problems faced by working households and the implications for what has been described as affordable workforce housing in

the US (for example, Haughey, 2002) and as affordable or intermediate housing for key workers in the UK (for example, ODPM, 2003).

A second aim of the research project is to determine the various coping strategies employed by potentially vulnerable working families who do not show up in the data as being in housing stress. One strategy is to choose to live in an affordable location and to travel to work when the option of living and working in the same location is not an affordable option. As bluntly stated by Blumenberg and Waller (2003), "to work, low income adults need to get to work". For many, the cost of being in work may well be high transport costs and/or long travel to work journeys. For others, the financial and social costs of long journeys may be prohibitive with the result that employers in high cost locations may not be able to recruit and retain low wage employees. An alternative coping strategy, already indicated, is to maintain a dual earning capacity within the household and/or to limit the number of children that need to be supported. The possibility that reduced fertility may be an economic rather than a social phenomenon has already been implied above.

A third aim of the research project is to provide some insights into the extent to which employers in high cost regions may be constrained in their capacity to recruit and retain a workforce that meets their particular needs. This aim brings to the fore the importance of the relationship between the occupations of those who work in high cost regions and their residential location.

### **1.3 Report outline**

This positioning paper provides background information on these research aims, identifies the methodological issues raised by this information and suggests how these are to be addressed. Chapter 2 provides a literature review that highlights the issues to be covered by this report. Chapter 3 provides some broad brush evidence for Australia, signals issues that need to be resolved before the substantive research is undertaken for this project and outlines the definitions to be employed in this study, indicating the reasons for the choices made. Chapter 4 provides an overview of the research questions addressed and methodology to be employed.

## **2 LITERATURE REVIEW**

What is meant by affordable housing and who might be served by it is interpreted differently by different people. The practice of providing assistance for housing to improve housing affordability for lower income households, most of whom are recipients of social security payments and are on incomes well below median, is well established through the provision of rent assistance to those in the private rental market and through the provision of income geared subsidies to those in public housing. Increasingly, however, concerns have been expressed about affordability outcomes for working households who are finding it difficult to rent or purchase private sector housing that is accessible to their place of work and who, as a result, bear the burden either of significant housing costs or of significant transport costs. Many of these households may not be covered by current housing assistance programs.

With the signing of the 2004 Commonwealth State Housing Agreement and with the introduction of performance requirements in relation to 5 per cent of base funding, there has been a renewed interest in the issue of attracting investment from outside the social housing system to increase the availability of affordable housing. As a consequence, there also has been a renewed interest in the related question of who this housing might serve. One group of households who is seen as a key contender for any affordable housing that might be provided outside the social housing system are the low and moderate income working households described in the introduction in Chapter 1. These are households who are likely to face affordability problems within the current private rental and home purchase markets. Of particular interest are those working households in occupations that are seen as being essential to local economic development.

Concerns in Australia with providing affordable housing for households currently not well served by the private housing market follow a similar pattern to concerns in the UK and the US, as can be seen from the UK and US literature reviewed below.

### **2.1 UK literature**

Much of the related work in the UK has arisen from the Office of the Deputy Prime Minister (ODPM). This, in turn, has built on earlier work by the Department of Transport and the Regions (DETR). The expression 'affordable housing' has been used in the UK to "include both low cost market housing, and subsidised housing (irrespective of tenure, ownership or financial arrangements) that will be available to people who cannot afford to occupy houses generally available on the local market." (ODPM, 2003a, p12). Affordable housing has been targeted on a group of what have been called key workers, following a Housing Green Paper (DETR, 2000) commitment to help key workers buy homes in high-demand, high-price areas (urban and rural) so that they can live within or near the communities they serve (Renewal, 2002).

In general terms, a key worker in the UK is someone who is employed by the public sector; in a frontline role delivering an essential public service; or in a sector where there are serious recruitment and retention problems (ODPM, 2004a). The term

'Intermediate housing market' is used to refer to that part of the housing market which might cater for key workers who are earning more than enough to pay a social rent, though not enough to access market housing (Cambridge, 2002). In specific terms, policies are directed at key workers in London and the South East, where housing has become increasingly unaffordable; where problems are being encountered recruiting and retaining key workers; where the social rented sector is unable to provide low cost housing for rent or shared ownership; and where concerns have been raised about the staffing of key services (Renewal, 2002).

Key workers who currently may get help under various 'key worker' initiatives targeted at housing hot spots in high cost areas in England are listed in Table 2.1 below.

**Table 2.1: Key workers in the UK**

<b>Key workers</b>
nurses and other NHS staff
teachers in schools and in further education and sixth form colleges
police officers and some civilian staff in some police forces
prison service and probation service staff
social workers, educational psychologists, planners (in London),
occupational therapists and (from May 2004)
speech and language therapists employed by local authorities
whole-time junior fire officers and retained fire fighters (all grades) in some fire and rescue services (currently only in Hertfordshire)

Source: ODPM (2004b)

One rationale given for this selection is provided in the following. "In the past, hostel-type accommodation has been provided for staff in certain sectors, including nurses and police officers. There has, however, been a dramatic reduction in the amount of on-site accommodation for workers and the cost of off-site provision targeted at nurses, for example, is increasingly beyond their means. Consequently, key workers are struggling to live within easy travelling distance of where they work and are looking for employment in areas where they can afford to live. Alternatively, they look for higher paid employment in other sectors" (Renewal, 2002).

One equally plausible argument why the UK definitions of key workers focused on teachers and nurses was that these occupations were seen as less likely to create a community backlash against the mixed income housing proposed as a policy response. Middle income households were concerned by the turnover and shortages of people in these professions and, in particular, were concerned by the effect that this had on provision of services in which they directly participated.

The inclusion of fire and rescue service workers only in Hertfordshire highlights a political rationale for the choice of which groups are eligible for key worker housing. These were added in response to political pressure after a series of strikes in 2003 by the politically aggressive Fire Brigades Union, which resulted in the army being called in to provide fire-fighting services (<http://news.bbc.co.uk/1/hi/uk/2704501.stm>). In London, planners were added to the key worker list because Keith Hill, the Minister for Planning at the time, was also the Minister for London.<sup>1</sup>

Eligibility criteria will vary across regions depending on local recruitment and retention priorities (ODPM, 2004b). Regions where policies are targeted are identified on the basis of housing needs assessments undertaken for various regions. "Every local authority has a responsibility to produce a housing strategy based on up-to-date assessments of aggregate housing needs in their area. These strategies are reflected in authorities' annual Housing Investment Programme (HIP) submissions to central government, and an assessment of their quality contributes to DETR decisions on HIP resource allocation" (ODPM, 2003b).

This overview of the perceived problem by the ODPM in the UK provides a clear overview of the issues involved but does not provide an evidence base of the extent of the problem. This can be found in a range of reports, most of which have been commissioned by various regional councils in the UK. These have focussed both on the needs of employers and the outcomes for employees.<sup>2</sup>

ANCER (2004), for example, undertook a study in Surrey in 2003 to assess the extent to which housing costs were affecting the ability of companies to recruit and retain staff. Their survey covered 138 businesses of which one fifth were in the manufacturing sector, one fifth in finance and business and a further one fifth in transport, storage and communications or wholesale and retail trades. Of the companies surveyed, 40 per cent reported experiencing problems with recruitment and 33 per cent problems with retention. Whilst recruitment and retention problems may result from housing affordability problems, they also may result from a general shortage of workers with the skills needed. In the ANCER survey, however, more than 20 per cent of companies attributed their recruitment and retention problems to high housing costs with just under half of these suggesting that housing costs were the major factor. Most recruitment and retention problems were encountered by industries using large numbers of relatively low skilled staff (hotels, manufacturing, retail, transport, warehousing, leisure and administration). Because the survey was of the private sector, these occupations are outside those covered by the conventionally applied key worker definition in the UK (which is limited to public sector workers).

Companies were asked about the consequences to their company of not being able to recruit or retain these workers locally. According to ANCER (2004, p16)

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<sup>1</sup> Background information provided by an employee of ODPM (personal communication).

<sup>2</sup> Any number of these that conform to the DTLR guidelines can be found on the internet using a search in Google on "Fordham Research" and "Housing Needs Survey".

- The main consequence for those companies unable to recruit or retain workers locally, is the length of time it takes to fill vacancies, and the accompanying extra costs.
- Those companies who report a high turnover of staff, indicate that it is causing a lack of younger staff and thus an ageing workforce. One company bemoaned the lack of apprentices recruited into the industry.
- The loss of skilled staff, resulting in a need to retrain replacements, has caused work delays and pressures on the remaining staff to meet production deadlines, and in some cases has led to a lowering of standards.
- Three manufacturing companies have attempted to resolve their skilled staff shortages by attempting to recruit skilled factory staff from the North of England. These attempts had to be abandoned as high housing costs made this impractical.
- Two companies report that they may be forced to downsize to fit the available workforce, and another reports he may shift production abroad.

Morrison and Monk (2004) provide qualitative evidence based on surveys to link these recruitment problems in Surrey to housing costs. They also point to the high costs faced by employers as a result of recruitment difficulties.

Similar outcomes were also reported by Tym et al (2003) and Morrison (2003) in their report prepared for the Cambridge sub-region. Tym and his colleagues limited their study to the public sector key workers listed in Table 2.1 although they suggested that some flexibility should be employed in applying this definition since many local councils are likely to have identified a need to provide housing for particular private sector workers on economic grounds, particularly when public sector services have been contracted out to the private sector. They used both qualitative and quantitative research methods to determine whether the anecdotal evidence on recruitment and retention problems because of high housing costs was well founded. Their concern was that, if this was so, it would "erode the sub-region's quality of life and hinder its ability to deliver economic growth and mixed, balanced communities." (Tym et al, 2003, p1)

Their study identified a problem of recruitment, particularly for people aged under 30 and a problem of retention which becomes particularly acute for those in the 30-34 age range. The 25-34 age range was identified as the range where workers are moving from a housing solution where house sharing is considered not just acceptable but even popular because of the social benefits associated with it. Living with friends or family was a significant option for younger key workers under age 25 but its acceptability dropped sharply thereafter. Younger key workers (also described in Tym et al as "care and comfort workers") were more likely than others to have low incomes, to have less reliance on a second income, and to report a longer commuting time than those in older groups, which suggests they were forced to find housing at more remote, less costly locations.



The Tym et al survey also provided information on the aspirations of key workers and the trade-offs they are prepared to make. All recognised the importance of good transport connections to their work and none regarded a journey to work of more than 45 minutes as acceptable. Three quarters of those surveyed had a journey time of less than 30 minutes.

The type and location of housing aspired to varied by household type. For families with children, a garden and access to good schools was important. For younger households and those without children there was no clear preference expressed. For those under 25 years old it was important to live near work and their friends but also near shops, recreation, and entertainment.

With the possible exception of those in the 30-34 age group, the key workers surveyed were generally unwilling to change career to meet their housing aspirations but they were prepared to move to do so, with 30-34 year olds being most prepared to move. This willingness to move declined with age. Monk and Whitehead (2002) report that, overwhelmingly, workers in the UK aspire to be home owners, although they are prepared to live in rented housing in the early stages of their career.

In a report prepared for the Greater London Authority (GLA, 2001), Whitehead and her colleagues presented evidence of the problems faced in London by bus drivers, nurses, police and teachers. London is by far the most expensive housing market in the UK and one in which pressures on labour and housing markets are created by immigration of both people and businesses, which come first to London before filtering out to the South East and elsewhere. This GLA report quotes evidence from a 1998 skills survey that shows "commuting was relatively low among certain groups, particularly ethnic minorities and women, among those with fewer qualifications and less experience and in certain employment sectors - notably health and education" (GLA, 2001, p16). A 2000 workplace survey showed that commuting patterns differed by occupation with nurses and bus drivers wanting to live near where they work but police officers not wanting to. This same workplace survey provided evidence to support claims of widespread recruitment and retention problems amongst the four occupations considered and underscored the concerns about this with reports that 48 per cent of teachers and 39 per cent of nurses were planning on looking for another job in the next 12 months with a significant proportion of these looking for jobs outside of London. Those most likely to be looking to leave London were younger workers aged 18-34 rather than older workers (GLA, 2001, p18).

One of the problems identified for nurses, teachers and police officers was the existence of national pay scales that do not reflect difference in labour market pressures across the country. This was seen as particularly problematic in the police service where pay was linked strongly to seniority. Where London weighting and incentive packages exist, they are rarely adequate to compensate for the higher costs of living in London. For bus drivers the issues were different because operating contracts do not allow for the required rises and privatisation has made it difficult to retain drivers who can only be offered relatively short term contracts.

ATIS Weatherall's (2002) study for the Housing Corporation pushed the boundaries of what might constitute a key worker further. They adopted a definition of key worker to include jobs that have been 'outsourced' in recent years due to privatisation: these include

"Employees in essential, universally accessible public and private sector services, without whom those services would generally operate at below optimal levels

and

Workers in those sectors whose income is insufficient to allow them to access reasonable accommodation in the private market, or to receive priority assistance through the relevant housing legislation" (ATIS Weatherall, 2002, p3).

In other words, the distinction between jobs in the private and public sectors is now much more blurred due to recent shifts in public ownership and the increased use of non-government sectors in the provision of essential services. As a result, "...affordability issues are of a similar scale in the private sector" (ATIS Weatherall, 2002, p5). Other research has also highlighted the position of workers in low paid service jobs regardless of sector (London Housing Federation, 2001; Delargy and Hawkey, 2003).

These illustrative UK case studies highlight a number of key characteristics that have emerged from the relatively limited amount of research that has been undertaken to date on the question of affordability, occupation and location. The evidence base for this concern can be found in the various housing needs assessments provided by various local authorities. They point to the strong local and regional focus of the issues analysed and to the critical role played by the income of the workers who are the target of associated policies. The issues arising from distinguishing regional from national shortages will be returned to below.

## **2.2 US Literature**

The US literature on essential workers covers similar issues to those raised in the UK in relation to key workers although from a somewhat different perspective. A relatively limited overview of the significant amount of affordability literature in the US would suggest that there are two broad strands to this literature.

The first comes from a national level perspective and is reflected in the work done by the Essential Worker Immigration Coalition (EWIC). EWIC is a coalition of businesses, trade associations and other organizations across the industry spectrum concerned with the shortage of both skilled and lesser skilled ('essential worker') labour. The second comes from a local perspective and is reflected in the work done by the National Housing Conference (NHC) and by the Urban Land Institute (ULI). The quote used to introduce this paper comes from NHC work.

The focus on shortages at a national level results in a focus on immigration policies rather than housing policies. It is relevant, however, because the essential workers nominated by EWIC include restaurant workers, retail clerks, construction trades people, manufacturing line workers, hotel service workers, food production workers, landscape workers, and health care aids<sup>3</sup> which overlap considerably with the issues of shortage raised at a local level. EWIC have argued that these are the jobs that many Americans do not choose, but which are 'essential' to keep the American economy growing. To support their argument they claim companies are reporting difficulties in retaining permanent staff and hiring replacements and are curtailing expansion plans, and many small businesses are struggling to survive without enough employees.

Their claims have been well supported with similar reports and concerns in the so-called 'Beige Book', the Federal Reserve's regular report on economic conditions in the US. According to a recent report, for example, "specific categories of employees in especially short supply included office managers (New York and Cleveland), high-tech workers (Atlanta, Dallas, and San Francisco), nurses (Atlanta, Minneapolis, and Kansas City), truckers (Kansas City and Dallas), and pharmaceutical workers (Minneapolis and San Francisco)."<sup>4</sup>

This national level focus on shortages raises an obvious issue that must be addressed in this report: namely, the extent to which shortages of key workers in high cost locations are due to housing affordability problems or, instead, are due to an overall shortage of workers in specific occupations. This issue will be addressed explicitly in the methodology chapter of this report.

It is the literature that focuses on local shortages, however, which reflects a concern with the impact of housing affordability on labour shortages. For example, the ULI Workforce Housing Forum, made up of a panel of experts, was convened "to discuss the growing shortage of housing that is affordable to moderate-income households, especially in urban areas. Despite a decade of economic success, the shortage has only intensified, and, though most severe in the largest metropolitan areas, the problem is nationwide and is attaining crisis proportions. The lack of affordable housing in urban areas is leading many households to locate far from their jobs, creating all the problems associated with sprawl, including traffic congestion, air pollution, environmental degradation, and requests for public funds to be used for the construction of new roads, schools, libraries, etc. In some areas, the lack of workforce housing has become an economic development issue as corporations decide not to locate in areas where their employees cannot acquire decent, safe, and affordable housing." (Haughey, 2001, p2)

Those participating in the forum saw workforce housing as targeting a moderate income group whose housing needs were growing more rapidly than any other income group because of a lack of affordable housing and as responding to a concern with the

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<sup>3</sup> <http://www.immigration.com/newsletter/news22ess.html>

<sup>4</sup> <http://www.federalreserve.gov/FOMC/BeigeBook/2000/20000119/default.htm>

implications of the commuting solutions that workers were finding in their attempt to find affordable housing. In terms of analysing the issues, they recommended that households be aggregated into three groups:

- low (at 50 percent or less of area median income - AMI). These households were seen as being covered by direct assistance policies.
- high (covering middle and high income households). The housing market was seen as working well for these households as they were able to afford to access housing close to jobs and services.
- workforce (from 50 per cent of area median income to 120 per cent above). This includes some households who may qualify for direct subsidies but is likely to include many that do not.

In broad terms this definition of a household eligible for workforce housing is consistent with the National Housing Conference definition of anyone working full time, which effectively means anyone making at least \$10,700 per year<sup>5</sup>, the minimum-wage yearly salary for a full-time employee in 2001 and 120 per cent of local AMI (Stegman et al, 2000).

The ULI forum participants pointed to the significant disparity between location and affordability (in one LA region, for example, there are 6 jobs for every housing unit and the jobs/housing ratio is out of balance in most parts of the country); raised the issue about housing affecting employer bottom lines because of lower retention rates and higher recruitment costs and suggested that much of the problem arose because, whilst most employers offer jobs across the income spectrum, housing markets tend to be more segregated (Haughey, 2001, p9).

One study, reported in Bell (2002), suggests that local regions face significant economic costs as a result of prospective workers not being able to find housing in the region. This results in household incomes and expenditures being deflected to other regions. These concerns are more likely to dominate in countries such as the US where local finances depend on the tax base and hence the strength of the local economy. In such countries, however, an alternative view is that this is precisely the reason why municipalities are unwilling to provide workforce housing.<sup>6</sup>

At a follow up forum, designed to build on the first and convened to focus on policies rather than problems, there was a strong and explicit acknowledgement of the locational implications of workforce housing shortages. "The supply of affordable housing is only one part of the problem. ... Failing to address the issue of geography means overlooking what realtors call the three most important factors in real estate:

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<sup>5</sup> Allowing for inflation and adjusting for the 2001 \$US/\$A exchange rate, this converts roughly to \$24,000 per annum in current (2004) Australian dollars, although considerable care needs to be made in making such comparisons because they do not take in account the differential purchasing power of the American and Australian dollars.

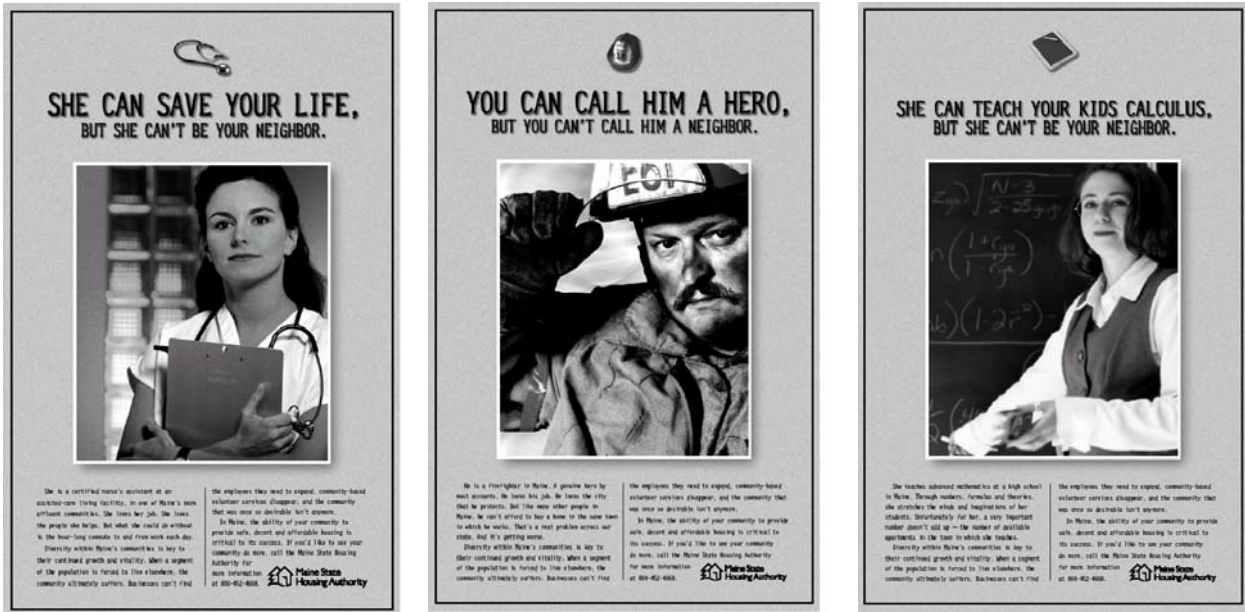
<sup>6</sup> "Why? Because, with the exception of elderly housing, most housing brings children, who must be educated. The cost of education must be financed with property tax revenue, and the revenue from new housing doesn't typically equal the cost of education. It's a net loser" (Fink (2004)).

location, location, and location. The issue is not how much affordable housing is produced but where it is produced, as well as how to address the challenges of producing it where it is needed. The proximity of affordable housing to jobs is the second part of the problem. Where affordable housing does exist ... it usually is located far from where most people work. ... This ... brings with it all the undesirable aspects of sprawl: grinding traffic congestion, school overcrowding, air pollution, and a loss of open space. Yet most major institutions - governments, hospitals, and the like - are located in or near the central city and cannot move out to follow the workforce. This dynamic makes it hard to recruit and retain moderate-income employees such as teachers, fire fighters, nurses, and so forth. Private businesses, on the other hand, are more mobile. Many are moving to the outer fringes to be closer to their workforce. While this might appear to solve the jobs/housing imbalance, it actually further compounds the cycle of sprawl by driving up land costs and forcing affordable housing even farther out" (Haughey, 2002, p2).

A recent European workforce housing forum, hosted by the ULI, focussed on similarities and differences between the US and Europe in relation to workforce, intermediate or key worker housing. Whilst there was agreement on the common issue of a shortage of workforce housing in the capital cities in Europe and the major cities in the US, the issues that motivated a concern about this were different. In the US, concern has emerged with the issue of increasing sprawl. In Europe, concern is with the issue of attracting and retaining workers to support local businesses or provide essential community services. These concerns are not inconsistent. A recent advertising campaign in the state of Maine, shown in Figure 2.1, illustrates this. These advertisements point to a nurse working in an assisted living facility in an affluent community; to a fireman who can't buy a home in the town in which he works and to a teacher for whom there are no available apartments which she can afford. They imply that these services are at risk because workers may not be prepared to continue to bear the costs associated with long commuting times. It is worth noting that the images are of relatively young workers and, in at least some of the cases, of single workers.

This contrasts with the more influential work undertaken for the National Housing Conference. In their Paycheck to Paycheck report for example, Lipman et al (2001), followed previous practice by focussing on low to moderate income working families with children and, in particular, on those with critical housing needs. Critical housing needs are defined as housing costs in excess of 50 per cent of household income. The definition of low to moderate income households (as outlined above) covers more than half of working households in the US and covers the vast majority of those with critical housing needs (Stegman et al, 2000, p7).

**Figure 2.1: Essential workers excluded because of a lack of workforce housing**



Source: <http://www.mainehousing.org/news.html>

Later reports from the Center for Housing Policy have updated this work and focussed on different aspects of the problem. See, for example, Lipman et al (2001), Harkness et al (2002), Lipman (2002a, 2002b), Fiore and Lipman (2003) and Harkness and Newman (2004). Fiore and Lipman (2003), in particular, analysed working families in which the head of household was employed in what they described as five vital occupations to see how such families fared in 60 of the nation's largest housing markets. The five occupations analysed "were all traditional jobs that rely on traditional wages". Table 2.2 indicates the essential workers identified in recent National Housing Conference reports. Earlier Stegman et al (2000, p17) identified a marginally different list containing blue collar, clerical, retail sales, service workers and police and consisting primarily of "workers whose wages are tied to the old economy."

**Table 2.2: Essential workers in the US**

<b>Essential workers</b>
Janitors
Retail sales workers
Elementary school teachers
Licensed practical nurses
Police

Source: Fiore and Lipman (2003)

The workers listed in Table 2.2 were selected for a number of reasons (Fiore and Lipman, 2003, p1):

- "new economy" high tech jobs are not eliminating these occupations;
- they are all jobs with large numbers of practitioners as well as having substantial projected growth;
- retail sales persons and janitors are jobs that represent the occupations that are attracting welfare to work participants and other first time entrants to the workforce;
- although not numerous, police, teachers and nurses play a vital role in the community;
- licensed rather than registered nurses were chosen because lower qualifications make this occupation suitable for workers moving up the economic ladder; and
- the wages in these occupations are not atypical for other essential occupations.

Fiore and Lipman's findings reinforced the broader results reported by Stegman et al. (2000). They highlighted the immense difficulties that families dependent on a single low income (such as earned by a janitor or retail sales worker) have in virtually all metropolitan housing markets in the US. Families reliant on low wages cannot afford the median rent on a 2 bedroom apartment in any metropolitan market in the US, nor can they qualify for a mortgage on a median price home in any of the 60 metropolitan markets considered. "Out of both choice and necessity, many working families have more than one wage earner to keep them out of serious housing stress" (p2). In a number of high cost markets typical rents for a modest one or two bedroom apartment require more than 30 per cent of two such salaries.

In both the US and Europe, the problem is seen as having arisen as a result of house prices rising faster than the incomes of those affected and because "rising expectations and the social marking of space .. add to the challenge of providing decent, affordable housing for the moderate-income workforce. Developers are now selling a lifestyle, not just housing." (McIlwain, 2003).

As with the UK literature, this overview of the US based work highlights several key points. The problems of affordability are more likely to be urban problems than non-urban and they are more likely to be faced by workers in occupations which are low or relatively lowly paid. Where commuting is an option, the cost and impact of long commutes to work is as likely to be a concern as is non-availability of labour. This is most likely in high cost locations in countries which have a greater suburban/ex-urban development than those which do not. It should be noted, however, that Australian cities, while extensive, have not suffered from the intense inner city decline that many older industrial US cities have or from such widespread peripheral sprawl. As a result labour markets in Australia, especially those in the growth sectors, are still relatively concentrated in central metropolitan areas.

## 2.3 Australian Literature

In Australia there have been a limited number of studies of the relation between housing and labour markets although the broad relationship between location and housing affordability has been well established. Dodson (2004) provides a useful and recent overview both of the literature on the broader context of the restructuring of urban labour and housing markets in which this Australian literature has been located and of the Australian literature itself. Much of this Australian literature has focussed on identifying the extent of residential socio-spatial polarisation rather than focussing on the implications of residential homogeneity when employment opportunities are more homogeneous than residential locations. Only that literature which directly addresses the question of affordability, occupation and location will be covered below.

O'Connor and Healy (2002) examined the links between housing and labour markets within metropolitan Melbourne and focussed specifically on the way in which the geography of employment was linked to metropolitan development. Melbourne was divided into 10 regions presumed to capture "the contemporary socio-economic structure of the Melbourne metropolitan area" (p7).

Their results suggest strong and stable geographic links between housing and labour markets with a relatively high degree of regional market self-containment and residential self containment,<sup>7</sup> supporting the claim that the presence of job concentrations (such as new economy in the city core and old economy in the inner SE) is reflected in residential choice of workers. In O'Connor and Healy's view, social and industrial workplace sorting is the key to self-containment measures. They see the outcomes being described by two general processes. Regions with high self containment have a concentration of particular types of work that induces residential relocation in that work. This maintains self containment and suggests that people follow jobs. On the other hand, regions with low self containment have fewer and more diverse jobs. In these regions, population growth runs ahead of employment. This induces expansion in service type jobs which are taken up by local residents so that, eventually, self-containment will begin to rise.

They saw the inner Core region in Melbourne as becoming increasingly separate from the remainder of the metropolitan region, consistent with Sassen's social and spatial polarisation or Fainstein's divided cities hypotheses (Fainstein, 1992; Sassen, 1991).

One of the difficulties of much of O'Connor and Healy's otherwise valuable work is that it has related the labour market outcomes of individuals to housing market outcomes of households. It makes no direct connection with household structure and housing affordability and does not distinguish between labour market outcomes for those who are already established in the housing market (for example older workers) from those who have yet to be established (for example, younger workers). Residential gains and losses for selected regions are presented for different household characteristics but

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<sup>7</sup> The former implies that a high proportion of workers are employed in their respective regions of residence; the latter that residential moves are mostly within the region where people already live or to an adjoining region.



these are not cross classified by the socio-demographic and economic factors that affect and limit housing choices.

Workers are classified by high and low status according to their occupations (single digit ASCO codes are employed) but not according to their incomes. This is problematic for two reasons. In the first place, ASCO codes are relatively broad level and cover a whole spectrum of potential earnings. Details are provided in Chapter 3. Secondly, individual earnings do not reflect household income. Again, further details are provided in Chapter 3. This is somewhat ironic given that the much more developed literature on socio-spatial polarisation (as reviewed by Dodson, 2004) makes precisely these distinctions. However, despite these limitations, and not surprisingly, O'Connor and Healy's analysis of journey to work data show "high status workers have very strong home-work links in the Core where more than 80 per cent find work in their home region. Of those low status workers who do live in the Core, only about 55 per cent are able to find work within their region. For the remainder of Melbourne's regions, the converse is the case. In non-Core regions... low status workers are much more likely to find work within their region of residence than high status workers who often travel to the core to work" (O'Connor and Healy, 2002, p35).

A report for VicUrban on key workers and affordable housing in the Docklands (Burke and Esposto, 2003) attempts to overcome this difficulty of relating labour market outcomes for individuals to housing market outcomes of households by generating hypothetical data in which affordability outcomes are separately identified for single income workers and couples with both in employment. These data are based on official wage data and on the assumptions that all work full time; that females earn 78 per cent of male earnings in the same occupation and that couples both work in the same (3 digit) occupational category. They explicitly recognise this is not realistic but suggest that it does give a realistic picture of the affordability constraints faced by those on modest incomes. They use their results to highlight the strong spatial dimensionality of affordability issues and express a concern that housing affordability constraints can lead to spatial segregation, arguing "spatially segregated cities can have troubling longer-term implications, most clearly in evidence in North American and European cities. Segregated cities with the associated uneven access to key urban resources can create social problems of higher crime rates, lower school retention rates, higher risk of family breakdown etc." They suggest "Greater socio economic diversity can create greater diversity of labour markets and reduce dependence on any one-industry or occupational sector. The effects of the IT collapse and the decline of manufacturing industry on certain spatial areas illustrate the need for labor markets to have as diverse an economic base as possible."

The study done by Randolph et al (2004) focuses more precisely on workers in specific occupations and highlights the difficulties of making general statements once this level of detail is taken into account. Their report for Landcom documents the affordability problems faced by moderate income households in the greater Sydney region and shows how these problems have become increasingly worse over the last two decades. At a broad level, their study focuses on households with household incomes

of \$40,000 to \$65,000 per year (corresponding approximately to the 40<sup>th</sup> and 60<sup>th</sup> percentile of the income distribution for all households in Sydney). At the specific level, they examine outcomes for computer professionals, registered nurses, primary and secondary teachers, truck drivers and sales assistants. These five occupational groups were a pragmatic choice: they were among the larger of those in which most middle income households were categorised (using the reference person within the household as the basis on which to categorise households by occupation). They were also chosen to provide examples from both the public and private sectors, although it was recognised that the distinction in reality is blurred. Importantly, this study recognised that while households form the basic decision making 'agent' in housing market transactions, labour market positions are occupied by individuals. This poses problems for linking housing markets and labour markets together, given the complexity of household structures. The study used the occupational characteristics of the household reference person to classify the labour market position of each household, choosing to ignore the impact of other working household members on locational decisions.

The 'key worker' component of this study relied upon 2001 census data to identify local government areas where there was a net job surplus or deficit in the occupations identified by comparing the number of workers resident in each LGA and the number who worked there. LGAs were the chosen spatial unit for analysis on the grounds of the complexity of conducting the analysis at a finer spatial scale (suburb or collector district) as well as cost and capacity implications. The resulting analysis pointed to two areas within Sydney where there was a net deficit of workers in the five key worker groups identified. These were the LGAs associated with the 'Global Arc' from Botany through the CBD and up to Chatswood and Ku-ring-gai in the north, and a second area associated with the manufacturing and warehousing belt along the Parramatta river and out to Fairfield.

The study also showed that there are considerable differences in the outcomes for different occupations even when analysis is limited to those in the moderate income range. Of the 5 occupations considered, the employment patterns of nurses, teachers and sales assistants were more dispersed compared with those for computer professionals and truck drivers with the result that there was a greater locational dichotomy between workplace and home location, and an implied higher level of commuting, for the latter two groups than for the former. They also identified different residential patterns with truck drivers being concentrated in the outer suburbs (and closer to the more accessible of the industrial areas) whilst teachers showed a wide range of locational choice, but tended to eschew living in lower status (and therefore more affordable) LGAs where jobs were concentrated.

Detailed analysis of the key worker groups by age and tenure indicated that for most groups, younger age cohorts were more likely to be renting in inner and eastern LGAs, while older workers and/or home buyers were concentrated in middle and outer LGAs. The strong implication here was that high costs in inner and eastern suburbs meant relatively few middle income key workers could afford to buy there, and so renting was the only feasible choice for many. The age component also implied strongly that

moderate income key workers moving into more mature life stages had little choice but to relocate to more distant suburbs to buy given house price pressures across the city. However, a point-in-time survey of properties for sale in Campbelltown, Liverpool and Blacktown conducted as part of the research showed that, even in these relatively cheaper housing markets, few moderate income households could afford to buy the properties that were on the market in late 2003 without substantial equity or pushing above the 30% cost to income ratio. In fact, only 11 per cent of the properties on sale were affordable to households at the top end of the middle income range (\$65,000 p.a.) and virtually none at the bottom of the income range (\$40,000). These were nearly all flats.

More detailed analysis of the work patterns of workers in specific locations in Sydney has been undertaken by Epic DotGov (2004), Cottrell (2004) and Blunden et al (2004). The first, undertaken for the Department of Infrastructure, Planning and Natural Resources, NSW Department of Housing, Manly Council and Warringah Council, focussed on key workers, defined as those in low income occupations who provide key services to the community, such as in the areas of health, education, transport, child care and property protection. This classification was followed by Cottrell (2004) in her study of the Eastern Suburbs. On the results available to date, the work undertaken by Blunden et al (2004) for the NSW Labor Council and Shelter NSW, also has focussed on the Eastern Suburbs but has been limited to bus drivers. The occupations specifically identified in these studies are listed in Table 2.3.

**Table 2.3: Occupations identified in Australian studies**

<b>Epic DotGov, Cottrell</b>	<b>Randolph et al.</b>	<b>Blunden et al</b>	<b>ASCO code</b>
	Computing professionals		2231
Registered nurses	Registered nurses		2323
School teachers	Primary and secondary teachers		241/ 2412-2413
Enrolled nurses			3411
Ambulance officers and paramedics			3491
Police officers			3911
Motor mechanics			4211
Automotive electricians			4212
Gardeners			4623
Firefighters			4985
	Sales assistants		621
Education aids			6311
Children care workers			6312
Personal care and nursing assistants			6314
	Heavy truck drivers		7311
Bus & tram drivers		Bus & tram drivers	7312
Train drivers and assistants			7315
Elementary service workers			831
Cleaners			9111

Source: Epic DotGov (2004), Cottrell (2004), Randolph et al (2004), Blunden et al (2004)

All three studies suffer from the same concern expressed about a number of the studies reviewed above. They are based on outcomes for individuals rather than for households. Epic DotGov, for example, used a similar methodology to that employed by O'Connor and Healy (2002) in identifying residential and employment self-containment from journey to work data. This was done at a statistical sub-division level of which there are 14 within Sydney. Residential self-containment is defined as the number of residents employed locally as a proportion of those who work in the region. This is the equivalent of the definition employed by O'Connor and Healy. Employment self-containment is the proportion of the local labour force that is employed locally. These ratios differ by the numbers of in- and out-commuters. Within Sydney, residential self-containment is 47 per cent for the work force as a whole and 57 per cent for key workers, suggesting a greater reluctance for key workers to travel outside their local region for employment purposes. Employment self containment, averaging 92 per cent

for the greater Sydney region<sup>8</sup>, is greater than residential self containment indicating spatial differences in the definitions of housing and labour markets.

One of the useful innovations of the Epic DotGov study is that it charted changes from 1996 to 2001 in the residential location patterns for key workers in the study region. A shift share analysis, which compared outcomes in the Northern Beaches with outcomes for Sydney as a whole, provided a means of separating out effects that were due to changes in the proportions of key workers in the Northern Beaches attributable to changes in the Sydney wide employment of key workers from those that might be attributed to relative changes in regional housing market conditions.

One of the conclusions of the Epic DotGov report was that there were more key workers than there were key worker jobs in the Northern Beaches with the result that there were relatively few problems in filling key worker jobs in this region despite a marked deterioration in affordability. In part this was attributed to the fact that many key workers owned their own homes (or lived in owner-occupied housing) and to the attractive local environment which meant it was easy to attract key workers. Key workers can afford to live there because they have done so for a long time. Recruitment problems were emerging for lower paid staff with the most serious problems being for nurses, child care workers and mechanics. For these workers, however, remuneration and career prospects were more of a concern than were housing costs. Declines in the percentage of resident key workers who own their own homes, however, was seen as a potential signal of future affordability based recruitment problems as younger workers moved to regions where housing for purchase was more affordable.

Both Cottrell (2004) and Blunden et al (2004) have undertaken a similar, although less comprehensive analysis for the Eastern Suburbs in Sydney as that undertaken by Epic DotGov for the Northern Beaches. Cottrell uses census data to show that key workers (as defined) are moving out of the Eastern Suburbs with a significant reduction in the numbers under 40 who can't afford to live in the Eastern Suburbs and so look elsewhere when they are ready to purchase. The interviews undertaken by Blunden et al provide support for this. Analysis undertaken at an individual level shows many of the current young workers in the occupations of interest as living in owner-occupied housing. When the analysis is undertaken at an individual rather than household level, this outcome is as likely to reflect the tenure of their parents as of the individual of concern. This highlights a further difficulty in defining the target group of interest.

Several policy initiatives from state housing authorities could be seen as a response to the concerns expressed in the studies reviewed above. The NSW Department of Housing, for example, announced a pilot initiative in 2004 which aimed to provide a small number of dwellings (in Thornleigh in northern Sydney) to key worker households on moderate incomes who worked in the region. Key workers were defined as those who provide a service that contributes to the well being of the community and are

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<sup>8</sup> Extended from the Sydney Statistical Division to include the Newcastle, Wollongong and Balance of Illawarra SDs.

unable to afford appropriate accommodation on the open market. The definition includes, but is not limited to, hospital workers, teachers, childcare workers, police, transport workers or fire fighters. Key Workers could be employed in the public or private sectors. Priority may be given to Key Workers employed in industries experiencing recruitment or retention problems in the Thornleigh area (NSW DoH, 2004).

A Queensland Department of Housing report acknowledges there is no commonly accepted definition of what constitutes a key worker but suggests "the term broadly implies occupations necessary to the efficient functioning of a community, particularly service industries." Key workers are seen as those who may provide an essential service in areas where they cannot afford to live and who, as a result, may undertake considerable travelling between place of work and home. This is seen as a major barrier to many workers, given the conditions and nature of their employment (Queensland DoH, 2003).

For a specific housing project in Kelvin Grove (a central region within the Brisbane metropolitan area), key workers were defined as being characterised by one or more of the following criteria:

- Low incomes (in recognition of the low base awards in some service industry occupations, particular for younger persons entering the workforce).
- Reliance on penalty rates or overtime to boost basic wages.
- A predominance of casual or part-time work, or where long-term job security is not apparent. Some occupations (e.g. in the creative arts industries) commonly have periods of unemployment or alternative casual work interspersed with working in their chosen field.
- May work night shifts, split shifts or irregular hours, including times when public transport is irregular or unavailable.
- May work in areas where free employee car parking is not provided, and alternative public transport is not practical.
- Generally lacking higher tertiary qualifications, although some groups such as community service workers, teachers and nurses are exceptions.

The importance of this definition is that it moves the concept of what constitutes a key worker further away from a focus on occupational categories to a more nuanced understanding of the labour market conditions in which a person undertakes work, particularly in the terms and conditions of employment. Unfortunately, this only adds complexity to the definitional issue.

## **2.4 Summary**

A number of observations can be made from the review above of the relatively limited evidence to date on the interactions between housing and labour market outcomes for workers in what might be called 'indicator' occupations.

The first is that it is important to identify the extent to which shortages are national and due to general labour market shortages, rather than regional or local and due to housing market constraints. These issues will be discussed in more detail in the Final Report for this study. In fact, the literature signals that the focus of the study should be on regions with high housing costs.

A second arises from the evidence that difficulties described here apply to working households, particularly younger workers, who aspire either to independent living or who are constrained in their ability to purchase rather than rent. This signals the importance of focussing on age, household structure and tenure. These issues also will be addressed in more detail in the Final Report.

A third observation is that useful generalisations can be drawn if the analysis is limited to a broad categorisation of workers - defined either or both by having incomes within a defined range or as belonging to some well defined occupational grouping. Once an attempt is made to distinguish between outcomes for workers with one occupation or another, outcomes are likely to be affected by the specifics of the occupation or the location of the industry which is the key employer of workers within that occupational grouping. This is particularly problematic for a national study where the definition of essential workers will differ depending on the characteristics of the region. Whilst this level of detail is of critical importance at a local level, it is likely to render analysis intractable at a national level. In addition, recent conceptualisations of key workers have shifted away from occupational groups *per se*, to include the employment conditions workers endure, especially shift and part-time workers. These issues will influence the choice of which 'indicator' occupations or income groups are used to define the scope of this study. This is addressed in the following chapter.

The final observation follows from this point and highlights the point made in the first observation above. It relates to the spatial level at which studies have been undertaken. All of the studies reviewed above apply to problems faced by workers in specific occupations in urban areas. None focus on issues for workers in areas outside of large metropolitan regions. This reinforces the suggestion above that, whilst this study is to be undertaken at a national level, its focus is likely to be limited to specific high cost regions within the nation. This also is addressed in the following chapter.

### **3 ISSUES TO BE RESOLVED**

This chapter begins with a brief discussion of the limitations of relying on wage and salary data to determine the likelihood that an individual in the chosen indicator occupations will face a housing affordability problem. It then provides an overview of national level data relevant for addressing the issues regarding definitions of occupation and location raised at the end of the literature review in the previous chapter. The information provided in this chapter can be used to inform decisions on the unit of analysis, the population of interest and the extent of spatial disaggregation that will define the scope of the study to be undertaken for the Final Report.

#### **3.1 Unit of analysis**

Because ASCO (Australian Standard Classification of Occupations) codes have been developed to broadly reflect education and skills levels, with lowest codes being associated with higher level skills and higher level of education, casual empiricism based on average wages in various occupations might suggest that housing affordability problems are unlikely to be a problem for workers in occupations with the lowest ASCO codes. However, even a cursory analysis of incomes for wage and salary earners, suggests that occupations and related average wages do not always translate directly into earnings.

Table 3.1 provides Australia wide data on individual incomes by occupation for 2001. It clearly shows that, whilst there is a general tendency for there to be a higher proportion of managers and professionals in the top income category, there are still significant numbers of wage and salary earners in these occupations with incomes in low and middle income ranges.

On an Australia wide basis, for example, 17 percent of wage and salary earners had an income of \$52,000 or more in 2000-01. In contrast, 34 percent of managers and administrators (ASCO first edition, code 1) had individual incomes in this range but 8 per cent of labourers and related workers (ASCO first edition, code 8) also had individual incomes in this range. Conversely, whilst 36 per cent of labourers and related workers had incomes below \$20,800 (compared with 13 per cent of all earners), so, too, did 14 per cent of managers and administrators. In other words, whilst occupational classifications give a broad indication of income earning capacity, they do not give an accurate indication of income earned.

These outcomes can be attributed to a number of different factors. Firstly, the broad occupational classifications reported in Table 3.1 cover a wide range of skill levels, some of which are identified by the more detailed 2, 3 and 4 digit ASCO codes. However, at the 2 digit level for which the data summarised in Table 3.1 were reported in the original source (but not shown here), there is still the same level of variation in earnings within any occupational classification.



A second reason, related in part to skills level, is that earnings vary with age and, in some occupations, by gender. In most occupations, earnings increase as workers develop experience through on the job training or further education. This is likely to be directly related to age. Figure 3.1, which excludes those individuals who are not in the workforce, highlights the significantly lower incomes earned by younger compared with older workers, consistent with human capital theories.

A third reason is that incomes depend both on hourly wage rates and on hours worked. Casual and part-time employees obviously earn lower incomes than their full-time counterparts in the same occupation. Secondary earners in a household, for example, may work fewer hours than the primary earner.

**Table 3.1: Wage & Salary Earners Aged 15 & over, Australia, 2001**

	\$0 - <\$20,800	\$20,800 - <\$52,000	\$52,000+	Total
	(%)	(%)	(%)	(%)
1 Managers and administrators	14	52	34	100
2 Professionals	14	47	38	100
3 Associate professionals	16	60	25	100
4 Tradespersons and related workers	24	60	15	100
5 Advanced clerical and service workers	31	62	7	100
6 Intermediate clerical, sales and service workers	47	46	7	100
7 Intermediate production and transport workers	17	63	20	100
8 Elementary clerical, sales and service workers*				
9 Labourers and related workers*	36	56	8	100
99 Not Stated	48	42	11	100
Total	31	52	17	100
1 Managers and administrators	6	11	22	12
2 Professionals	9	15	34	17
3 Associate professionals	4	8	9	7
4 Tradespersons and related workers	12	14	10	13
5 Advanced clerical and service workers	18	18	6	16
6 Intermediate clerical, sales and service workers	27	13	6	15
7 Intermediate production and transport workers	3	6	6	5
8 Elementary clerical, sales and service workers*				
9 Labourers and related workers*	20	15	6	15
Total (excl not stated)	100	100	100	100
99 Not Stated	718,328	625,191	159,493	1,503,012
Total	2,299,183	3,888,111	1,284,877	7,472,171

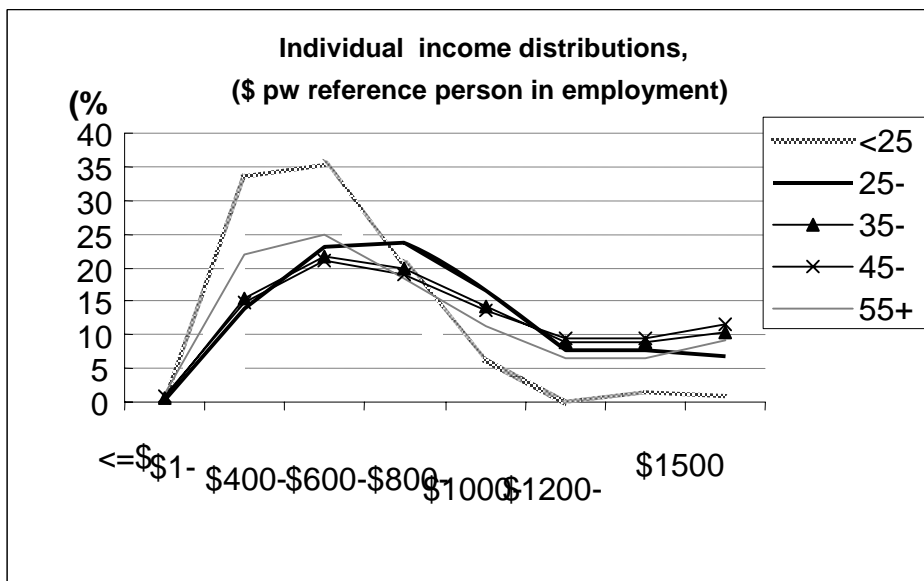
\* categories combined

Source: derived from data in ABS Wages Salaries and Earnings, Cat No 5673.0, table 9 based, in turn, on ATO Individual Income Tax Return Data for 2000-01.

A related issue arises because individual incomes do not reflect the household's capacity to pay for its housing. For this, household income is required. A comparison of the income distribution in Figure 3.1, which applies to individuals, with that in Figure 3.2, which applies to households, shows there are marked differences in the distributions of individual and household income.

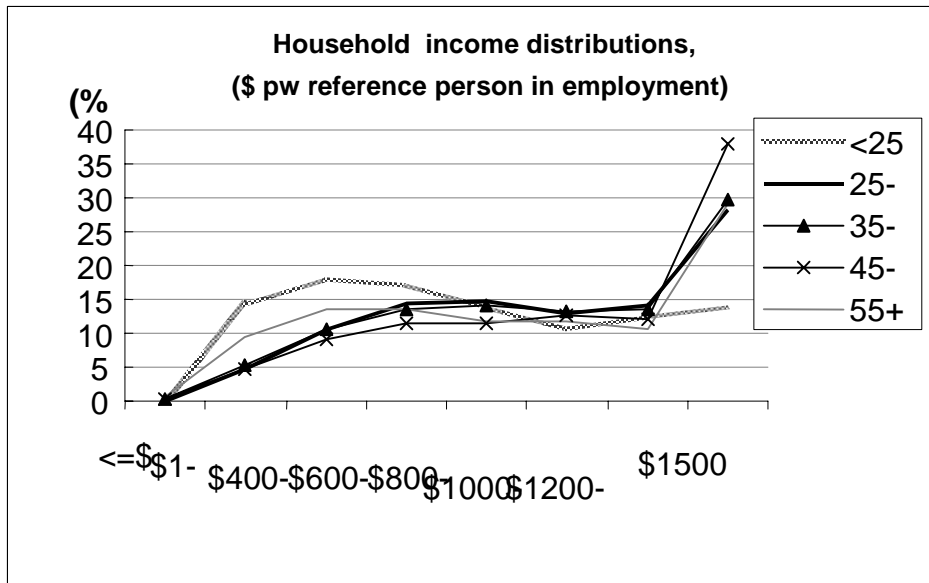
Besides the same factors that contribute to differences in individual incomes, there is one key additional factor that contributes to differences in household incomes. This is household structure. Even when all other factors (such as age and occupation) are the same, multiple income households will have higher household incomes than single income households. Households where the reference person is under 25 years old, for example, are more likely to be single income rather than multiple income households. However, it does not follow that young persons less than 25 years old are more likely than older persons to live in single person households. Many may live in the parental home. Others may live in group households. Their housing affordability outcomes are likely to be very different depending on their housing arrangements. A resolution of the issues raised by this discussion is proposed in the final section of this chapter.

**Figure 3.1: Individual income distributions, Australia 2001**



Source: 2001 Census, household sample file

**Figure 3.2: Household income distributions, Australia 2001**



Source: 2001 Census, household sample file

### 3.2 Choice of occupations of interest

Leaving the issue of income to one side, several approaches to the choice of occupations to be used for the analysis of key jobs are possible. One approach might be to base the choice on assessments of those occupations for which there are labour market shortages. Several sources of such estimates are available. The most reliable national source is the National Skills Shortage Lists published regularly by the Department of Employment and Workplace Relations (DEWR). These lists show the range of occupational groups where skill shortages are known to exist. While these point to a range of specific skills that are in short supply, DEWR point to ambiguity in what these data may actually mean.

“There is considerable ambiguity about the term ‘skill shortages’ in industry and media discussions, and in developing guidelines for training, migration, labour market programs and regional skills analysis. The term ‘skill shortages’ is often a surrogate for more general recruitment difficulties, or skill gaps” (Department of Employment and Workplace Relations, 2004, p 12)

Moreover, the DEWR lists only provide limited geographical information about skill shortages. For example, Table 3.2 below gives the range of 29 occupational groups for which skill shortages or recruitment difficulties were reported in 2004 in either metropolitan or rural areas. This is derived from a list of 143 specific occupation groups listed as having shortages. A more detailed spatial disaggregation, which is more likely to reflect a region that might define a housing or labour market, is not available.

Only seven of these occupational groups showed shortages or recruitment difficulties specifically in metropolitan areas, the rest being in rural areas. From the accompanying notes, it is clear that such shortages are largely seen as labour market problems due to supply side factors such as a general lack of trained or qualified workers, or generic jobs-skills mismatches, and not due to housing market factors such as affordability. In addition, the Skills Shortage List also lists a wide range of Information, Technology and Communications skills categories that currently suffer from shortages across the country, undifferentiated by region. It seems clear, therefore, that these occupations are not in short supply due to specific locational factors.

Consequently, such lists do not appear to offer a satisfactory basis for the choice of target groups for this analysis, although they can inform that choice and they do signal the need to distinguish problems arising from local housing market conditions from those arising from regional or national labour market conditions. It is notable that engineers, health care and medical workers, child care workers, secondary teachers, social workers, lawyers, and a wide range of skilled trades workers are prominent in these skills shortages lists.

The second approach is to concentrate on public sector occupations that are deemed to be essential for the proper functioning of a locality but, with salary scales prevalent in the public sector (often based on national or state-wide salary rates), may have difficulty in meeting housing costs in certain areas. The lists in Table 2.1 to Table 2.3 above illustrate the prominence of public sector occupations in previous research in this area. The current key worker programs in the UK are targeted specifically on employees in public sector occupations (see Table 2.1). In part, these have been influenced by those instances where policy makers have identified key groups for housing assistance programs. However, it is not at all clear that the occupations listed are limited to public sector employment, especially for those sectors that have been subject to privatisation in recent years or where the private sector accounts for a substantial component of the provision of these services. This is likely to be even more of an issue in Australia than in the UK.

The literature review reported in Chapter 2 suggests that a number of other factors may be important in identifying appropriate occupational groups for this analysis. In particular, the size of the group needs to be large enough to allow disaggregated spatial analysis to be undertaken. The groups should also be those that are in demand or in growing sectors of the labour market.

**Table 3.2: Skills shortages in identified geographical areas, 2004**

<b>Skill</b>	<b>Region</b>	<b>ASCO Code</b>
Child Care Coordinator	Metro NSW, Regional NSW, Regional WA	1295
Child Care Worker	Metro NSW, Regional NSW	6312
Electrical Engineer	Metro NSW	2125
Electronics Engineer	Regional NSW	2125
Dentist	Regional VIC	2381
Pharmacist (Hospital/Retail)	Regional WA	2382
Occupational Therapist	Regional NT	2383
Speech Pathologist	Metro NSW, Regional SA	2386
Secondary Teacher	Regional QLD	2413
Secondary Teacher – Manual Arts/ Tech Studies	Regional WA	2413
Secondary Teacher - Maths/Science	Regional TAS	2413
Secondary Teacher - Physics/Chemistry	Regional WA	2413
Secondary Teacher - Maths	Regional WA	2413
Secondary Teacher - LOTE	Regional WA	2413
Secondary Teacher - Home Economics	Regional WA	2413
Secondary Teacher - Special Education	Regional WA	2413
Social Worker	Regional VIC, Regional NT	2511
Lawyer	Regional NSW, Regional VIC	2521
Sheetmetal Worker	Metro NSW	4124
Metal Fabricator	Regional NT	4122
Welder	Regional NT	4122
Electrician	Regional VIC	4311
Carpenter and Joiner	Regional VIC	4411
Roof Slater and Tiler	Regional VIC	4413
Bricklayer	Regional VIC, Metro VIC	4414
Plumber	Metro QLD, Regional QLD	4431
Chef	Regional QLD, Regional TAS	3322
Cook	Regional QLD	4513
Printing Machinist	Regional QLD	4912

Source: DEWR (2004)

In order to better understand the distributional characteristics of occupational groups in the Australian economy, data from the 2001 census was obtained for all four digit occupational categories by gender for all employed persons and all employed reference persons (the person that was placed first in the list of household members on the census form). Focusing on the top 20 occupations by numbers of employed persons identifies those groups with large numbers. The results are presented in Table 3.3 to Table 3.5.

Table 3.3 lists the top 20 occupations for all employed persons and supplements this with a gender breakdown of those employed. The data are person level data and are ranked in descending order by total number employed. Table 3.4 repeats this table at a household level, with the household occupation being defined by that of the reference person. Table 3.5 compares the results of Table 3.3 and Table 3.4. Table A.1 to Table A.4 in Appendix A provide equivalent data to Table 3.3 and Table 3.4 on the top 20 occupations for males and females respectively.

Several points can be drawn from these tables. Firstly, the gendered nature of occupations is quite evident from the data presented in Table 3.3. By far the largest single occupational group, sales assistants, accounted for 471,225 persons, of whom 71% were female. Over nine out of ten secretaries and personal assistants, registered nurses and receptionists, all groups in the top 10 by numbers of individuals, were women. In contrast, only 2% of the 110,961 truck drivers, the second top male profession (as shown in Table A.1), were female.

Secondly, workers in only three of the top 20 occupational groups reported in either Table 3.3 or Table 3.4 (that is, based on either individuals or households as defined by the reference person) could be thought of as consisting predominantly of public service workers: these are primary and secondary teachers and registered nurses. However, even these occupational groups are likely to include workers in private institutions. Other groups in the list similarly will contain workers in both public sector and private sector employment. For example, secretaries, computing professionals, receptionists, office managers and project administrators might be employed in either the public or private sectors.

Thirdly, the size of the occupational groups in Table 3.3 or Table 3.4 declines quite rapidly, and even more so when the data are split between genders (as shown in Appendix A). This constrains the capacity to undertake any analysis of a wide range of occupations and renders analysis at a spatially disaggregated level increasingly problematic. This problem is exacerbated for an analysis at the household level since the numbers of reference persons in a particular occupation is necessarily lower than the total number employed in that occupation.

Fourthly, as can be deduced from the data in Table 3.5, the list of top 20 occupational groups for all employed reference persons shows a bias to male dominated occupations compared to the all employed persons list. This suggests that any analysis of housing affordability at the household level which employs an occupational cross-classification needs to ensure this bias is addressed.

This analysis suggests there are a number of options for identifying target groups for this project. It might be appropriate to choose groups with a balance between men and women to ensure gender biases are not material to the outcomes. On the other hand, it might be appropriate to choose both balanced and biased groups to highlight the gendered nature of employment and the implications for housing consumption for men and women. It suggests that the choice of the reference person with the chosen occupation is an inappropriate way of identifying households of interest. A significant proportion of workers in the chosen indicator occupations may be secondary workers in a household. Obvious examples are the partner of a reference person in a couple household or an independent young adult living in the parental home.

The proposed solutions to the issues discussed here are presented in the summary section at the end of this chapter.

**Table 3.3: Males and females in the top 20 occupations in Australia, 2001**

<b>Occupation</b>	<b>Number of Employed Persons</b>	<b>% of total</b>	<b>Employed Males</b>	<b>% employed within occupation</b>	<b>Employed Females</b>	<b>% employed within occupation</b>
Sales Assistants	471,225	5.7%	136,354	28.9%	334,871	71.1%
Cleaners	181,424	2.2%	75,168	41.4%	106,256	58.6%
Secretaries and Personal Assistants	171,631	2.1%	2,892	1.7%	168,739	98.3%
General Clerks	169,735	2.0%	30,833	18.2%	138,902	81.8%
Shop Managers	164,137	2.0%	91,395	55.7%	72,742	44.3%
Registered Nurses	142,202	1.7%	10,848	7.6%	131,354	92.4%
Storepersons	127,719	1.5%	99,307	77.8%	28,412	22.2%
Computing Professionals	126,497	1.5%	98,710	78.0%	27,787	22.0%
Receptionists	114,576	1.4%	4,191	3.7%	110,385	96.3%
Sales Representatives	112,420	1.4%	75,352	67.0%	37,068	33.0%
Primary School Teachers	112,318	1.4%	18,262	16.3%	94,056	83.7%
Truck Drivers	110,961	1.3%	108,497	97.8%	2,464	2.2%
Accountants	107,091	1.3%	60,802	56.8%	46,289	43.2%
Secondary School Teachers	104,900	1.3%	45,213	43.1%	59,687	56.9%
Office Managers	98,898	1.2%	16,948	17.1%	81,950	82.9%
Sales and Marketing Managers	94,314	1.1%	65,807	69.8%	28,507	30.2%
Project and Program Administrators	90,891	1.1%	43,216	47.5%	47,675	52.5%
Livestock Farmers	88,267	1.1%	58,967	66.8%	29,300	33.2%
Checkout Operators and Cashiers	88,157	1.1%	19,057	21.6%	69,100	78.4%
General Managers	85,875	1.0%	68,721	80.0%	17,154	20.0%
<b>Total</b>	<b>8,298,675</b>	<b>100.0%</b>	<b>4,546,807</b>	<b>54.8%</b>	<b>3,751,868</b>	<b>45.2%</b>

Source: Special request table from 2001 Census of Population and Housing.



**Table 3.4: Males and females (reference persons) in the top 20 occupations in Australia, 2001**

Occupation	Number of Employed Persons	% of total	Employed Males	% employed within occupation	Employed Females	% employed within occupation
Sales Assistants	123,917	3.1%	51,115	41.2%	72,802	58.8%
Shop Managers	83,802	2.1%	63,798	76.1%	20,004	23.9%
Cleaners	78,316	1.9%	44,510	56.8%	33,806	43.2%
Truck Drivers	74,080	1.8%	73,245	98.9%	835	1.1%
Computing Professionals	73,445	1.8%	62,548	85.2%	10,897	14.8%
Sales Representatives	64,127	1.6%	50,784	79.2%	13,343	20.8%
General Managers	59,835	1.5%	52,549	87.8%	7,286	12.2%
Sales and Marketing Managers	59,499	1.5%	47,253	79.4%	12,246	20.6%
Secondary School Teachers	58,947	1.5%	33,800	57.3%	25,147	42.7%
General Clerks	58,378	1.4%	18,519	31.7%	39,859	68.3%
Accountants	56,906	1.4%	41,444	72.8%	15,462	27.2%
Registered Nurses	54,443	1.3%	6,920	12.7%	47,523	87.3%
Storepersons	52,511	1.3%	44,634	85.0%	7,877	15.0%
Livestock Farmers	52,418	1.3%	46,481	88.7%	5,937	11.3%
Secretaries and Personal Assistants	51,596	1.3%	1,776	3.4%	49,820	96.6%
Project and Program Administrators	51,069	1.3%	31,144	61.0%	19,925	39.0%
Primary School Teachers	49,016	1.2%	13,413	27.4%	35,603	72.6%
Metal Fitters and Machinists	46,994	1.2%	46,798	99.6%	196	0.4%
Electricians	46,372	1.1%	46,075	99.4%	297	0.6%
Motor Mechanics	44,837	1.1%	44,622	99.5%	215	0.5%
<b>Total</b>	<b>4,049,866</b>	<b>100.0%</b>	<b>2,829,323</b>	<b>69.9%</b>	<b>1,220,543</b>	<b>30.1%</b>

Source: Special request table from 2001 Census of Population and Housing.

**Table 3.5: Comparison of the top 20 occupations of all employed persons and employed reference persons in Australia, 2001**

<b>Occupation</b>	<b>Number of Employed Persons</b>	<b>Number of Reference persons</b>	<b>Reference persons as a % of employed persons</b>
Sales Assistants	471,225	123,917	26.3%
Cleaners	181,424	78,316	43.2%
Secretaries and Personal Assistants	171,631	51,596	30.1%
General Clerks	169,735	58,378	34.4%
Shop Managers	164,137	83,802	51.1%
Registered Nurses	142,202	54,443	38.3%
Storepersons	127,719	52,511	41.1%
Computing Professionals	126,497	73,445	58.1%
Receptionists	114,576	35,373	30.9%
Sales Representatives	112,420	64,127	57.0%
Primary School Teachers	112,318	49,016	43.6%
Truck Drivers	110,961	74,080	66.8%
Accountants	107,091	56,906	53.1%
Secondary School Teachers	104,900	58,947	56.2%
Office Managers	98,898	39,324	39.8%
Sales and Marketing Managers	94,314	59,499	63.1%
Project and Program Administrators	90,891	51,069	56.2%
Livestock Farmers	88,267	52,418	59.4%
Checkout Operators and Cashiers	88,157	16,045	18.2%
General Managers	85,875	59,835	69.7%

Source: Special request table from 2001 Census of Population and Housing.

### 3.3 Choice of regions of interest

The second issue that arises for the research to be undertaken in this study is identification of the specific regions to be analysed. A prior issue is determination of the level of the appropriate level of spatial disaggregation. These questions are addressed in this section.

#### 3.3.1 *Level of spatial disaggregation*

Because the implicit focus of the project is on the interaction of housing and labour market outcomes for particular workers, the appropriate spatial level will be one which can be related back to regions that reasonably delineate housing and/or labour markets.

The BTRE (2003), for example, has identified 425 labour market regions, based on commuting patterns revealed by the 2001 census. These are defined in terms of residential containment and are regions in which the majority (typically at least 70%) of employed residents work in the region. Outside of the metropolitan areas, the majority (337) are stand alone SLAs although a small number of these (15) had a few as 50% of residents working in the same region.

"In concept, labour market regions reflect the area within which people are willing to commute from their place of residence to their place of employment." BTRE (2003, IP 49, p17)

This suggests that, outside of the metropolitan area, the SLA provides a logical starting point for defining regions. This choice is consistent with that adopted by Lawson and Dwyer (2002) in their study of labour market adjustment undertaken for the Reserve Bank. Lawson and Dwyer (2002) argue for use of SLA as the basic unit for determining the boundaries of a regional labour market. They point to three methods for delimiting regional boundaries in the regional science literature. These are based on homogeneity (with respect to a key economic element), nodality (derived from the outer limits over which people can commute to the central location of economic activity) and programming (based on administrative and political areas. They suggest that outside of the capital cities, regions any larger than SLA are too large for commuting.

Within the capital cities, however, the BTRE recognise that the SLA is too small a unit to reasonably define a labour market and treat capital city labour markets differently, defining the whole capital city plus its surrounds as a unified labour market. For the capital cities, Lawson and Dwyer also follow the BTRE solution and aggregate their region up to SD level.

However, this solution defeats one of the key tasks of this research project. It does not allow for an examination of the extent to which affordability within a particular metropolitan region affects the residential location choices of workers in that region.

The limited number of housing sub-market analyses that have been undertaken in Australia provide little further guidance. Bourassa et al (2004), for example, used local government areas as their spatial unit of analysis for identifying housing sub-markets.

Randolph et al (2004) used local government areas for their study of housing needs for moderate income worker. Melhuish and King (2004) use SLAs for their small area housing demand projections. In Sydney at least, LGAs provide a close approximation to SLAs although there are approximately twice as many LGAs as SLAs on an Australia wide basis (roughly 1400 compared with 700 in 2004). On an Australia wide basis, use of the LGA as a spatial unit can be problematic because of amalgamations that have taken place. Also, Brisbane has only one LGA (but 158 SLAs).

In their study of the links between housing and labour markets, O'Connor and Healy (2002) chose to segment the Melbourne metropolitan area into 10 regions. These were customised regions, based on planning regions within Melbourne but were similar to the 16 SSDs within the Melbourne SD. Both Phibbs (2004) and Cottrell (2004) used a single SSD as the spatial unit of analysis for their studies of Sydney.

This study proposes use of the SLA for regional Australia and the SSD as the most appropriate spatial unit of analysis for capital cities as a compromise between SLA, which is too small a geographical scale within metropolitan areas and the SD, which is too large.

### *3.3.2 Identification of high cost regions*

This section reviews 2001 census data on median rents by SSD within the capital cities and SLA for the rest of Australia to help identify those locations in each state in both metropolitan and non-metropolitan areas with high housing costs. This in turn will assist in identifying those locations that will form the geographical basis of the analysis of housing and labour market interrelationships for the target occupational groups for this study.

Census rent data was chosen on a purely pragmatic ground as a proxy for high housing costs. This dataset represents the most readily available and cost effective indicator of housing cost at the local level available. House price datasets are not readily available for the whole of Australia at SLA or lower spatial scales, or would be prohibitively expensive to create from state data bases. While rents do not perfectly reflect variations in house prices and do not exhibit the more extreme spatial polarisation that house prices do, they nevertheless can be taken as a relative indicator of broader housing costs.

Table 3.6 below lists the 20 SSDs and SLAs that had the highest median rents in Australia in 2001. More detailed data are presented in Tables B.1 to B.8 in Appendix B, along with a discussion of changes in rents from 1996 to 2001. Figures B.1 to B.9 in Appendix B provide a visual representation of these data. The data in Appendix B have been generated at an SLA level for both metropolitan and non-metropolitan regions with the result that median rents for a number of metropolitan SLAs are considerably higher than those presented below for metropolitan SSDs. This highlights the effect of aggregation: the larger the regions considered, the less disperse will be median rents.

**Table 3.6: Median rents for top 20 regions in Australia, 2001**

City/State	SSD for non-metro regions	SSD/SLA	Median Rent (\$pw)
Sydney		Eastern Suburbs	300
RoQld	Gold Coast City - B	Main Beach-Broadwater	300
Sydney		Lower Northern Sydney	295
Sydney		Northern Beaches	290
Sydney		Central Northern Sydney	288
Sydney		Inner Sydney	250
Sydney		Inner Western Sydney	245
RoQld	Gold Coast City - B	Robina	235
RoQld	Gold Coast City - B	Hope Island	230
Sydney		St George-Sutherland	225
RoQld	Sunshine Coast	Noosa (S) - Noosa-Noosaville	220
RoQld	Gold Coast City - B	Benowa	215
RoQld	Gold Coast City - B	Broadbeach Waters	215
Melbourne		Inner Melbourne	210
Melbourne		Boroondara City	210
RoQld	Gold Coast City - B	Bundall	210
RoQld	Gold Coast City - B	Parkwood	210
RoNSW		Snowy River (A)	200
RoQld	Gold Coast City - B	Broadbeach	200
RoQld	Gold Coast City - B	Burleigh Waters	200

Source: Special request table from 2001 Census of Population and Housing.

Several points can be summarized from the data on median rents by SSD and SLA presented in Table 3.6 above and by SLA in Tables B.1 to B.8 in Appendix B. In NSW, the levels of rents in Sydney completely overshadow those in other parts of the State. Except for Queensland, the same pattern is repeated for all other States. In Queensland, SLAs on the Gold Coast have rents only marginally lower than those in Brisbane, suggesting that this region needs to be included in assessing the affordability issues facing the target occupation groups in Queensland (see Figure B9).

A second observation is that rent levels in the other capital cities are generally well below those recorded for Sydney, Melbourne and Brisbane. Seven of the ten SSD/SLA regions with highest median rents are SSDs in Sydney; the remaining 3 are SLAs outside of Brisbane. All are in the Gold Coast City Part B SSD as are 7 of the next ten SSD/SLA regions ranked by median rent. Only 2 SSDs in Melbourne and none in Brisbane are ranked in the top 20 although the data in Appendix B does show there are smaller SLA regions within Melbourne and Brisbane SSDs with median rents that

match those in the Gold Coast. The fact that the regions employed are not of equal size is an unavoidable weakness of relying upon median rent data defined at a regional level.

The question then arises as to which areas should be selected for the high cost areas on which the study needs to focus. The distribution of absolute rental levels clearly places inner and northern Sydney, inner Melbourne and inner west Brisbane well ahead of the rest of the country, with a few minor exceptions most of which are based on relatively small area data such as certain suburbs in Canberra. Similarly, there are few non-metropolitan areas that match metropolitan cost levels with the exception of South East Queensland which can properly be seen as part of the Greater Brisbane metropolitan area. From this it seems reasonable to conclude that, as long as the Gold Coast is included within the Brisbane region, the study will not cover non-metropolitan areas. Any job skill shortages in non-metropolitan regions are much more likely to be a result of labour supply factors than housing affordability issues.

### **3.4 Summary**

Which groups might form an appropriate basis for this project? Previous research suggests there are several criteria on which a choice could be made. Firstly, the issue of whether key workers are from the public or private sectors needs to be addressed. Given the limited number of occupational categories that lie totally within one or other sector, it seems this criteria is somewhat spurious. The focus might therefore be on what might be called 'public services' workers more generally. This might include the 'traditional' public sector groups such as police, teachers, workers in public administration and government and train drivers, but also other areas of semi-public services such as health workers and bus drivers. However, it is also evident that previous research has increasingly rejected a strict focus on public services as defining key worker occupations. Which other occupations could therefore be seen as essential to the functioning of the city? Moreover, should the focus be on 'essential' workers at all, given the conceptual difficulty in defining what these might be?

A second defining dimension is income. Most of the literature on this subject focuses on lower to middle income groups. This makes intuitive sense as affordability problems faced by households on above average incomes can reasonably be put down to choice more than constraints.

A third defining dimension is the issue of gender and the gendered nature of occupational groupings. It might be preferable to choose contrasting occupations in which either men or women predominate to explore any potential gender differences. An alternative might be to include occupational groupings with more balanced gender profiles. This issue is compounded by the issue of whether the person is in a single earner household or part of a dual or multiple income household.

The distribution of workplaces might also be considered in selecting occupational groups for the study. Previous research has shown that some occupational groups have widespread workplaces (retail workers, teachers), making the definition of

distinctive workplace-home relationship more difficult. Others have more locationally concentrated distributions - computing professionals, for example. The residential constraints may be more obvious for workers in geographically concentrated occupations than for more dispersed ones. However, it may be that a range of workplace concentration characteristics should be included in the choice of occupational groups to illustrate this issue.

A further complicating factor is the extent to which salary levels for different occupational groups are subject to state or national wide pay scales, or whether pay is set more locally in response to of labour supply pressures. This, of course, is where many public sector workers lose out, unless specific metropolitan weightings are paid as income supplements. This can explain the focus on these groups in much of the literature and policy response to the key worker problem. However, it is difficult to see how the ABS occupational groupings can assist in determining this factor, although there are several of the groups that would appear to be entirely dependent on such sector-wide wage negotiations, such as police and, teachers and nurses.

A sixth issue concerns the nature of the employment situation workers are in. Are shift workers and those on part-time or irregular hours more likely to experience key worker 'syndrome', where incomes are too low to allow them to live near to their work or near to convenient transport facilities.

Finally, the level of spatial aggregation needs to be addressed. Many of the shortages observed in the labour market are global rather than local and many that are local arise in low cost rather than high cost regions, suggesting that housing affordability is not the key factor contributing to shortage. The analysis above suggests use of sub-regions within the larger capital cities in Australia to test the impact that affordability might have on shortage.

The research outline summarised in the final chapter suggests that, rather than getting tied into a potentially flawed analysis based on essential worker concepts, the objective for this project is to test the impact of high housing costs on the workplace-home relationship for all workers. The task at this stage therefore is to identify 'indicator' groups in the workforce that might be seen to be typical of workers who are likely to experience real constraints on their residential location choices as a result of high cost housing in or around the places they work. Income, gender, employment conditions and locational concentration could all play a part in this.

## 4 RESEARCH QUESTIONS AND METHODOLOGY

### 4.1 Research questions

The research to be undertaken for this project will address the following questions:

- How can the occupational circumstances of a household (rather than an individual) be appropriately defined with regard to assessing the housing affordability outcomes of households? Affordability will be addressed in relation both to rental housing and to home purchase.
- What are the travel to work patterns for individuals with the occupation and household characteristics selected for consideration?
- What are the housing affordability outcomes for the households in which the selected individuals live?

### 4.2 Approach

The research will be undertaken in a number of identifiable steps, most of which will be concluded with a consultation with the user group. The analysis will be limited to households where at least one member is currently employed. This constraint is imposed because, in the data sets that will be used for this study, occupation is not defined for unemployed persons or for persons not in the labour force. In any event, the focus is on working households, rather than those dependent on benefits or pensions.

In the first instance, however, a simple (if somewhat problematic) overview of affordability outcomes for individuals cross-classified by their respective occupations will be provided in order to indicate the extent to which affordability problems can be associated with specific occupations. Some of the reasons why such an analysis is likely to be of limited use have been identified in Chapter 3. For example, it will not provide any indication of the extent to which it is occupation, the individual's household (and hence household income) status, or their housing and location choices that are more relevant to determining affordability outcomes. It will also not provide any insights into the extent to which housing affordability issues are resolved by long commutes to work.

#### *4.2.1 Determining occupations to be considered*

There are two broad approaches that might be taken. The first is to select workers in what are described above as indicator occupations that are indicative of those that have been covered in the literature. The second is to define households of interest by their income characteristics.

##### *Definition by ASCO code*

Two categories that fit the requirement of the first approach and reflect the range of issues discussed in Chapter 3 are computer operators (ASCO 223) and registered nurses (ASCO 232). Both occupations are associated with growth sectors, respectively



information and communications technology and health services. The first covers those who work predominantly in the private sector. The second is likely to have a much higher proportion of public sector employees. The first is a male dominated occupation critical to the growth of the knowledge economy (Reich, 1991; Florida, 2002). The second is a female dominated occupation, critical to maintaining a high level of service provision. The first is more likely to be dominated by young workers than is the second, but both have nationwide shortages as evidenced in the DEWR skill shortage analysis presented above. The question of whether there are local shortages influenced by housing affordability conditions has yet to be determined. In principle, imbalances can be addressed by relocation either of jobs or workers and technology jobs may be relocated more easily than service jobs to where people can afford to live. The question of whether this has occurred also has yet to be answered.

The final list of occupations of concern will be discussed with the user group. Identification of occupations at this level of detail requires four digit ASCO codes. Available survey data, such as the 2002 GSS and the 2001 census sample record file, contain only single digit codes and hence are too broadly aggregated to identify specific occupations. The RADL (Remote Access Data Laboratory) for census data, however, does have occupation data at a 2 digit level. Despite these limitations, these data sources could be used in conjunction with household income to provide a more narrowly defined focus on households of interest (seen as those who may be in need of some form of housing assistance either to meet their rental costs or to gain access to home ownership – the so-called 'intermediate housing market'. More detailed classification will require a special request matrix from the 2001 census.

The issue of whether all essential workers can be aggregated into one broad analysis group or whether a more detailed breakdown is required is a question that is still to be considered. The initial descriptive data on the numbers of workers in different categories presented in Chapter 3 was instrumental in the choice of occupations recommended and suggests that aggregation is needed if more detailed occupational classifications are to be considered. The unpublished study by Phibbs et al (2004), for example, indicated there were fewer than 130,000 individuals in the occupational categories in Sydney in 2001 on the then current DEWR skill shortages list (extended to include cleaners). Almost 50 per cent fell into one of two categories: viz. nurses and cleaners. Motor mechanics and child care workers together contribute a further 25 per cent of the essential worker population. The remaining 25 per cent of those identified are spread across 9 further occupational categories. This reinforces the conclusion that too refined a definition of an essential worker category will render a more detailed analysis (for example by household type, housing costs, tenure and location) statistically inappropriate. This is also of relevance to the question of whether the analysis disaggregates the data into full- or part-time workers, to test the impact of different employment conditions on the outcomes for households in similar occupational groups.

### *Definition by household income*

The second approach is to assume that housing affordability constraints are defined by income rather than occupation and to undertake the analysis solely on the basis of household income. The discussion in Chapter 3 suggested that households with incomes broadly in the range from \$40,000 to \$65,000 per year are likely to be those in the intermediate housing group.

The advantage of this approach is that it would enable more detailed analysis by household characteristics other than occupation. The disadvantage is that it would change the focus of the study away from labour market outcomes and towards housing market outcomes.

In what follows, it is assumed that the first option is that preferred but it is also assumed that household income will be identified as an important characteristic for analysing outcomes. In particular, the analysis will seek to identify whether households receive income from a single or multiple earned source. This will be an important criterion in assessing the direct impact of labour market position and location of work on the residential locational choice households make.

### *4.2.2 Determining the unit of analysis*

The second step is to define households containing workers with the chosen occupations.<sup>9</sup> The discussion in Chapter 3 provides sufficient information for this decision to be made without further research.

As indicated, a number of options are available and the implications of which is chosen have been discussed in this paper. The simplest solution was to use the occupation of the reference person identified in the data. This is the conventional approach employed, for example, when classifying households by age. A similar but alternative approach when census data are employed is to use the occupation of the person identified as person number one on the census form, on the grounds that such a person is likely to be the person who is the decision maker in any household. A similar alternative is to use the occupational classification of the highest income earner in the household (but again, this would need to be constrained to ensure that such an earner belongs to the primary income unit deemed to be the decision making unit in relation to housing and location choices). The results presented in Chapter 3 are sufficient to indicate that the choice between these various approaches has a discernible impact on outcomes.

The approach to be adopted for this study is to select individuals with the selected indicator occupation and to then define the population of interest as all households that contain anyone with the occupation of interest. Affordability analyses will be undertaken at a household level with household characteristics defined by the reference person in the household. However, additional classifications will be introduced to ensure that sufficient data are collected for analysis of selected individuals who are not the

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<sup>9</sup> This step would be by-passed if the second approach outlined in section 4.2.1 was adopted.

household reference person (examples given in Chapter 3 are independent children living in their parental home or secondary earners in a household).

The journey to work analysis described below, however, will be undertaken at an individual rather than a household level.

#### *4.2.3 Determining level of spatial disaggregation target case study areas*

The definition of areas for study will be defined through a combination of both their labour market and housing cost attributes. The intention is to focus on 'job rich' and high cost areas.

Job rich areas will be derived from journey to work data available from the census. These will be defined as areas that experience a net in-movement of workers (i.e. where jobs out-number resident workers). As a result of the analysis reported in Chapter 3, the locations to be considered will be defined at an SSD level and limited to the capital cities on the eastern seaboard of Australia, with these metropolitan regions extended to include the surrounding regions that realistically might be used as residential locations for commuters to high cost regions. Thus, Sydney and surrounds will include the SSDs in Sydney plus Newcastle and Wollongong; Melbourne and surrounds will include Geelong and Brisbane and surrounds will include Gold Coast part B and the Sunshine Coast. These definitions of labour market regions are slightly broader than relevant capital city and surrounds definitions employed by the BTRE and so will have close to a 100% containment ratio for each of Sydney, Melbourne and Brisbane. The slightly smaller BTRE regions have containment ratios of 97 to 99 per cent.<sup>10</sup>

High housing cost regions have been defined on the basis of median rental costs. These have been discussed in Chapter 3. Regions that will be included in this analysis will be selected from those identified as high cost but which also are job rich with a significant level of net-in-movement of workers or regions where there is a low containment ratio (that is, where there is a relatively low proportion of workers in the region who live in that region). Containment ratios will be calculated for SSDs in the regions indicated above and the final choice of region based on balancing the labour market data defined by these containment ratios with the housing market data defined by median rents.

The results from this step will be used to identify regions for which a more detailed analysis of the housing market and residential outcomes can be undertaken. This analysis will identify households who work in the case study 'job rich/high cost' SSDs by their occupational and other household characteristics and will explore their housing locations and characteristics. This step will require purchase of a special request matrix from the 2001 census in order to obtain data for households in the indicator occupations for the regions identified.

#### Determining location and affordability outcomes

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<sup>10</sup> BTRE (2004) data base at <http://www.btre.gov.au/docs/databases/database.aspx>.

Once relevant occupations and locations have been identified, the final step of the research will be to undertake a descriptive analysis of affordability and residential location outcomes for workers in these targeted occupational classifications who work in the chosen regions. An initial presumption is that the focus of concern will be on working households with incomes below approximately \$65,000 pa.

This analysis will begin with an examination of the changes in residential location outcomes for the selected workers/households who work in the target areas for both 1996 and 2001. These location outcomes will be compared with the equivalent outcomes for the workforce as a whole in order to provide a benchmark against which any changes in residential location for the workers who form the focus of the analysis can be compared.

Affordability outcomes will be examined only for 2001 because of the higher data requirements and a need to take socio-economic and demographic characteristics into account as well as housing tenure. By its nature, housing affordability must be defined at a household (or dwelling) level since housing market decisions and rents and mortgage payments are made by the household, not by individuals.

It should be noted at this stage that a major conceptual problem of any analysis of the impact on housing costs on labour markets shortages stems from the fact that it is extremely difficult to establish the extent that local labour supply is constrained by high housing costs. What might happen in practice is that lower income key workers who work in high cost areas simply undertake longer commutes from areas where housing is more affordable. Consequently, the analysis of their housing cost or affordability position per se may show relatively little to be concerned about. The downside would be increasing commuting costs, social stress and poor traffic and environmental outcomes, rather than labour market shortages. The methodology outlined addresses this issue through a focus on the commuting 'sheds' of target occupational groups working in areas with higher than expected net in-movement of workers, as indicated above. It may also be possible to assess the transport implications by including journey to work mode in the analysis.

### **4.3 Next Steps**

The next immediate step will be to convene a user group meeting to discuss the proposed research method outlined above and to agree the final choice of target groups and case study areas in the light of the data presented in this Positioning Paper.

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## APPENDIX A: SUPPLEMENTARY OCCUPATION TABLES

Table A.1: The top 20 occupations of males in Australia, 2001

Occupation	Number of Employed Males	% employed within occupation	% of total
Sales Assistants	136,354	28.9%	3.0%
Truck Drivers	108,497	97.8%	2.4%
Storepersons	99,307	77.8%	2.2%
Computing Professionals	98,710	78.0%	2.2%
Shop Managers	91,395	55.7%	2.0%
Motor Mechanics	78,677	99.1%	1.7%
Electricians	75,458	98.6%	1.7%
Sales Representatives	75,352	67.0%	1.7%
Cleaners	75,168	41.4%	1.7%
Carpentry and Joinery Tradespersons	72,920	99.2%	1.6%
Metal Fitters and Machinists	72,458	99.3%	1.6%
General Managers	68,721	80.0%	1.5%
Sales and Marketing Managers	65,807	69.8%	1.4%
Accountants	60,802	56.8%	1.3%
Livestock Farmers	58,967	66.8%	1.3%
Structural Steel and Welding Tradespersons	48,389	99.4%	1.1%
Plumbers	47,269	98.8%	1.0%
Farm Hands	47,081	73.3%	1.0%
Secondary School Teachers	45,213	43.1%	1.0%
Project and Program Administrators	43,216	47.5%	1.0%
<b>Total</b>	<b>4,546,807</b>	<b>54.8%</b>	<b>100.0%</b>

Source: Special request table from 2001 Census of Population and Housing.

**Table A.2: The top 20 occupations of females in Australia, 2001**

<b>Occupation</b>	<b>Number of Employed Females</b>	<b>% employed within occupation</b>	<b>% of total</b>
Sales Assistants	334,871	71.1%	8.9%
Secretaries and Personal Assistants	168,739	98.3%	4.5%
General Clerks	138,902	81.8%	3.7%
Registered Nurses	131,354	92.4%	3.5%
Receptionists	110,385	96.3%	2.9%
Cleaners	106,256	58.6%	2.8%
Primary School Teachers	94,056	83.7%	2.5%
Office Managers	81,950	82.9%	2.2%
Shop Managers	72,742	44.3%	1.9%
Checkout Operators and Cashiers	69,100	78.4%	1.8%
Accounting Clerks	67,321	80.4%	1.8%
Bookkeepers	66,166	91.6%	1.8%
Children's Care Workers	65,723	96.2%	1.8%
Waiters	61,447	77.0%	1.6%
Secondary School Teachers	59,687	56.9%	1.6%
Keyboard Operators	50,982	85.4%	1.4%
Special Care Workers	48,503	84.7%	1.3%
Project and Program Administrators	47,675	52.5%	1.3%
Accountants	46,289	43.2%	1.2%
Inquiry and Admissions Clerks	45,818	70.9%	1.2%
<b>Total</b>	<b>3,751,868</b>	<b>45.2%</b>	<b>100.0%</b>

Source: Special request table from 2001 Census of Population and Housing.

**Table A.3: The top 20 occupations of males (reference persons) in Australia, 2001**

<b>Occupation</b>	<b>Number of Employed Males</b>	<b>% employed within occupation</b>	<b>% of total</b>
Truck Drivers	73,245	98.9%	2.6%
Shop Managers	63,798	76.1%	2.3%
Computing Professionals	62,548	85.2%	2.2%
General Managers	52,549	87.8%	1.9%
Sales Assistants	51,115	41.2%	1.8%
Sales Representatives	50,784	79.2%	1.8%
Sales and Marketing Managers	47,253	79.4%	1.7%
Metal Fitters and Machinists	46,798	99.6%	1.7%
Livestock Farmers	46,481	88.7%	1.6%
Electricians	46,075	99.4%	1.6%
Storepersons	44,634	85.0%	1.6%
Motor Mechanics	44,622	99.5%	1.6%
Cleaners	44,510	56.8%	1.6%
Accountants	41,444	72.8%	1.5%
Carpentry and Joinery Tradespersons	41,129	99.6%	1.5%
Secondary School Teachers	33,800	57.3%	1.2%
Project and Program Administrators	31,144	61.0%	1.1%
Building and Construction Managers	29,672	98.4%	1.0%
Crop Farmers	28,886	92.5%	1.0%
Structural Steel and Welding Tradespersons	28,629	99.6%	1.0%
<b>Total</b>	<b>2,829,323</b>	<b>69.9%</b>	<b>100.0%</b>

Source: Special request table from 2001 Census of Population and Housing.

**Table A.4: The top 20 occupations of females (reference persons) in Australia, 2001**

<b>Occupation</b>	<b>Number of Employed Females</b>	<b>% employed within occupation</b>	<b>% of total</b>
Sales Assistants	72,802	58.8%	6.0%
Secretaries and Personal Assistants	49,820	96.6%	4.1%
Registered Nurses	47,523	87.3%	3.9%
General Clerks	39,859	68.3%	3.3%
Primary School Teachers	35,603	72.6%	2.9%
Cleaners	33,806	43.2%	2.8%
Receptionists	33,604	95.0%	2.8%
Office Managers	27,274	69.4%	2.2%
Secondary School Teachers	25,147	42.7%	2.1%
Accounting Clerks	23,037	68.2%	1.9%
Shop Managers	20,004	23.9%	1.6%
Project and Program Administrators	19,925	39.0%	1.6%
Bookkeepers	19,121	81.9%	1.6%
Children's Care Workers	19,081	95.3%	1.6%
Special Care Workers	18,647	78.3%	1.5%
Keyboard Operators	17,435	80.3%	1.4%
Inquiry and Admissions Clerks	16,840	62.6%	1.4%
Accountants	15,462	27.2%	1.3%
Personal Care and Nursing Assistants	15,012	71.0%	1.2%
Waiters	14,385	73.3%	1.2%
<b>Total</b>	<b>1,220,543</b>	<b>30.1%</b>	<b>100.0%</b>

Source: Special request table from 2001 Census of Population and Housing.

## **APPENDIX B: REGIONAL HOUSING COST DATA**

The following analysis presents data for each state and territory in turn, highlighting median rent levels by SLA in the capital cities and non-metropolitan areas separately. Data from both 1996 and 2001 are analysed. For ease of presentation, only data for 2001 is included in this section (Tables B.1 to B.8). Maps of each metropolitan area, including the Gold Coast, are also presented (Figures B.1 to B.9).

### **Median Rents in Sydney in 1996 and 2001**

The North Sydney region was the area highlighted as having the highest median rents in 1996. Ku-ring-gai had the highest median rents of \$296 per week. In North Sydney and Willoughby SLAs, the median rents were \$250 per week, whilst in Mosman and Pittwater, the figures were slightly lower, at \$235 and \$230 per week respectively. Baulkham Hills was the other North Sydney area where median rent prices were high in comparison to other SLAs in Sydney, with the median weekly figure being \$220. The eastern suburbs were also featured in the top ten SLAs with the highest median rents. In Woollahra in 1996, the median weekly rent was \$254 whilst in Waverley, it was \$220. Drummoyne was also included, with a median rent of \$220 per week.

By 2001, rents in Sydney SLAs had increased dramatically, with the highest median rent being \$375 in Ku-ring-gai. Sydney remainder and Woollahra, were once again areas with some of the highest median rents in Sydney, those being \$370 and \$350 per week respectively. The increase in popularity of inner city living between 1996 and 2001 is evident in the fact that Inner Sydney emerged as one of the top ten areas for median rents and actually had the fourth highest median rent in Sydney in 2001 of \$337 per week. Manly was another area that emerged as one of the SLAs in Sydney with the highest median rent, that being \$320 per week. The North Sydney region still had high rent prices, with Willoughby, North Sydney, Mosman and Pittwater reporting weekly median rents of \$332, \$326, \$320 and \$305 respectively. Waverley in the eastern suburbs was also included in the top ten SLAs with a median rent price of \$300 per week.

### **Median Rents in other New South Wales in 1996 and 2001**

Outside of Sydney, the Snowy River was the SLA with the highest median rent in New South Wales in 1996, with a figure of \$180 per week. Kiama and Byron both reported median rents of \$150 per week, whilst in Inner Newcastle, Tweed (Part A) and Ballina, the weekly median rent prices were \$140. Wingecarribee, Hastings and Bathurst all reported median rents of \$130 per week and in Lake Macquarie, the median rent was slightly lower at \$125 per week.

In 2001, median rent figures were similar to those of 1996, with the weekly median rent price in the Snowy River being \$200. Byron increased to \$180 per week, whilst Tweed (Part A) and Ballina remained relatively stable, both reporting a median rent figure of \$150 per week. The median rent in Hastings (Part A) was also \$150 per week. By 2001, Tweed (Part B) became part of the top ten list for median rent prices in other

NSW, reporting a median rent price of \$140 per week. The median rent in Coffs Harbour (Part A), Bathurst and Yarrowlumla (Part A) was also \$140 per week. The final SLA in other NSW included in the top ten areas regarding median rent was Orange, with a weekly median rent price of \$135.

### **Median Rents in Melbourne in 1996 and 2001**

In 1996, Inner Melbourne reported the highest median rent in Sydney at \$225 per week, well above all other rents in Melbourne. The second highest median rent was found in the Bayside (Brighton) SLA, where the weekly rent was on average \$45 less than Inner Melbourne, at \$180. Boroondara SLAs were also popular areas for high median rents. The Camberwell North, Camberwell South and Kew areas within Boroondara had median rents of \$170, \$170 and \$162 per week respectively. Manningham West and Monash (Waverley East) had similar median rents of \$170 and \$165 per week respectively. Knox South, Nillumbik South and Casey (Berwick) were included as the final three areas in the top ten median rent SLAs in Melbourne, with figures of \$162, \$155 and \$150 per week respectively.

In 2001, Melbourne (Southbank-Docklands) was the area with the highest median rent figure, that being \$323 per week. Inner Melbourne and Bayside (Brighton) were still relatively high at \$280 and \$251 per week respectively, whilst Port Phillip West became an area of high median rent, at \$254 per week. The three areas of Boroondara mentioned above were included in the top ten SLAs with the highest median rent figures again. The median rent in Camberwell North was \$225 and in Camberwell South it was \$215, whilst in Kew it was \$220. The increase in popularity of inner city living also showed in Melbourne (remainder) with median rent prices increasing to \$220 per week. Manningham West was still an area of high rents at \$210 per week, whilst in Stonnington (Prahran) the median weekly rent was \$200.

### **Median Rents in other Victoria in 1996 and 2001**

In 1996 Greater Bendigo was a significant region with regards to high median rents outside of Melbourne. Within the region, Strathfieldsaye SLA, the Inner East SLA and the Inner North SLA reported weekly median rent figures of \$130, \$120 and \$120 respectively, including them in the top ten areas regarding median rents in NSW (outside of Sydney). The median rent in Wodonga was also \$120 per week, whilst in Surf Coast (East), it was slightly higher at \$124 per week. For the remaining SLAs in other Victoria on the top ten list regarding median rent prices, the median rent was \$120 per week. These SLAs include: Macedon Ranges (balance), Campaspe (Echuca), Mitchell (South), Moorabool (Bacchus Marsh) and Greater Geelong (Part B).

By 2001, Surf Coast (East) had a median rent price of \$150 per week, making it the most expensive SLA to rent in other Victoria (based on median prices). Macedon Ranges was similarly priced at \$147 per week, whilst many SLAs included in the top ten list regarding median rent, had median prices of \$140 per week. These SLAs included: South Barwon (Inner), Queenscliffe, Greater Bendigo (Strathfieldsaye), Campaspe (Echuca) and Mitchell (South). The remaining three SLAs were Greater

Geelong (Part B), Greater Bendigo (Inner East) and Moorabool (Bacchus Marsh) for which the median rent was \$135 per week.

## **Median Rents in Brisbane in 1996 and 2001**

In 1996, SLAs with high median rents were concentrated in the west and south-west of Brisbane. The SLA with the highest median rent in 1996 was Mount Ommaney, where the median price for housing rentals was \$340 a week. In Pullenvale, the median weekly rent was also \$300 per week, whilst in the surrounding areas of Fig Tree Pocket, Chapel Hill and West Lake, figures were slightly lower at \$220, \$210 and \$210 per week respectively. Slightly north of Pullenvale is Kenmore Hills, where the median rent was also relatively high at \$200 per week. Inner City Brisbane featured as the SLA with the second highest median rent in Brisbane, that being \$300 per week. There were two SLAs in South Brisbane that were included as areas with high weekly median rents, Parkinson-Drewvale (\$200) and Stretton (\$230). Carindale was the only area in South East Brisbane which reported having a high median rent in comparison to other SLAs in Brisbane, that being \$210 per week.

By 2001, the SLA of Inner City Brisbane had the highest median rent in Brisbane, with a weekly rent median of \$410. Nearby, Fortitude Valley (inner) was also included in the top ten SLAs in Brisbane regarding the highest median rents, with a weekly median rent of \$240. The west and south west also featured heavily with concentrations of high median rents in Fig Tree Pocket, Brookfield (including Mt. Cootha), Mount Ommaney, Pullenvale, Chapel Hill and Westlake. The weekly median rents for these areas were all between \$251 and \$240. Carindale represented South East Brisbane as one of the areas with the highest median rent at \$230 per week, whilst in East Brisbane, Ransome was the only area where the median rent was considered high, being \$265 per week.

## **Median Rents in other Queensland in 1996 and 2001**

The Gold Coast region featured heavily in the top ten SLAs in 1996 with regards to median rent in other Queensland. Main Beach at Broadwater had the highest median rent price of \$245 per week, whilst Robina also reported a high figure of \$220 per week. In Benowa, Broadbeach Waters, Bundall and Parkwood, the weekly median rent price was \$200. The remaining SLA within the Gold Coast was Hope Island, where the median rent was \$185 per week. Noosa (Noosa-Noosaville) also had a median rent price of \$185 per week. The Cairns (northern) and Cairns (western) were also two SLAs mentioned in the top ten list, with median rents of \$185 and \$180 respectively.

In 2001, the Gold Coast region became an even stronger area with regards to median rents, as 9 of the 10 areas with the highest median rents in other Queensland were included in this region. Main Beach (Broadwater) still reported the highest median rent at \$300 per week. Robina and Hope Island had similar median rent prices of \$235 and \$230 per week respectively. In Benowa and Broadbeach Waters, the weekly median rent was \$215, whilst in Bundall and Parkwood, the median rent price was slightly

lower at \$210 per week. Broadbeach and Burleigh Waters reported median rent figures of \$200 per week. The only area not within the Gold Coast region was Noosa (Noosa-Noosaville) where the median rent was \$220 per week.

### **Median Rents in Adelaide in 1996 and 2001**

In Adelaide, the highest median rent in 1996 was being paid in the SLA of Stirling. The median rent here was \$145 per week, similar to the median rent in Happy Valley of \$140 per week. In Adelaide city, Burnside and Tea Tree Gully the weekly median rent was approximately \$130 (\$136, \$130 and \$130 respectively). Mitcham, St. Peters and Unley all had median rents of \$120 per week, whilst in East Torrens, the figure was slightly higher at \$122 per week. Campbelltown was the last on the top ten list of most expensive SLAs to rent in Adelaide, with median rent prices being \$115 per week.

By 2001, the top ten SLAs with regards to median rent prices were all priced between \$170 and \$150 per week. Adelaide city was the most expensive area to rent with the median rent price being \$170 per week. Marion South was slightly less at \$165 per week, whilst Adelaide Hills was also a similar \$160 per week. In Tea Tree Gully (Hills) and Burnside (North-East) the median rent was slightly lower at \$155 a week whilst in the remaining four areas of: Playford (Hills), Tea Tree Gully (Central), Adelaide Hills (Ranges) and Burnside (South-West), the median rent in 2001 was \$150 per week.

### **Median Rents in other South Australia in 1996 and 2001**

In 1996, the SLA in South Australia (outside of Adelaide) with the highest median rent was Tanunda. In Tanunda, the median rent price was \$115 per week. Roxby Downs, Gumeracha, Mount Barker and Onkaparinga were four SLAs where the median rent price was \$110 per week, whilst in Victor Harbour, the median rent was slightly less at \$105 per week. In the Barossa, Light and Mallala, the median rent price was \$100 per week, whilst in Port Elliot (& Goolwa) the weekly median rent price was \$98.

In 2001, Tanunda in the Barossa was still the most expensive area regarding median rent prices, with a figure of \$140 per week. Other parts of the Barossa also featured in the top ten list in relation to weekly median rents, with median rent in the Barossa being \$120 per week and \$115 per week in Angaston. Two SLAs within Mount Barker were also listed, those being Central Mount Barker, where the median rent was \$135 per week and the balance of Mount Barker, where median rent was slightly less at \$130 per week. In Adelaide Hills, the median rent was \$130 for the balance and \$125 for north Adelaide Hills.

### **Median Rents in Perth in 1996 and 2001**

In Perth in 1996, the median rent price was highest in the SLA of Peppermint Grove. In Peppermint Grove, the median weekly rent was \$185, whilst in Nedlands, the figure was slightly lower at \$170 per week. Cottesloe on the west coast was also an area where median rent was high, at \$160 per week. In Claremont, Wanneroo (Central Coastal) and Wanneroo (South-West), the median rent in 1996 was \$145 per week. The remaining four areas listed in the top ten SLAs with regards to median rent prices



all had figures between \$140 and \$130 per week. More specifically, the weekly median rent in Cambridge in 1996 was \$140 and in Melville, \$135, whilst in Kalamunda and South Perth it was \$130.

By 2001, Joondalup on the North West Coast had become an area where the median rent had significantly increased, with Joondalup North and South moving into the top ten areas with regards to the most expensive rent prices. The figures for these two areas were \$170 and \$165 per week respectively. Other Coastal SLAs such as Cottesloe and Cambridge were also included as areas with high median rents, those being \$230 and \$180 per week respectively. Most areas regarded as having high median rents in Perth were SLAs on the coast, river or bays. These include Nedlands where the weekly median rent in 2001 was \$200 and Claremont, where the median rent was \$173 per week. Other areas included were: Peppermint Grove, Perth (remainder), Vincent and East Fremantle where the median rent prices were \$170, \$165, \$160 and \$160 per week respectively.

### **Median Rents in other Western Australia in 1996 and 2001**

In other Western Australia (outside of Perth) the most expensive SLA in 1996 with regards to median rent was Kalgoorlie/Boulder. The median rent in this SLA was \$140 per week. In Augusta-Margaret River, the weekly median rent price was \$120, which was also the weekly median rent for Busselton and Dardanup. There were three areas included in the top ten SLAs in other Western Australia (in relation to median rents) which reported a weekly median rent price of \$110. These areas were: Albany, Bunbury and Mandurah. The remaining three areas reported median rents of between \$100 and \$105 and included Harvey (\$105), Greenough (\$104) and Geraldton (\$100).

By 2001, the SLA with the highest median rent was Dardanup (Part A), where the weekly median rent was \$155. Augusta-Margaret River was still reporting a high median rent figure of \$150 per week, whilst the weekly median rent in Harvey (Part A) was also \$150. In Capel (Part A) and Busselton, the median rent was \$140 per week. The median rent in Kalgoorlie/Boulder (Part A) was \$135 per week, whilst in Bunbury it was slightly lower, at \$130 per week. Greenough (Part A) and Mandurah both reported weekly median rent prices of \$125. The final SLA on the top ten list for median rents in other Western Australia was Exmouth, where the median rent was \$123 per week.

### **Median Rents in Hobart in 1996 and 2001**

In 1996, Hobart Inner and Remainder along with Kingsborough (Part A) made up the top three SLAs in Hobart with regards to median rent prices. The prices in these SLAs were \$125, \$115 and \$120 per week respectively. In Clarence, Glenorchy and Sorell (Part A) the median rent was \$100 per week, whilst in Derwent Valley it was \$80 and in Brighton, it was a low \$68 per week.

By 2001, median rent prices had increased mildly, with Inner Hobart, Kingborough (Part A) and Hobart Remainder still being the most expensive SLAs to rent. Median rents for these three SLAs were \$150, \$129 and \$120 per week respectively. The weekly median rent in Clarence and Sorell was \$110, whilst in Glenorchy, the median

rent in 2001 was \$105 per week. Derwent Valley (Part A) and Brighton were still priced under \$100 per week with regards to median rent, at \$90 and \$76 respectively.

### **Median Rents in other Tasmania in 1996 and 2001**

In 1996, the SLA with the highest median rent in other parts of Tasmania out side of Hobart was Meander Valley (Part A), where the median rent price was \$120 per week. Three SLAs reported median rent figures of \$100 per week, those SLAs being: Latrobe (Part A), West Tamar (Part A) and West Tamar (Part B). Launceston (Part B) was also included in the top ten areas in other Tasmania with regards to median rents, with a figure of \$95 per week. The Central Coast (Part A), Devonport, Launceston (Inner), Northern Midlands (Part A) and Huon Valley were all SLAs within other Tasmania where the median rent in 1996 was \$90 per week.

Whilst Meander Valley (Part A), was still the most expensive place to rent in 2001, in other Tasmania, at \$125 per week, many of the areas in the top ten in other Tasmania were priced around \$100 per week. Latrobe (Part B), Burnie (Part B), West Tamar (Part B) and Launceston (Part C) were all SLAs in other Tasmania where the median rent was \$100, whilst in Northern Midlands (Part A) and Latrobe (Part A), the median rents were slightly higher at \$102 and \$105 respectively. Launceston inner and Part B had similar median rents at \$107 and \$110 per week. Part A of West Tamar was slightly more expensive with regards to median rent, with the median rent price in 2001 being \$120 per week.

### **Median Rents in Darwin in 1996 and 2001**

In 1996, the median rent price in Brinkin SLA was \$190 per week, making this the most expensive area to rent in Darwin. In Leanyer and Marrara, the median rent was \$180 and \$175 per week respectively, making these areas also expensive in comparison to other SLAs in Darwin. In Larrakeyah, Stuart Park and Rapid Creek, the median rent was only slightly lower at \$170, \$160 and \$155 per week respectively. The median rent in Inner city Darwin was \$150 per week as was the median rent in Nightcliff. In Millner and Nakara, the median rent was slightly lower at \$148 per week.

In 2001, inner city living had become more popular and expensive, as in most other capital cities in Australia. Inner city Darwin was the most expensive area to rent, with the median rent price being \$205 per week. Larrakeyah and Nakara were slightly less, with a median rent of \$200 per week each, whilst in The Gardens and Wulagi, the median rent was \$190 per week. There were no SLAs in the top ten areas with regards to median rent prices, that had a median rent price under \$180 per week, with the weekly median rent being \$185 in Leanyer and \$180 in Brinkin, Jingili, Marrara and Stuart Park.

### **Median Rents in other Northern Territory in 1996 and 2001**

In 1996, the most expensive area to rent according to median rent prices was generally in Alice Springs. The SLAs of Ross, Charles, Stuart and Larapinta in Alice Springs were all included as some of the most expensive areas to rent in other Northern

Territory, reporting median rent figures of \$135, \$130, \$125 and \$123 per week respectively. Litchfield (Part A) was also one of the notably expensive rental areas (with regards to median rent prices) at \$130, whilst Part B of Litchfield was significantly cheaper, but still included in the top ten SLAs at \$100 per week. The SLA of Coomalie also had a median rent price of \$100 per week. The remaining areas of Katherine, Petermann and Tennant Creek all reported figures of less than \$100 per week, at \$90, \$86 and \$84 respectively.

By 2001, the Alice Springs region had become even more prominent in the rental market with Ross, Larapinta, Stuart, Charles and Heavitree SLAs all being included in the top ten SLAs for median rent prices in the Northern Territory. The specific median rent prices for these SLAs were \$152, \$150, \$150, \$140 and \$106 respectively. Coomalie was still viewed as one of the more expensive SLAs for renting, with a median rent price of \$120 per week. In Katherine and Tennant Creek, median rent was \$105 and \$100 respectively. The remaining two areas of Peterman and South Alligator reported median rents of under \$100, at \$90 and \$65 respectively.

### **Median Rents in Canberra in 1996 and 2001**

In 1996, the SLA with the highest median rent was O'Malley, where the median rent price was \$485 per week. This was significantly higher than any other area, with the next most expensive area being Acton, where the median rent price was \$340 per week. The city SLA was also one of the more expensive areas to rent, with the weekly median rent price being \$300. These three areas were also significantly more expensive than other parts of Canberra. Fadden and Chapman reported similar median rent prices of \$225 and \$220 respectively, whilst in Isaacs, the median rent was \$210 per week. The remaining four areas included in the top ten most expensive places to rent with regards to median rents, reported prices between \$190 and \$180 per week. In Bruce, the median rent was \$190 per week, whilst Kingston reported \$185 per week and the weekly median rent figure for Gungahlin-Hall (SSD Balance) and Macarthur was \$180.

By 2001, many changes had occurred in those areas that were regarded as having high median rent prices. Whilst O'Malley was still the most expensive area with a median rent figure of \$480 per week, Forrest became a new SLA with high median rent prices, at \$380 per week. Acton stayed at the same median price of \$340 per week. Hume, Barton and Deakin were all new areas to the top ten list of SLAs with the highest median rents, with figures being \$305, \$250 and \$220 per week respectively. The remaining four areas considered to have high weekly median rents reported similar figures. They were: Chapman (\$255), Bruce (\$250), Isaacs (\$240) and Fadden (\$235).

**Table B 1: NSW SLAs with highest median rents in 2001**

<b>Sydney</b>	<b>Median Rent 2001 (\$)</b>
Ku-ring-gai (A)	375
Sydney (C) - Remainder	370
Woollahra (A)	350
Sydney (C) - Inner	337
Willoughby (C)	332
North Sydney (A)	326
Mosman (A)	320
Manly (A)	320
Pittwater (A)	305
Waverley (A)	300
<b>Other NSW</b>	
Snowy River (A)	200
Byron (A)	180
Tweed (A) - Pt A	150
Ballina (A)	150
Hastings (A) - Pt A	150
Tweed (A) - Pt B	140
Coffs Harbour (C) - Pt A	140
Bathurst (C)	140
Yarrowlumla (A) - Pt A	140
Orange (C)	135

Source: Special request table from 2001 Census of Population and Housing.

**Table B 2: Victorian SLAs with highest median rents in 2001**

<b>Melbourne</b>	<b>Median Rent 2001 (\$)</b>
Melbourne (C) - S'bank-D'lands	323
Melbourne (C) - Inner	280
Port Phillip (C) - West	254
Bayside (C) - Brighton	251
Boroondara (C) - Camberwell N.	225
Melbourne (C) - Remainder	220
Boroondara (C) - Kew	220
Boroondara (C) - Camberwell S.	215
Manningham (C) - West	210
Stonnington (C) - Prahran	200
<b>Other VIC</b>	
Surf Coast (S) - East	150
Macedon Ranges (S) Bal	147
South Barwon - Inner	140
Queenscliffe (B)	140
Gr. Bendigo (C) - S'saye	140
Campaspe (S) - Echuca	140
Mitchell (S) - South	140
Greater Geelong (C) - Pt B	135
Gr. Bendigo (C) - Inner East	135
Moorabool (S) - Bacchus Marsh	133

Source: Special request table from 2001 Census of Population and Housing.

**Table B 3: Queensland SLAs with highest median rents in 2001**

<b>Brisbane</b>	<b>Median Rent 2001 (\$)</b>
City - Inner	410
Ransome	265
Fig Tree Pocket	251
Brookfield (incl. Mt C'tha)	250
Mount Ommaney	250
Pullenvale	250
Chapel Hill	240
Fortitude Valley - Inner	240
Westlake	240
Carindale	230
<b>Other QLD</b>	
Main Beach-Broadwater	300
Robina	235
Hope Island	230
Noosa (S) - Noosa-Noosaville	220
Benowa	215
Broadbeach Waters	215
Bundall	210
Parkwood	210
Broadbeach	200
Burleigh Waters	200

Source: Special request table from 2001 Census of Population and Housing.

**Table B 4: South Australian SLAs with highest median rents in 2001**

<b>Adelaide</b>	<b>Median Rent 2001 (\$)</b>
Adelaide (C)	170
Marion (C) - South	165
Adelaide Hills (DC) - Central	160
Onkaparinga (C) - Reservoir	160
Tea Tree Gully (C) - Hills	155
Burnside (C) - North-East	155
Playford (C) - Hills	150
Tea Tree Gully (C) - Central	150
Adelaide Hills (DC) - Ranges	150
Burnside (C) - South-West	150
<b>Other SA</b>	
Barossa (DC) - Tanunda	140
Mount Barker (DC) - Central	135
Mount Barker (DC) Bal	130
Adelaide Hills (DC) Bal	130
Adelaide Hills (DC) - North	125
Victor Harbor (DC)	122
Barossa (DC) - Barossa	120
Alexandrina (DC) - Coastal	120
Mallala (DC)	118
Barossa (DC) - Angaston	115

Source: Special request table from 2001 Census of Population and Housing.

**Table B 5: West Australian SLAs with highest median rents in 2001**

<b>Perth</b>	<b>Median Rent 2001 (\$)</b>
Cottesloe (T)	230
Nedlands (C)	200
Cambridge (T)	180
Claremont (T)	173
Peppermint Grove (S)	170
Joondalup (C) - North	170
Perth (C) - Remainder	165
Joondalup (C) - South	165
Vincent (T)	160
East Fremantle (T)	160
<b>Other WA</b>	
Dardanup (S) - Pt A	155
Harvey (S) - Pt A	150
Augusta-Margaret River (S)	150
Capel (S) - Pt A	140
Busselton (S)	140
Kalgoorlie/Boulder (C) - Pt A	135
Bunbury (C)	130
Greenough (S) - Pt A	125
Mandurah (C)	125
Exmouth (S)	123

Source: Special request table from 2001 Census of Population and Housing.



**Table B 6: Tasmanian SLAs with highest median rents in 2001**

<b>Hobart</b>	<b>Median Rent 2001 (\$)</b>
Hobart (C) - Inner	150
Kingborough (M) - Pt A	129
Hobart (C) - Remainder	120
Clarence (C)	110
Sorell (M) - Pt A	110
Glenorchy (C)	105
Derwent Valley (M) - Pt A	90
Brighton (M)	76
<b>Other TAS</b>	
Meander Valley (M) - Pt A	125
West Tamar (M) - Pt A	120
Launceston (C) - Inner	110
Launceston (C) - Pt B	107
Latrobe (M) - Pt A	105
Northern Midlands (M) - Pt A	102
Latrobe (M) - Pt B	100
Burnie (C) - Pt B	100
West Tamar (M) - Pt B	100
Launceston (C) - Pt C	100

Source: Special request table from 2001 Census of Population and Housing.

**Table B 7: Northern Territory SLAs with highest median rents in 2001**

<b>Darwin</b>	<b>Median Rent 2001 (\$)</b>
City - Inner	205
Larrakeyah	200
Nakara	200
The Gardens	190
Wulagi	190
Leanyer	185
Brinkin	180
Jingili	180
Marrara	180
Stuart Park	180
<b>Other NT</b>	
Alice Springs (T) - Ross	152
Alice Springs (T) - Larapinta	150
Alice Springs (T) - Stuart	150
Alice Springs (T) - Charles	140
Coomalie (CGC)	120
Alice Springs (T) - Heavitree	106
Katherine (T)	105
Tennant Creek (T)	100
Petermann	90
South Alligator	65

Source: Special request table from 2001 Census of Population and Housing.

**Table B 8: ACT SLAs with highest median rents in 2001**

<b>Canberra</b>	<b>Median Rent 2001 (\$)</b>
O'Malley	480
Forrest	380
Acton	340
Hume	305
Chapman	255
Barton	250
Bruce	250
Isaacs	240
Fadden	235
Deakin	220

Source: Special request table from 2001 Census of Population and Housing.

Figure B. 1: Median Rent in Sydney by SLA, 2001

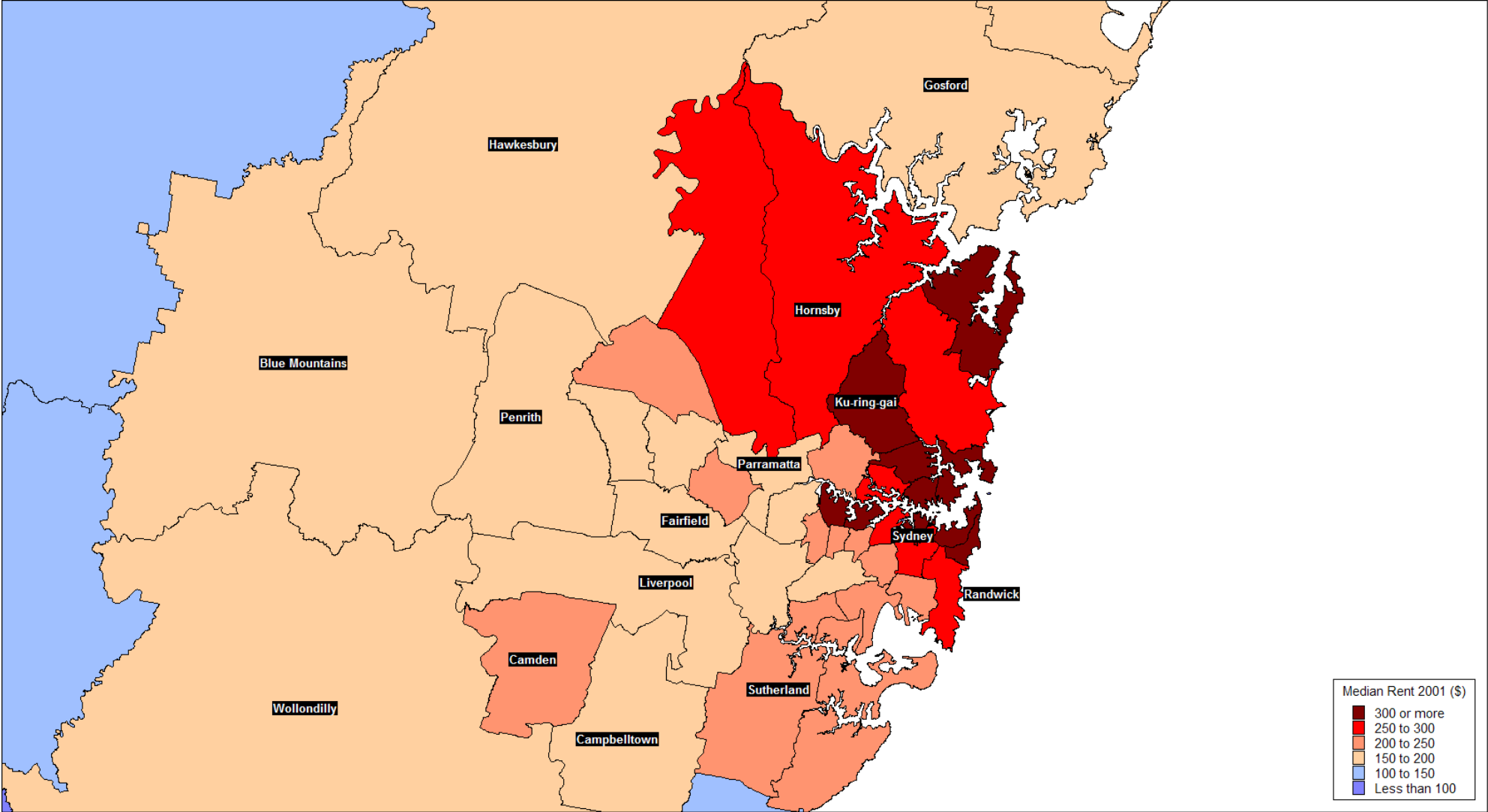


Figure B. 2: Median Rent in Melbourne by SLA, 2001

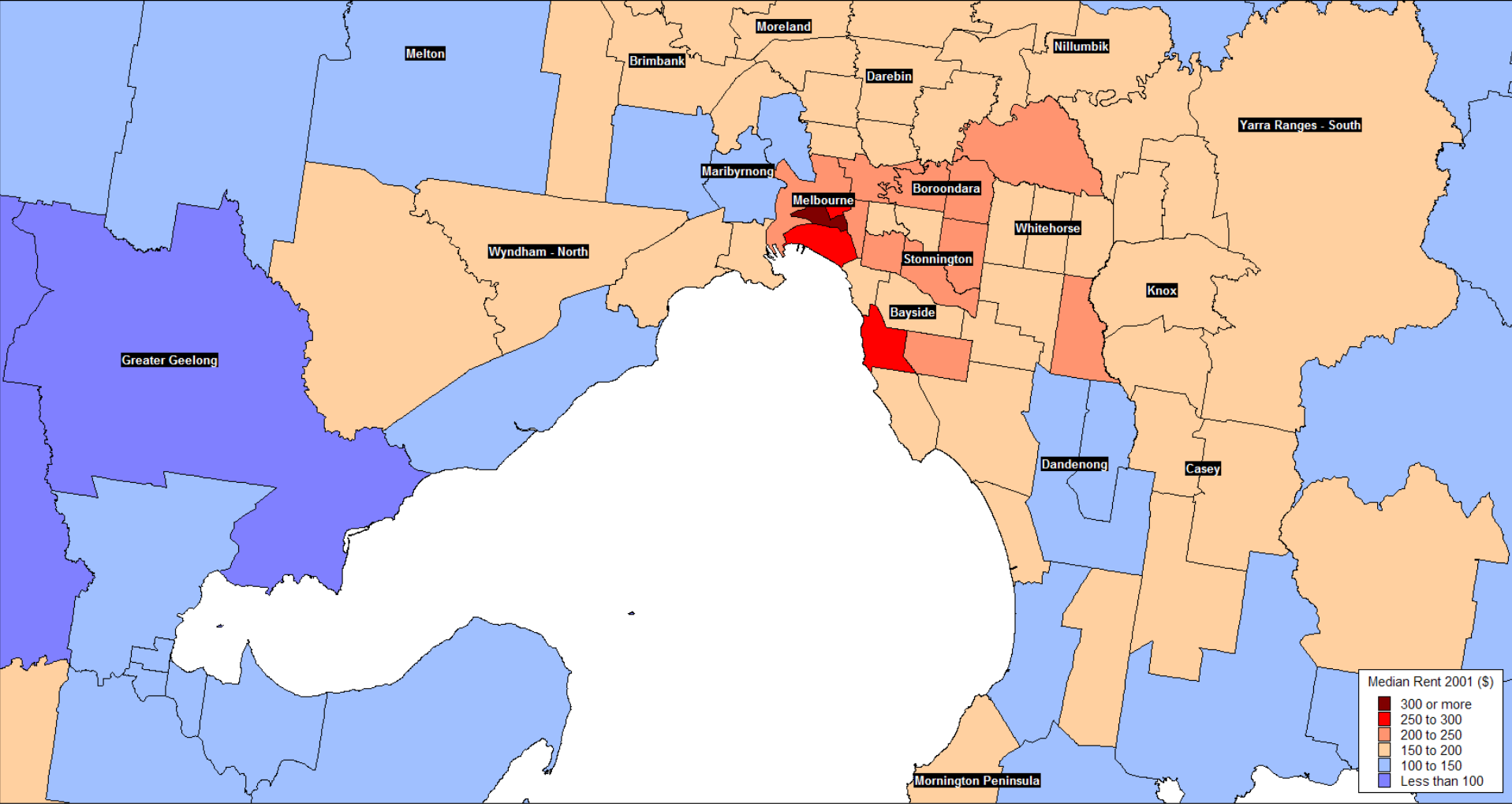


Figure B. 3: Median Rent in Brisbane by SLA, 2001

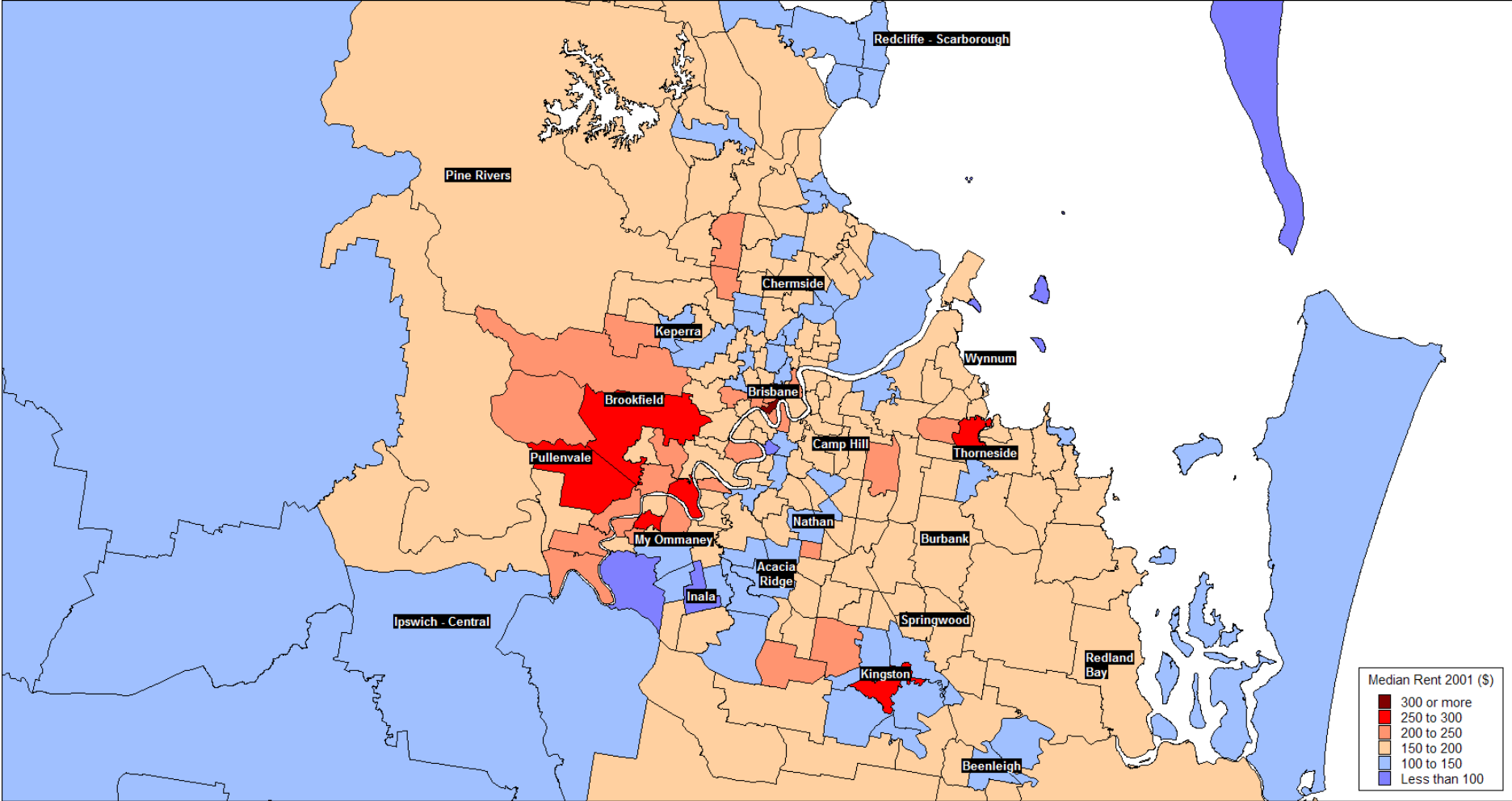


Figure B. 4: Median Rent in Adelaide by SLA, 2001

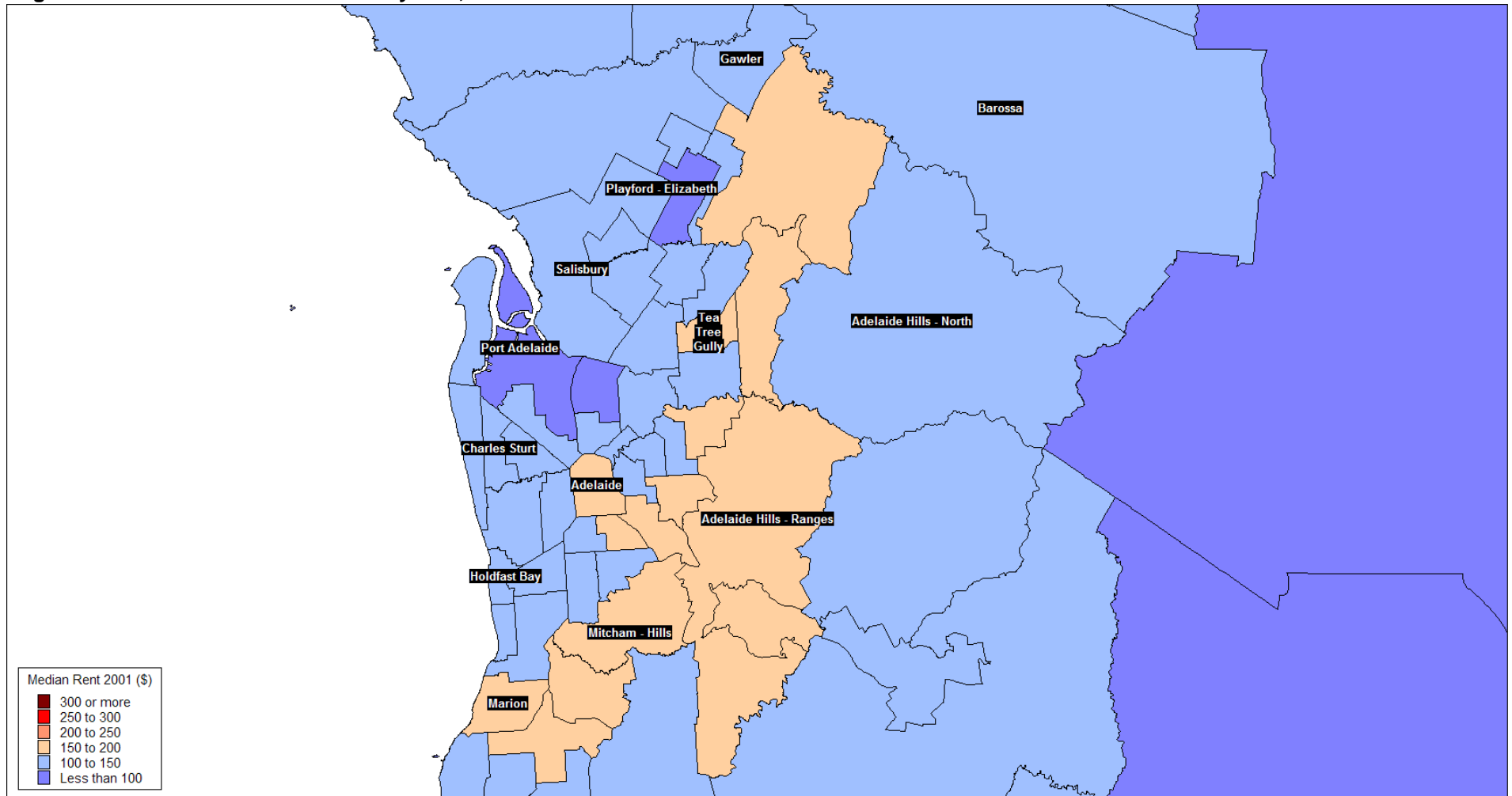


Figure B. 5: Median Rent in Perth by SLA, 2001

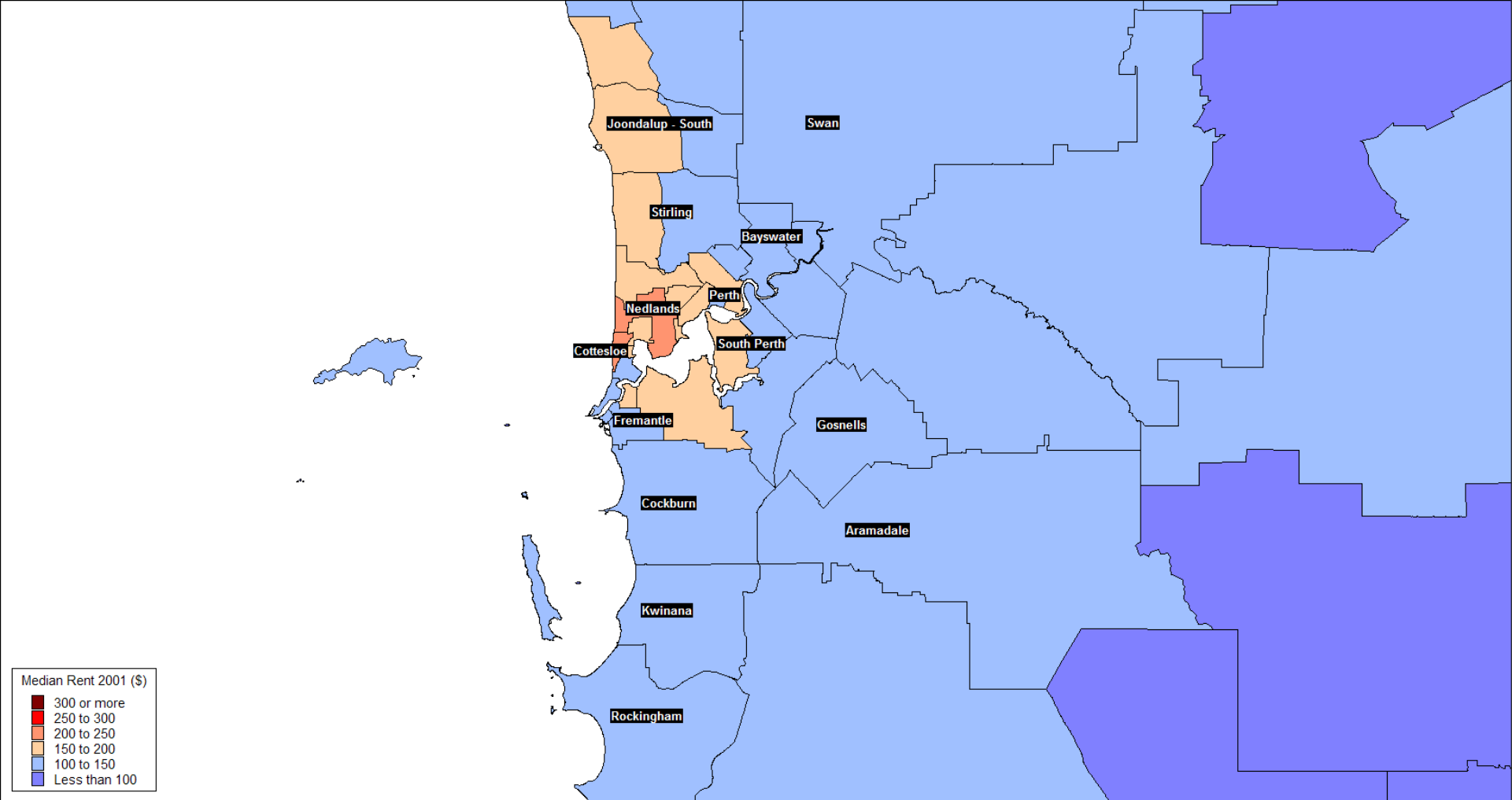


Figure B. 6: Median Rent in Hobart by SLA, 2001

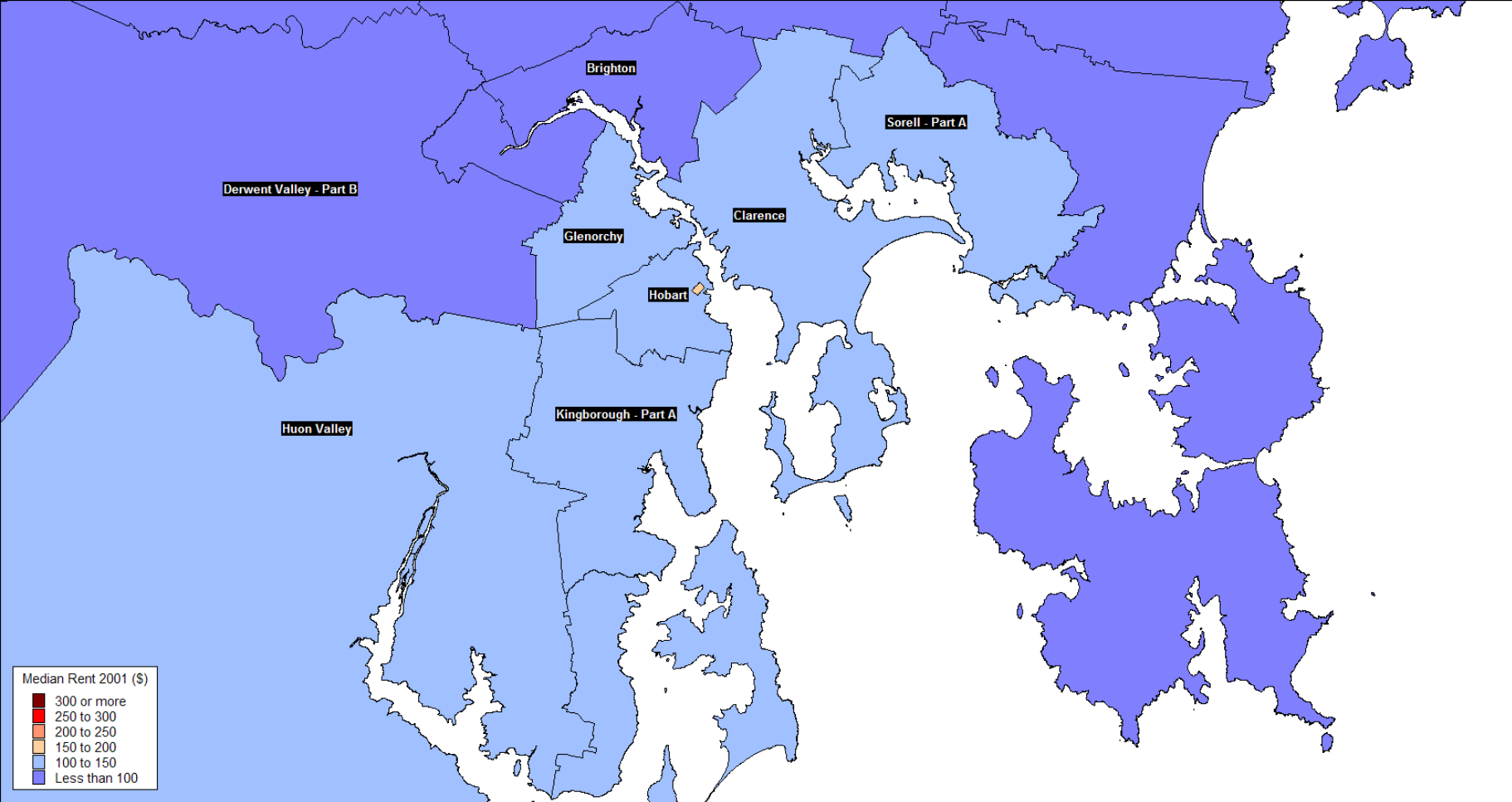




Figure B. 7: Median Rent in Darwin by SLA, 2001

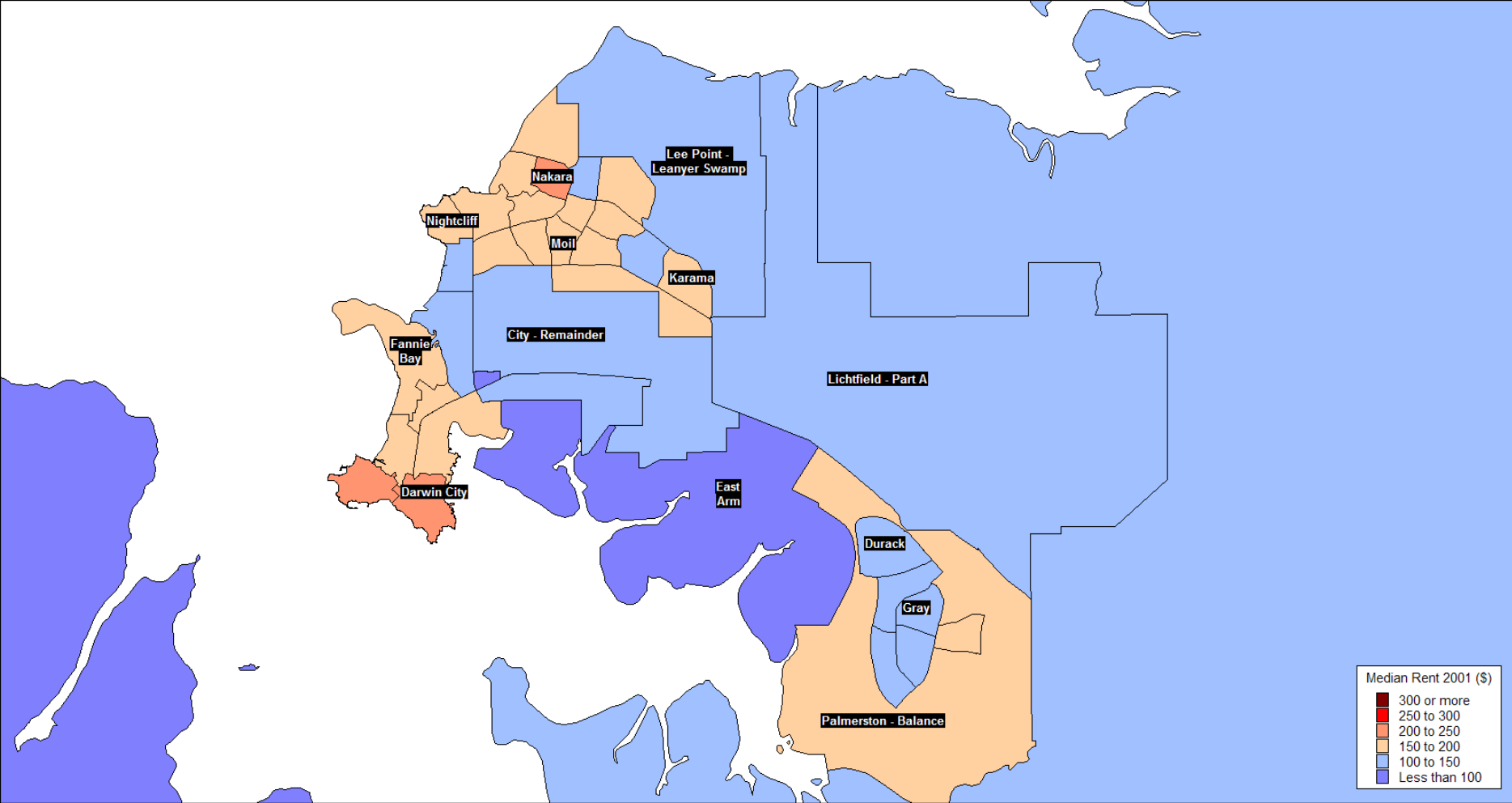


Figure B. 8: Median Rent in Canberra by SLA, 2001

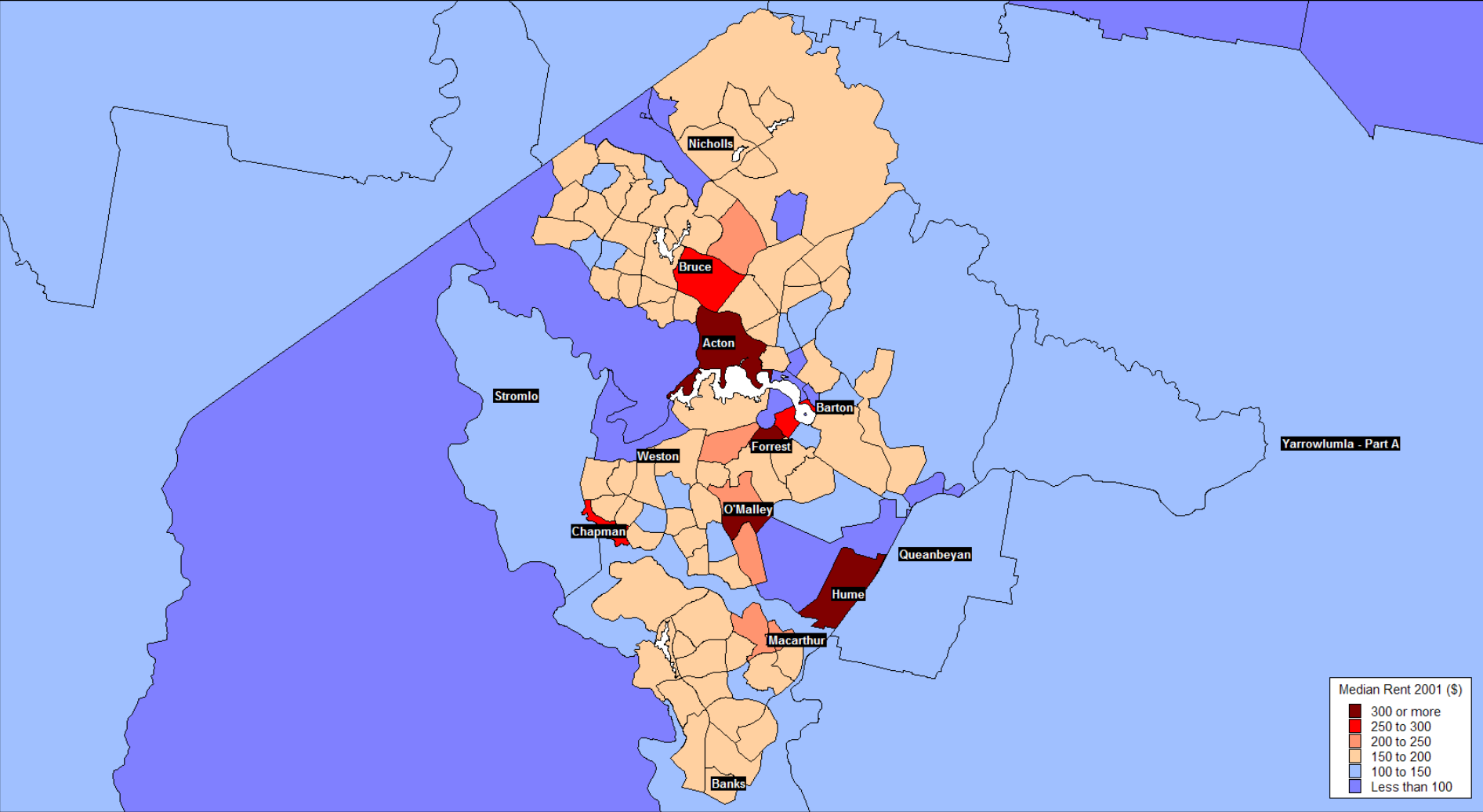
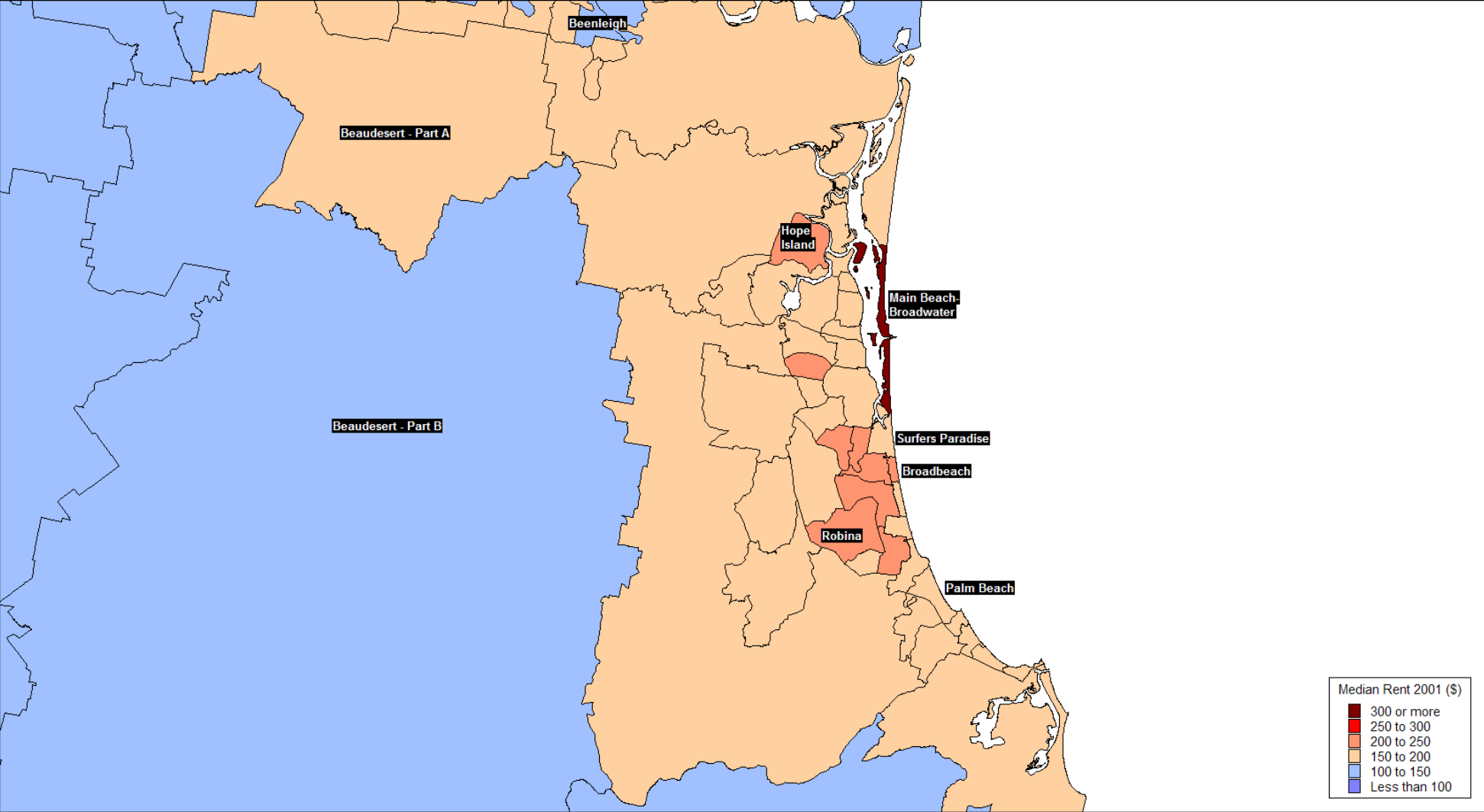


Figure B. 9: Median Rent in Gold Coast by SLA, 2001



## **AHURI Research Centres**

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## **Affiliates**

Charles Darwin University  
National Community Housing Forum

