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Housing key workers: scoping challenges, aspirations, and policy responses for Australian cities



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Acronyms and abbreviations used in this report

ABS	Australian Bureau of Statistics
AHURI	Australian Housing and Urban Research Institute Limited
AMI	Area Median Income
CBD	Central Business District
CNOS	Canadian National Occupancy Standard
DALP	Downpayment Assistance Loan Program
GMR	Greater Metropolitan Region
GIS	Geographic Information System
ICT	Information and Communication Technology
LGA	Local Government Area
NHS	National Health Service
NYC	New York City
NYPD	New York Police Department
NSW	New South Wales
RN	Registered Nurse
SIRCA	Securities Industry Research Centre of Asia-Pacific
UK	United Kingdom
US	United States
USD	United States dollar

Executive summary

Key points

- There is no single definition of what constitutes a ‘key worker’. The term usually refers to employees in services that are essential to a city’s functioning but who earn low to moderate incomes. In cities and regions with high housing costs, this makes access to appropriate and affordable housing in reasonable proximity to work difficult for key workers.
- All key worker jobs require physical presence—few key workers can ‘work from home’. Proximity to work is particularly important in healthcare, emergency services and some community and welfare support roles in order for workers to cover shifts, quickly respond to increases in service demand and attend emergency situations.
- This study finds that Sydney and Melbourne’s teachers, nurses, community support workers, ambulance and emergency officers, delivery personnel and cleaners are struggling to find appropriate and affordable housing. Twenty per cent of key workers across Sydney and 17 per cent across Melbourne experience housing stress, with much higher rates in inner subregions.
- Further, approximately 31,000 key workers across Sydney and 18,000 in Melbourne are living in overcrowded homes.

- **Difficulties accessing housing that is both appropriate and affordable are extending beyond the lower income (Q1 and Q2) households traditionally considered in need of welfare support to also include workers earning incomes in the Q3 range. For example, in Sydney (the more expensive of the two cities):**
 - No LGAs in the Sydney metropolitan region or its satellite cities of Wollongong and Newcastle have a median house price that is affordable to an early career registered nurse, and only a few LGAs have affordable unit prices.
 - Close to 8,000 teachers are in households experiencing housing stress.
 - Approximately 4,500 registered nurses and midwives are living in overcrowded homes.
- **Key workers are more likely than the labour force generally to reside in outer suburbs and satellite cities and to commute more than 30kms to work.**
 - In Sydney, just under 44,000 key workers commute over 30kms to work, and just under 16,000 commute 50kms or more.
 - In Melbourne, just under 38,000 key workers commute 30kms or more and over 10,000 commute 50kms or more.
- **Between 2011 and 2016, inner subregions of both cities experienced a net loss of key workers, while more affordable outer suburbs and satellite cities gained key worker residents.**
- **In England and the US, challenges attracting and retaining key workers in expensive metropolitan regions is being addressed by governments through assisted home ownership programs and planning and funding support for ‘intermediate’ housing products situated on the continuum between social rental and market rate housing.**
- **In Australia, policies and projects to support key workers (variously defined) to access housing are limited and sporadic and statutory planning policies and funding programs to support the provision of affordable housing generally, and affordable housing for moderate-income earners more specifically, are limited.**

- **In responding to the key worker challenge, governments should introduce planning policies and funded programs to increase the supply of affordable housing across both rental and ownership tenures, support the scaling up of a purpose-built rental housing sector and help key workers to access information about housing options.**
- **Non-housing based support mechanisms could include transportation subsidies or income supplements for key workers working in expensive housing market areas, but these would not address the problem of rising housing costs over time.**
- **Further research should build on this scoping study by:**
 - analysing geographic patterns of housing affordability at a finer spatial scale
 - taking a longitudinal view in order to better understand changes and trends over time
 - capturing the perspectives of key workers themselves on their housing constraints, choices, aspirations and perceptions of affordability
 - canvassing employers' perspectives on recruitment and retention challenges, and
 - examining the peri-urban and regional dimension of key-worker housing stress.

Key findings

There is no single definition of what constitutes a key worker. However, the term broadly refers to workers who provide services essential to the functioning of cities, but who earn low to moderate incomes. This makes accessing appropriate and affordable housing challenging for key workers, particularly in cities with expensive housing markets. Traditionally, the term has encapsulated occupations such as teaching, nursing and other healthcare roles, policing and emergency services. However, our review of the research literature and policies and programs to support key workers to access housing in English, US and Australian cities revealed that the inclusion of occupations beyond these traditional groups varies in practice. This variation reflects the nature of different local economies and the specific recruitment and retention challenges experienced by different employers. In the context of COVID-19, there is evidence that some jurisdictions are considering an expanded definition, with occupations in delivery services and retail food services, for example, now also seen as important to the functioning and resilience of cities in times of crisis.

Because key worker jobs are generally population-serving, key workers have the opportunity to work in most locations where people live. This means that there is little incentive for them to move to or remain in expensive housing market areas with unaffordable housing costs. Internationally, government policies and programs to support key workers to access housing are generally designed to support the recruitment of key workers to higher cost cities and regions and to retain more experienced workers over time. Our international review of programs revealed examples targeting both the supply of housing for key worker groups as well as 'demand side' support, with assistance to enter home ownership seen to be particularly important for longer-term retention of key workers.

Using data on median house prices and rents, indicative incomes for key workers at different career stages and 2016 Australian Census data, we examined geographic patterns of housing affordability across Sydney and Melbourne and their satellite cities and regions and the housing situation and commuting patterns of key workers across a range of occupation groups. The research revealed that some key workers in Sydney and Melbourne are struggling to afford appropriate and affordable housing. Unsurprisingly, housing unaffordability, incidences of housing stress and overcrowding were found to be greatest in inner subregions and among lower income occupation groups.

Nevertheless, the analysis revealed that many outer suburbs and coastal satellite cities now also have median house prices that are unaffordable on most key worker incomes and that evidence of difficulty accessing appropriate and affordable housing is extending to workers earning incomes in the Q3 range. For example, in Sydney, which is the more expensive of the two greater metropolitan regions examined, we found that:

- No LGAs have a median house price that is affordable to an early career registered nurse, and only a few LGAs in the metropolitan region have affordable unit prices.
- Close to 8,000 teachers are in households experiencing housing stress.
- Approximately 4,500 registered nurses and midwives are living in overcrowded homes.

As interviews with industry and policy experts revealed, difficulties accessing appropriate and affordable housing also relate to factors such as age, income, security of employment, overall household income and household composition. Younger key workers, key worker households on low and or single incomes and workers with children often face the greatest affordability constraints, the latter related to the need for larger homes.

The interviews revealed that one response to unaffordable housing costs in central city areas is for key workers to reside in outer suburbs and even satellite cities. This requires key workers to endure lengthy commutes, with examples given of workers commuting to the Central Business District (CBD) from the Blue Mountains, Central Coast and Illawarra. The analysis of 2016 Census data also revealed that key workers are more likely than the labour force generally to reside in outer suburbs and satellite cities and to commute more than 30kms to work. Across Sydney and its satellite cities and regions, for example, just under 44,000 key workers commute over 30kms to work, and just under 16,000 commute 50kms or more. Between 2011 and 2016, in both Sydney and Melbourne, inner subregions experienced a net loss of key worker residents, while more affordable outer suburbs and satellite cities gained key worker residents.

As interviewees with expertise in specific key worker occupation groups explained, key worker jobs require physical presence. They can also be physically demanding and performed over long shifts, during anti-social hours and in high stress situations. Housing stress and insecurity and long commutes can exacerbate the stress and fatigue that is already inherent in many key worker jobs, with implications for service quality, workplace health and safety and the long-term retention of more experienced workers. Moreover, long commutes to work mean that key workers in some service areas are unable to be on-call to cover shifts or respond to increases in service demands and emergency situations.

There are, therefore, compelling reasons to support key workers to access appropriate and affordable housing close to the populations they serve. However, as our policy analysis revealed, while there is increasing recognition of essential workers and the housing needs of low and moderate-income working households more broadly in strategic planning in both Sydney and Melbourne, there is a lack of statutory tools and funded programs to support the delivery of housing to meet those needs. Moreover, particularly in NSW, policies and programs only support the provision of affordable rental housing which, the interviews revealed, is misaligned with the aspirations of many key workers for home ownership. Even if significantly scaled up, such housing may not support long-term retention of key workers within high housing cost areas.

Policy development options

The findings presented in this report add to the weight of evidence that Australia's housing system needs fundamental reform. The data detailed in this study presents a picture of key workers struggling to access appropriate and affordable housing in Sydney and Melbourne; including workers on incomes in the Q3 range; and, shows that even outer suburbs and some satellite regions are now also unaffordable for these essential employees. If not addressed, there is a risk that key workers who provide essential services but who earn low and moderate incomes will be unable to live in Australia's most expensive cities, threatening ongoing capacity to sustain critical urban functions across the public and private sector. To address this risk, governments must support initiatives to increase the overall supply of housing that is affordable and suitable for low and moderate-income workers, while recognising their aspirations for home ownership.

These supply initiatives should embrace diverse tenure options and can be achieved by:

- using public sector land to deliver affordable housing for key workers, as part of mixed tenure developments
- allowing/encouraging key worker employers to develop homes for workers (for example, by allowing housing development on non-residential land, but only for the purpose of affordable key worker accommodation)
- instigating inclusionary zoning requirements to deliver affordable housing for key workers in health and education precincts
- supporting models that can secure affordability over the long term, such as community land trusts
- supporting/encouraging more superfunds to invest in housing for key workers
- initiating government shared ownership programs for purchase of properties delivered through some of the above mechanisms.

While not replacing the need for affordable housing, government support for purpose-built, professionally managed rental housing offering secure tenure, could also improve housing options in rental markets with low vacancy rates.

The value of a scaled-up purpose built rental housing sector, would be maximised if landlords were required to lease a proportion of units to key workers; prioritise key workers in tenancing decisions; and/or include a proportion of affordable rental housing for low and moderate-income key workers in their developments. Governments could also help key workers to access information about affordable housing options (market rate and affordable housing) near major key worker employers and in expensive housing market areas, for example, through a centralised property listing and enquiry service.

Other options to consider could be to subsidise transport costs for low-income key workers and/ or subsidise wages in central city locations and/or high housing cost subregions. However, the cost of those options could prove very significant over time if the overall affordability of housing in expensive subregions does not improve. Moreover, there will always be a need for key workers in some occupations, particularly healthcare, emergency services and some community services roles to reside close to where they work in order to respond to sudden changes in demand and emergency situations. Although subsidising the cost of commuting would help lower income key workers with the cost of living, it would not address this need.

Finally, while there is a clear public interest in supporting key workers to access housing in high cost regions and subregions, singling out specific occupation groups for special government assistance may raise questions about equity. Moreover, as there is no single definition of what constitutes a key worker, determining which occupation groups to include when designing specific policies and programs is also a difficult decision. Further research to better understand the housing challenges and needs of workers in different occupation groups; the decisions and trade-offs key workers are making regarding housing; evidence of recruitment and retention challenges among different employers; and how all of the above are playing out in different locations (including beyond Sydney and Melbourne) and over time would further develop the evidence base from which to make these policy decisions.

As the review of policies and programs in England and the US revealed, policies and programs targeted to specific occupation groups typically sit alongside or have evolved into broader initiatives designed to support low and moderate-income households to access housing. One option for governments to consider would be to pilot policies and programs to deliver intermediate forms of affordable housing or affordable home ownership programs with a cohort of key workers, but then to roll them out to other occupation groups and to low and moderate-income households more broadly over time.

The study

Following a decade of significant house price growth, particularly in Sydney and Melbourne, housing affordability is now a significant issue for many cohorts, including households in stable employment earning low and moderate incomes. In this context, there have been claims that high housing costs are impacting the recruitment and retention of low and moderate-income workers who perform essential city functions—for example, in healthcare, emergency services, child care and education. At the same time, the recent COVID-19 pandemic has served to highlight the essential role many low and moderate-income workers play in the functioning and resilience of cities, particularly during times of crisis. To date, there has been little comprehensive research on whether and to what extent these workers in different essential services face challenges accessing appropriate and affordable housing in Sydney and Melbourne. This extends to how those workers are responding to high housing costs, and what governments could potentially do to support key workers to reside near and/or access jobs in high cost regions. In this context, this scoping study sought to capture new evidence of:

- whether and how governments in selected international jurisdictions as well as in Sydney and Melbourne are supporting different types of key workers to access housing
- evidence of housing affordability, housing situations and commuting patterns of key workers across a range of occupation groups in Sydney and Melbourne, and
- potential ways that governments in Australia could respond to the issues identified.

Corresponding with these aims, the research was conducted in the following stages using mixed research methods.

Scoping practice in planning for and addressing the housing needs of key workers

The scoping research commenced by examining whether and to what extent governments in Sydney and Melbourne and selected international jurisdictions are considering the housing needs of key workers and what specific policies or programs have been implemented. Examples of policies and programs to support key workers across a variety of occupations were identified in the course of the literature review and via a web search process. The international component of the analysis focussed on England and the US and, within those countries, on the highest cost cities and regions. Policies and programs were reviewed against a series of questions designed to consistently capture key characteristics, including eligibility criteria and funding and governance arrangements.

Scoping housing affordability and the housing situation of key workers in Sydney and Melbourne

Drawing on the findings of the literature and practice review, 21 occupation categories (based on four digit occupation categories in the Australian Census) were selected as the focus of the analysis. While the selected occupations were not exhaustive, they represented incomes ranging from the lower end of the second quintile to the mid point of the third quintile range. Selected occupations included those traditionally associated with the term key workers, including teachers, nurses, police and emergency service workers, but also included laundry workers and cleaners, delivery drivers, public transport operators, ICT and communications technicians, aged care and child care workers and community services and support workers.

In the light of evidence that workers are increasingly commuting into Sydney and Melbourne from adjoining regions, the analysis included each metropolitan region, as well as its satellite cities and immediately surrounding regions.

Geographic patterns of housing affordability for workers in the selected occupations was examined by comparing affordable rent and purchase prices at different indicative key worker income levels to actual median rents and purchase prices for applicable dwelling types at the Local Government Area (LGA) level, and then spatially mapping the results. Data was derived from Corelogic via the Security Industries Research Centre of Asia-Pacific (SIRCA) (prices), publicly available government datasets (rents) and industry awards and job listing services (incomes). Evidence of the housing situation (including housing suitability), commuting patterns and residential move patterns of workers in the selected occupation groups were examined using 2016 Census data derived from ABS TableBuilder which was analysed spatially and to generate descriptive statistics. Custom data was commissioned from the Australian Bureau of Statistics (ABS) in order to examine rates of housing stress across each occupation group and subregion.

Scoping industry and policy perspectives on challenges and potential responses

Finally, the findings of the quantitative analysis were triangulated through interviews with professionals in Sydney with expertise in specific key worker groups as well as planning, housing and urban policy. The interviews also captured participants' perspectives on:

- the different ways that governments could potentially assist key workers to access housing and/or connect to jobs, and
- policies and programs that would be best targeted to different key workers' needs and aspirations.

1. Introduction

- Many low and moderate-income workers perform services that are essential to a city's functioning but, like other low and moderate-income households, may face challenges accessing appropriate and affordable housing in expensive housing markets.
- While research has documented spatial mismatches between the location of jobs and affordable housing in Australia's largest cities, the implications of these trends for workers in essential services (often termed 'key workers') are less clear.
- This scoping study addresses this gap by examining geographic patterns of housing affordability for different occupation groups performing essential services across Sydney and Melbourne and their satellite cities and regions. It also examines key workers' housing circumstances, commuting patterns and residential moves.
- Twenty-one occupation groups were selected as the focus for the analysis covering a range of occupations that could be considered essential to a city's function. All of these occupational groups earn incomes in the second and lower-third quintiles.
- The findings of the quantitative analysis were triangulated, and potential policy responses were examined through interviews with professionals with expertise in specific occupation groups and in labour markets, planning and housing.

1.1 Why this research was conducted

Sustained, rapid house price growth in Australia's largest cities, has meant that many working households now face significant challenges accessing appropriate and affordable housing, particularly to purchase. Moderate-income households who previously would have become homeowners are now being locked out of the housing market, putting strain on the rental sector (Hulse, Morris et al. 2021). To cope with the lack of affordably priced housing close to jobs, some workers are commuting long distances, and there are suggestions that some young people are leaving Sydney and Melbourne altogether to settle in more affordable cities and regions (Callaghan 2020; O'Sullivan 2020).

Within the cohort of low and moderate-income earners are workers whose jobs are essential to the functioning and liveability of cities. This includes moderate-income public sector workers (like teachers, healthcare and emergency service workers)—often termed 'key workers'—and other low-income workers (such as cleaners and delivery drivers). Recent disruptions and crises, particularly the COVID-19 pandemic, have highlighted the dependence of cities and their populations on these workers, as well as the risks for overall resilience when services are inadequately staffed and/or workers live significantly far from the populations they serve, being unable to respond to emergency situations or sudden spikes in service demands.

With opportunities to work in communities with lower housing costs, recent evidence suggests that some key workers, particularly younger key workers, are leaving (or are planning to leave) expensive central city areas (Gurran, Gilbert et al. 2018b; PwC Australia 2019), and there have been media claims that this is leading to labour recruitment and retention problems (Kadib 2019). This issue may be exacerbated in future as new housing in accessible locations targets the higher end of the housing market (Ong, Dalton et al. 2017) and inclusionary planning mechanisms deliver few affordable homes (Gilbert and Gurran 2018; Gurran, Gilbert et al. 2018a). Moreover, as many key workers have traditionally aspired to home ownership, ongoing barriers to entering urban housing markets may continue to drive out-migration (Gurran, Gilbert et al. 2018b; Gurran, Phibbs et al. 2018).

This suggests that the issue of housing affordability for key workers may present a significant challenge for cities, particularly into the future as older owner occupying key workers retire. However, many aspects of the scale and nature of key worker housing challenges and locational choices remain unclear. This includes how a 'key worker' should be defined, as well as how factors beyond occupation, such as age, income and household composition affect the housing aspirations and choices of key workers. Moreover, while advocacy groups have suggested a range of potential approaches to support low and moderate-income workers to live in reasonable proximity to their employment, ranging from financial assistance to inclusionary planning mechanisms, few have examined potential responses in a holistic way. There is a particular need to consider the challenges and aspirations of key worker households in Australia's most expensive cities in order to inform potential policy responses and to direct further research. This research addresses these gaps, with a particular focus on Sydney and Melbourne.

1.2 Existing research

Only a handful of studies on housing affordability and lower income Australians have looked specifically at key workers. However, recent research on mismatches between the location of affordable housing and jobs in Australia's largest metropolitan regions provides insight into the potential challenges key workers might face and their responses. This research, which informed the present study, is discussed below.

1.2.1 Declining metropolitan housing affordability and its implications for low and moderate-income workers

Since the new millennium, the affordability of Australia's largest cities has significantly declined for low and moderate-income households, particularly in inner ring locations. This has occurred as jobs (both knowledge and service-based) have become increasingly concentrated in central areas of the major cities (Berry 2006; Kelly and Donegan 2014; Hulse, Reynolds et al. 2019), coupled with a shift in locational preferences among higher paid knowledge sector workers towards inner city areas with good access to transport, jobs and services

(Nygaard 2005). This process has led to significant gentrification of many historically more affordable inner suburbs (Bounds and Morris 2006; O'Hanlon and Hamnett 2009), exacerbated by government support for urban renewal and inner city redevelopment projects (Searle and Bunker 2010) which nevertheless failed to deliver promised volumes of new affordable housing (van den Nouweland, Davison et al. 2015; Gurran, Gilbert et al. 2018a; Whitzman 2018).

More recently, economically successful global cities have become a focal point for domestic and international real estate investment, further exacerbating the disassociation of house prices from local wages (Ross and Rohde 2017). As researchers have documented, many middle and even outer ring areas of Sydney and Melbourne, which traditionally provided more affordable market entry points for first home buyers, are now unaffordable (Weller and van Hulten 2012; Bangura and Lee 2019), meaning that would-be buyers are looking further afield.

These trends, and specifically the spatial dislocation of affordable housing from jobs, has implications for the economic productivity of cities (MacLennan, Randolph et al. 2018). These effects accrue at the city level, as firms struggle to recruit or retain employees due to high housing costs; and at the household scale, as those with caring responsibilities appear more likely to reduce labour market participation if they are unable to find work near home (Hulse, Reynolds et al. 2019). Scenario building and economic modelling suggests that increasing the volume of subsidised and affordable housing close to areas of job density in Sydney would have significant productivity effects to the metropolitan economy (MacLennan, Randolph et al. 2018). These productivity gains predominantly stem from reduced travel times and better matching of the labour force to jobs that align with their skills.

International research suggests that the inability of workers in essential services to live in high cost metropolitan regions can have significant implications for the quality of essential services and the functionality, including the health and safety, of cities. Particularly in England, research has found that high housing costs are a significant factor in labour recruitment and retention difficulties in essential public services. For example, research in the early and mid-2000s capturing the perspectives of employers in the high housing cost regions of Cambridge and Surry found evidence of recruitment and retention problems and under-resourced essential services due to the lack of available and affordable housing (Morrison 2003; Morrison and Monk 2006). As researchers have documented, the inability to recruit staff due to lack of affordable housing has also threatened the feasibility of government plans to increase the capacity of public services in regions such as London (Airey and Wales 2019).

In addition to a lack of affordable housing, research suggests that the tenure of housing that key workers can afford is also important. Research commissioned by the UK Government in the early 2000s involving focus groups with workers employed in teaching, nursing, policing and prison and probation services found that there is a strong aspiration for homeownership among those occupation groups (Office of the Deputy Prime Minister 2005; Berry 2006). Inability to access appropriate housing that met those aspirations was found to be a significant factor in workers leaving the London region or leaving their profession (Office of the Deputy Prime Minister 2005; Berry 2006). These concerns have also been raised in Australia, particularly in Sydney (PwC Australia 2019).

Responses and their potential risks

Research in the Australian context on the labour market impacts of declining central city housing affordability has revealed that individuals and households may cope with high metropolitan housing costs in ways that somewhat mitigate obvious labour market impacts. For example, research has found that many lower paid service sector workers in central city areas are able to cope with high housing costs because they reside in higher income households where they are not the primary income earner. As Yates, Randolph et al. (2006) documented over a decade ago, and van den Nouweland, Crommelin et al. (2016) found again in 2016 in the Sydney context, lower paid workers in hospitality and the service sector are typically young and/or temporary workers and often reside in their parental home or in shared housing with multiple working adults (Yates, Randolph et al. 2006; van den Nouweland, Crommelin et al. 2016). Research by Hulse, Reynolds et al. (2019) shows that some lower income renters go into housing stress in order to reside in job-rich locations (Hulse, Reynolds et al. 2019). Lower income workers may also reside in more affordable outer suburbs and commute long distances (often by private car) to work (Dodson, Li et al. 2020).

While these adaptations may somewhat mask the labour impacts of declining housing affordability, they nevertheless produce negative externalities. One of the most obvious ones for cities is the environmental impacts of long, car-based commutes (Climate Council 2017). Long commutes, particularly by private car also have financial implications as well as negative consequences for physical and mental health, stemming from limited time for exercise, meal preparation and eating, sleeping and family time, as well as the stress of the commute itself (Dodson and Sipe 2008; Bissell 2015; Nicholls, Phelan et al. 2018; Chatterjee, Chng et al. 2020). In their review of international research, Chatterjee Chng et al. (2020) found that those outcomes can have implications for work performance, with long commutes linked to worsened moods while at work, fatigue symptoms and higher rates of absence due to illness. Recent research also suggests that long commutes are a productivity drain on the economy and that a significant driver of the productivity gains associated with the colocation of jobs and affordable housing is reduced travel time (MacLennan, Randolph et al. 2018).

Documenting the impact of housing stress on lower income households using data from the Household, Income and Labor Dynamics in Australia (HILDA) survey, researchers have linked conditions of housing affordability stress, particularly among lower income renters, to material deprivation—the inability to meet other important non-housing costs. Material deprivation can manifest in skipping meals, reducing spending on healthcare and foregoing weather appropriate clothing and social and leisure activities (Rowley, Ong et al. 2015; Daniel, Baker et al. 2018). In addition to the obvious health implications of reduced nutrition and expenditure on medical and dental check-ups and treatments, housing affordability stress and material deprivation has been linked to a decline in mental health (Rowley, Ong et al. 2015; Bentley, Pevalin et al. 2016). As Bentley, Pevalin et al. concluded in their comparative analysis of Australia and the United Kingdom, mental health impacts are particularly prevalent among Australian private renters due to limited access to safety nets such as government income support and social housing which can mitigate the impacts of sudden changes in financial circumstances (Bentley, Pevalin et al. 2016).

Recent ‘shock’ events have further highlighted the vulnerabilities inherent in certain adaptations, particularly long distance commuting and house sharing. The Australian bushfire crisis of late 2019 and early 2020, and the COVID-19 shutdown, for example, significantly disrupted the transport network and the feasibility of long commutes. Moreover, while researchers have long documented the negative physical and mental health impacts of overcrowding (Herath and Bentley 2018; Singh, Daniel et al. 2019), the COVID-19 situation has raised new concerns about shared and marginal housing and infectious disease spread, with overcrowded households potentially presenting a wider public health risk (Gurran, Phibbs et al. 2020). Key workers working in healthcare and with vulnerable populations, in particular, risk serving as a conduit. This risk has been documented in California where 16 per cent of essential workers whose jobs require physical presence live in overcrowded households where physical distancing and self isolation are not possible (Cuellar Mejia and Cha 2020).

Recent consultancy studies and media reports suggest that a further response to declining housing affordability has been for some key workers to leave expensive metropolitan regions (or plan to leave in future) to find employment in areas with lower housing and living costs (Gurran, Gilbert et al. 2018b; PwC Australia 2019). This is possible for key workers as job opportunities are dispersed (not necessarily concentrated in inner city areas) as they are population serving. As new housing in accessible locations targets the higher end of the housing market (Ong, Dalton et al. 2017) and traditionally more affordable ‘entry level’ suburbs have become unaffordable to many first home buyers (Bangura and Lee 2019), it is very plausible that younger key workers are looking to migrate to more affordable cities and regions. This resonates with UK-based research which has found that key workers, particularly those in higher paid occupations such as teaching and nursing, have strong preferences for home ownership and will look to move to regions where ownership is more affordable when they reach a particular career stage (e.g. 5 years post graduation) (Office of the Deputy Prime Minister 2005).

However, with limited empirical evidence, it is unclear how key workers are responding to declining housing affordability in Australia’s most expensive cities and what the implications for those cities might be into the future. The existing research documenting the outcomes of declining housing affordability near jobs nevertheless suggests outcomes to explore. As discussed in the following section, this research guided our selection of variables to examine within 2016 Census data, as well as questions to put to the industry and policy experts who were interviewed.

1.3 Research methods

This project is a scoping study which is an AHURI research model introduced into the National Housing Research Program in 2020. Scoping studies are shorter projects (conducted over approximately six months) designed to map evidence on a policy issue for which the evidence base is currently limited and/or to provide greater clarity on a complex topic or emerging issue. In generating new evidence, as well as identifying gaps in the evidence base, scoping studies are intended to help refine future research as well as policy options.

A decade and a half on from Berry's consideration of the key worker concept in the Australian context (Berry 2006) and analysis of housing affordability by occupation conducted by Yates, Randolph et al. (2006), and in light of new claims that rapid house price growth is affecting or will affect recruitment and retention of essential service providers in Australia's largest cities (Kadib 2019; PwC Australia 2019), this research was designed to scope evidence of:

- whether and how governments in Sydney and Melbourne and select international jurisdictions are considering key worker housing needs and supporting key workers to access appropriate housing
- the housing situations of key workers on different low and moderate incomes in Australia's two largest metropolitan regions, and
- potential policy responses for Australian cities.

1.3.1 Our approach

The scoping study involved four main components, as follows:

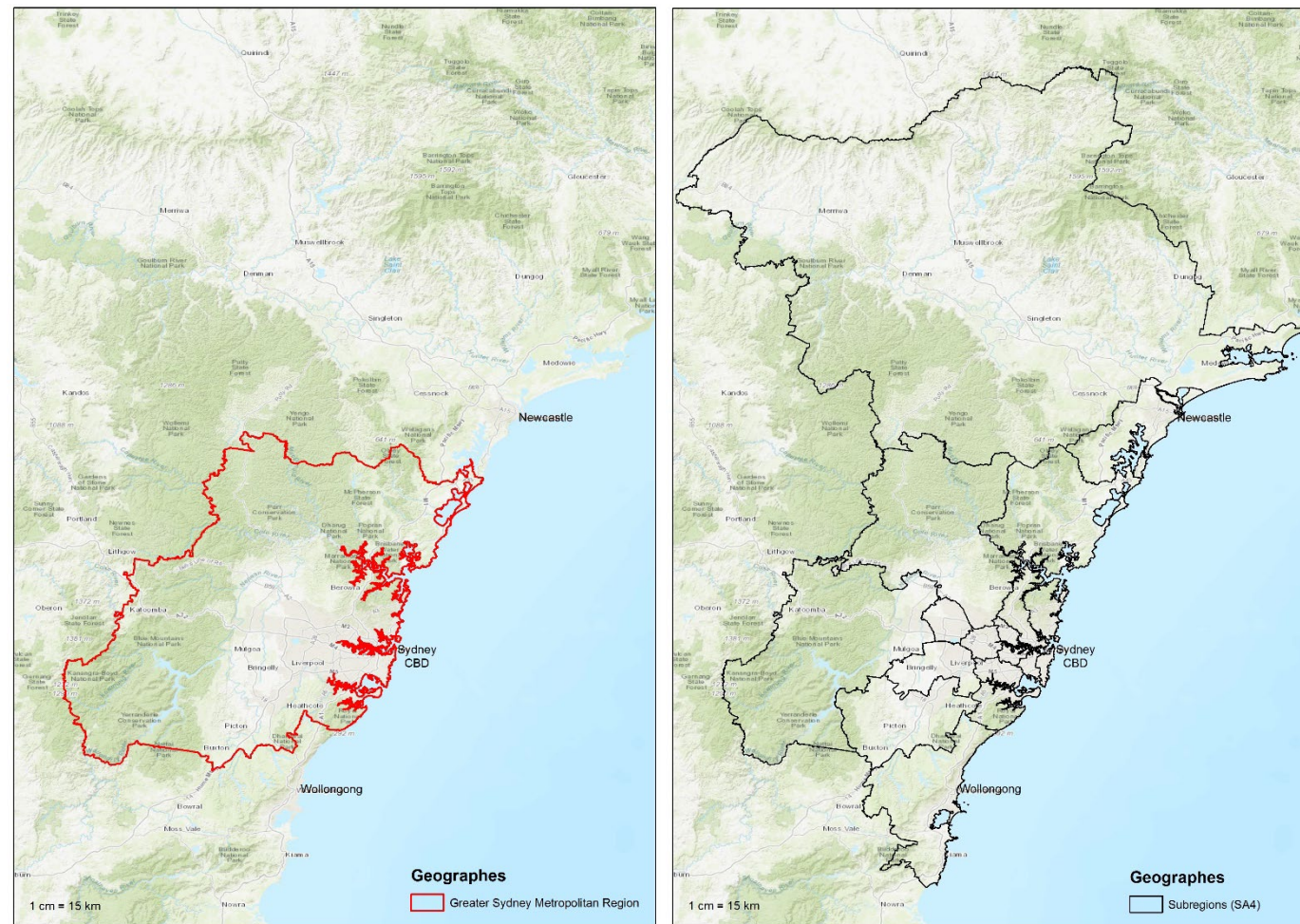
- a desk-based review of strategy, policy and program documents to understand whether and how governments in Sydney and Melbourne and select international jurisdictions are considering key worker housing needs and supporting key workers to access appropriate housing
- high level analysis of geographic patterns of rental and purchase affordability for indicative key worker salaries across Sydney and Melbourne
- collection and analysis of 2016 Census data to examine evidence of the housing situation and commuting patterns of key workers in different occupations across Sydney and Melbourne; and,
- interviews with individuals with expertise in different key worker occupations and in labour markets, housing and urban planning in Sydney.

Further details on each of these components follows.

To examine evidence of the situation of essential workers in Sydney and Melbourne, our data collection and analysis focussed on each city's 'greater metropolitan region', which we define to include the metropolitan region (Greater Capital City Statistical Area in ABS geography) (see Figures 1 and 2, maps on left side), plus immediately surrounding satellite cities and regions. We chose to include areas bordering each metropolitan region in our analysis in recognition of evidence that as more outer suburbs have become unaffordable, some first home buyers are moving to fringe areas and satellite cities (Burnley, Murphy et al. 1997; Bangura and Lee 2019) and that some workers are commuting from satellite cities and regions to central city jobs (Gurran, Gilbert et al. 2018b).

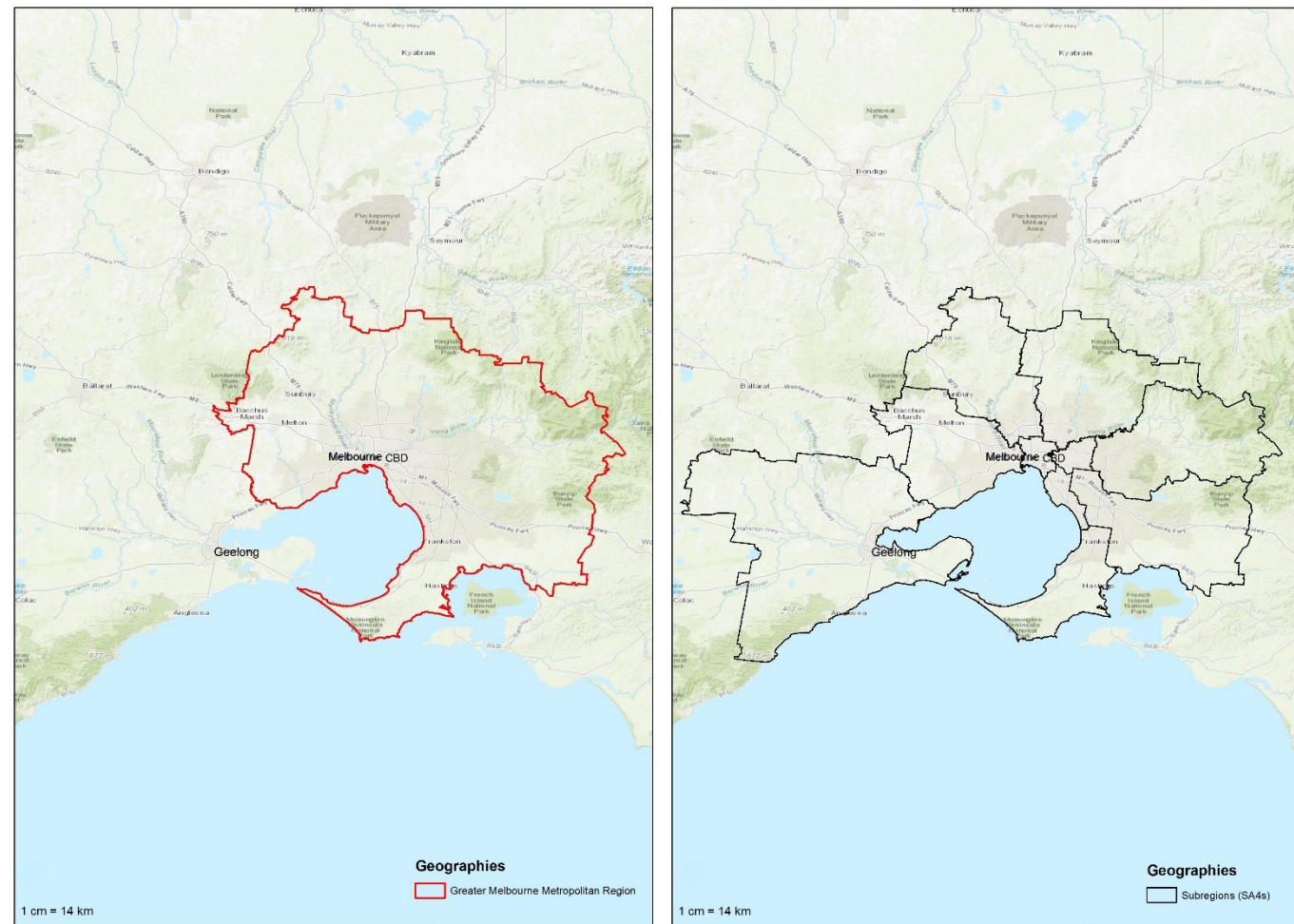
The majority of data was collected and analysed using SA4 geographic units (Figures 1 and 2, maps on right side show coverage). As defined by the ABS, these typically constitute areas with a population of 100,000 or more (300,000 to 500,000 in metropolitan areas) and are designed to capture labour markets (ABS 2020a). Some analysis was also undertaken at the smaller LGA level.

Figure 1: Metropolitan region boundaries and total area included in analysis (shown as subregional units) (Sydney)



Source: Authors; shapefiles derived from the ABS.

Figure 2: Metropolitan region boundaries (a) and total area included in analysis (shown as subregional units) (b) (Melbourne)



Source: Authors; shapefiles derived from the ABS.

Scoping existing policy and practice in addressing key worker housing needs

International and Australian examples of policies and programs to support key workers—across different occupations—to access housing in high-cost city regions were identified in the course of the literature review and via a web search. The scoping commenced with a review of Sydney and Melbourne. The international component of the review was limited to England and the US, which are identified in the literature as countries where there has been a comparatively long history of trying to address key worker housing challenges, and which have planning and housing systems that are relevant to the Australian context. Within those countries, we focussed on cities and regions known to have very expensive housing markets. Once identified, policies and programs were reviewed against a series of questions designed to consistently capture key attributes, including the design of assistance programs, eligibility criteria and funding and governance arrangements.

Scoping evidence of housing affordability for low and moderate-income workers in Sydney and Melbourne

A first step in generating evidence of the situation of key workers in Sydney and Melbourne was to undertake a high level analysis of housing affordability at different income levels that broadly correlate to full-time salaries for different occupations. The purpose of this analysis was to identify high level geographic patterns of affordability across each LGA. We derived indicative incomes for different occupations from a combination of sources. For public sector employees including teachers, healthcare workers, police and emergency service workers, salaries were derived from industry awards published by the NSW and Victorian Governments. Information on average wages for other occupations was derived from Fair Work Australia and from the employment site SEEK, which provides information on average wages for different jobs by state (Australian Government 2020; SEEK Australia 2020). Salaries were then plotted within the income quintile ranges for each state (ABS 2019) and indicative incomes were selected at the low, mid and high point of each quintile (representing different key worker occupations) for the affordability analysis. We recognise that in practice individual salaries within different occupation groups vary considerably based on hours worked (including full-time or part-time status and extent of overtime) as well as experience level.

Median rents by LGA for different property sizes (number of bedrooms) were derived from publicly available data published by the NSW and Victorian Governments (Data Vic 2020; NSW Department of Communities and Justice 2020). An affordable rent level was calculated for each indicative income on the basis that, to be affordable, weekly rental costs should not exceed 30 per cent of gross weekly income (i.e. affordable rent = gross weekly income x 0.3). The maximum affordable rent for each selected income was then compared with median rents for one, two and three-bedroom properties for each LGA. Median rents were derived from the NSW Government's quarterly *Rent and Sales Report* (NSW Department of Communities and Justice 2020) and the Victorian Government's quarterly *Rental Report* (Data Vic 2020). An LGA was deemed to have an affordable median rent (for the applicable dwelling type/size) if the median rent was equal to or below the applicable affordable rent. Actual median rents exceeding the affordable rent by \$1–\$49 per week were deemed to be moderately unaffordable and actual median rents exceeding the affordable rent by \$50 or more per week were deemed to be very unaffordable. The findings were mapped and spatially analysed using the Geographic Information System (GIS).

Affordable purchase prices for each indicative income level were calculated by first determining an affordable monthly loan repayment (i.e. (gross income x 0.3)/12)). The affordable loan repayment was then used to calculate a maximum affordable loan amount (assuming an interest rate of 4 per cent and a 30-year loan term). Finally, an affordable purchase price was calculated assuming an 80 per cent loan-to-value ratio. We derived median LGA sale prices for units and houses for the 2019 calendar year from aggregate Corelogic data accessed via SIRCA (SIRCA 2020). Consistent with the approach to the rental affordability analysis, affordable purchase prices for different incomes was compared to actual LGA median house and unit prices. Actual median prices that were below or equal to the affordable price were deemed to be affordable. Actual median prices exceeding the affordable price by \$1–\$49,999 were deemed to be moderately unaffordable and median prices exceeding the affordable price by \$50,000 or more were deemed to be very unaffordable. The results were analysed spatially using the GIS.

Scoping evidence of the housing situation and commuting patterns of key workers in Sydney and Melbourne

Existing research evidence suggests that major labour market impacts arising from unaffordable housing costs have been somewhat mitigated in Australia's major cities as low and moderate-income earners continue to access jobs in high housing cost areas by commuting long distances (Dodson, Li et al. 2020); sharing housing or being part of higher income households (van den Nouwelant, Crommelin et al. 2016); and, by taking on unaffordable housing costs (Hulse, Reynolds et al. 2019). While mitigating significant labour shortages, these responses nevertheless carry risks (discussed above). Moreover, there is also evidence to suggest that key workers, particularly those in population serving jobs (with dispersed employment opportunities) may be leaving or planning to leave high cost metropolitan areas to settle and work in areas with more affordable living costs (Gurran, Gilbert et al. 2018b; PwC Australia 2019).

Using 2016 Census data we examined evidence of how essential workers across a range of occupations (and incomes) are coping with high metropolitan housing costs. Our approach, including the variables selected for analysis, was informed by this research using evidence of where individuals in our selected occupation groups live; where they work; how they travel to work and the distance they commute; their household composition and housing (including housing tenure and housing suitability); the income of their household relative to rental or mortgage payments; and, where they lived in 2016 compared to 2011 (i.e. residential moves). The majority of data for the analysis was collected using the ABS's TableBuilder Pro tool. However, we used custom data commissioned from the ABS to examine the proportion of individuals in different occupations, residential locations and tenures who, at the time of the 2016 Census, could be classified as being in housing stress. Housing stress was defined as spending over 30 per cent of gross household income on rental or mortgage payments.

We chose to focus on 21 occupation groups. These reflected a combination of individual four-digit census occupation categories and combinations of categories. Occupation categories that were combined for analysis included different types of teachers and ICT professionals and trades. The following 21 occupation groups were used in our analysis:

- Teachers (all types from early childhood to secondary school and special education)
- Registered Nurses
- Midwives
- Social Workers
- ICT Support Professionals
- ICT Support and Telecommunications Technicians and Trades
- Ambulance Officers and Paramedics
- Enrolled and Mothercraft Nurses
- Welfare Support Workers
- Child Carers
- Educational Aides
- Aged and Disability Carers
- Nursing Support and Personal Care Workers
- Fire and Emergency Service Workers
- Police
- Prison Officers
- Bus and Coach Drivers
- Train and Tram Drivers
- Delivery Drivers
- Commercial Cleaners
- Laundry Workers.

The list covers both the public sector essential service providers who have traditionally been identified as key workers (including healthcare, teaching, policing and emergency services workers and public transport operators), and non-public sector workers providing essential support services in the city, such as cleaners, child carers, aged and disability support workers and computing and ICT support workers (Office of the Deputy Prime Minister 2004; Yates, Randolph et al. 2006; PwC 2017; Gurran, Gilbert et al. 2018b). Particularly amidst the COVID-19 pandemic, laundry workers, commercial cleaners and delivery drivers have proven essential to city functioning, so were included in our analysis. Our list is certainly not exhaustive in terms of the low and moderately paid occupations that could potentially be considered essential to a city's functioning. Other occupation groups not specifically reflected in the ABS's four digit occupation categories, such as refuse collectors, also play an important role in city functioning. However, the occupations included in the analysis represent a range of incomes (from low Q2 to mid Q3 for each metropolitan region). The implications of the findings could, therefore, extend beyond these specific occupation groups to include other workers in these income ranges.

Most of the information was collected and analysed using SA4 geographies which represent subregions. However, some information was also collected and analysed using LGA geographies, including where individuals in our selected occupations live and their concentration relative to the distribution of the labour force.

Overall, over 80 data tables were generated. The data was analysed to generate descriptive statistics and examined spatially using the GIS.

Scoping industry and policy perspectives

A small number of interviews were conducted with professionals in Sydney to test and extend the findings of the quantitative analysis. These interviews also examined the appropriateness and feasibility of potential strategies to support key workers to access housing and jobs in high housing cost areas. The plan was initially to run a face-to-face focus group in Sydney comprised of up to eight participants. However, in the context of COVID-19, this approach was amended to individual interviews conducted by phone or via a videoconferencing app.

The aim was to speak to professionals with diverse expertise across specific occupation groups, planning, labour markets and housing. Initially we sent an email invitation to organisations representing and employing essential workers, including unions and advocacy groups, inviting them to participate in the research on a voluntary basis. This was followed by invitations to organisations and individuals with expertise in labour market, planning and housing. In total, eight experts were interviewed for approximately 30 to 40 minutes each. The interviews were open-ended and mostly involved discussion relevant to participants' expertise and experience. Interviews were recorded or notes were taken from the audio for further analysis. As the interviews were conducted during the COVID-19 global pandemic period, many office workers were 'working from home' but many essential sectors—such as health, delivery, and cleaning services—experienced increased demand.

Qualitative data analysis deals with the meanings, descriptions, values and characteristics of 'subjects' according to the themes of the research (Grbich 2013). NVivo software was used for data analysis, involving manual coding by applying nodes (themes) to segments of text and arranging larger data into fewer content categories (Hsieh and Shannon 2005). The coding process helped to identify similarities and differences between different participants' viewpoints and to determine the relationship between themes to make analytical comparisons. The content analysis technique was applied to determine the themes emerging from the interview data through deductive (interview question-driven) and inductive (data-driven) logics (Fereday and Muir-Cochrane 2006). Content analysis revealed different themes of 1) housing unaffordability and other housing challenges faced by different types of essential workers; 2) locational aspects of key worker jobs; 3) labour market challenges and/or difficulty in retention or recruitment of key workers related to housing unaffordability; 4) personal and professional challenges arising from a disconnect between key workers' housing and job locations; 5) particular challenges arising during COVID-19; and 6) the appropriateness and feasibility of potential policies and programs to support key workers to live in and/or access jobs in expensive housing market areas. These themes were either directly expressed by participants in interviews or derived through textual analysis. In this sense, content analysis of interviews helped to contextualise and identify nuances within the findings of the quantitative analysis.

1.3.2 Limitations of this research

As a scoping study, parameters had to be set around the overall breadth and depth of the research. We focussed our analysis predominantly on Sydney and Melbourne and their satellite cities and regions as the two largest and most expensive cities in Australia. Furthermore, the analysis, which was based on 2016 Census data and price, rental and income information for select quarters and years, was only able to capture a given moment in time. We therefore recommend that further research use the methods and variables from this research to take a more longitudinal view and to examine patterns and trends in locations beyond the two capital cities.

As discussed in the following chapter, there is no universal definition of what constitutes a key worker. Nevertheless, specific occupation groups captured in ABS occupation classifications had to be selected for the purpose of the analysis. Our approach was to take a broad view. This meant including occupations beyond the traditional teaching, healthcare, policing and emergency sectors. We also sought to select occupations with a range of incomes, extending from the low Q2 to mid Q3 range. However, the 21 occupations included in this analysis, and the somewhat broader range of occupations discussed in the interviews, by no means captures the full range of workers that could be considered 'key' or 'essential' to the functioning of a city. The COVID-19 shutdown, in particular, highlighted the important role many workers play in maintaining public health and safety in times of crisis. As is discussed in the final chapter, selecting occupation groups is one of the challenges in responding to the key worker problem.

Finally, we were unable to attain any responses from the key worker employers we contacted. While organisations representing specific occupation groups of key workers were able to provide some perspectives on the locational choices of key workers and recruitment and retention challenges, further research should seek to capture the perspectives of employers and recruitment agencies, as well as key workers themselves.

Directions for future research arising from the findings of this study and its limitations are discussed in the final chapter.

2. Policies and programs to support key workers

- **There is no consistent or universal definition of what constitutes a key worker with occupations varying across programs.**
- **In England and the US, policies and programs to support key workers include funding and inclusionary planning mechanisms to support the supply of affordable rental and ownership housing for key workers as well as financial assistance to support home purchase.**
- **Policies and programs to assist key workers to access affordable rental and ownership housing in those countries exist alongside and within broader policies and programs designed to support the provision of intermediate housing tenures and home purchase opportunities for low and moderate-income earners generally.**
- **In Sydney and Melbourne, statutory planning policies and programs to support the provision of housing specifically for key workers have been limited and sporadic.**

2.1 Introduction

In 2006, Australian urban scholars considered the key worker question in the context of broader research on housing affordability for lower income Australians (Berry 2006; Yates, Randolph et al. 2006). At the time, the research found that the main programs to address the issue of housing affordability for key workers were in England, and focussed on a relatively narrow range of occupations (Berry 2006). By contrast, programs in the US were focussed more broadly on providing workforce housing across the public and private sectors. Despite some evidence of a growing spatial mismatch between the location of jobs and the location of affordable housing in Sydney and Melbourne (Berry 2006; Yates, Randolph et al. 2006) there was almost no interest in the issue of key worker housing by governments in Australia or within Australian housing debates (Berry 2006).

A decade and a half on, and following significant house price growth relative to wages in many global cities internationally, we, again, examine examples of policies and programs in England and the US and the extent to which governments in NSW and Victoria have engaged with the issue of key worker housing affordability. The chapter begins by discussing what constitutes a key worker before outlining the international policies and programs identified. The chapter then examines the Australian cases.

2.2 Defining ‘key worker’

Both the literature and policy and program reviews revealed that, consistent with previous research findings, there is no universal definition of what constitutes a key worker, nor is the term universal (with ‘essential worker’ and ‘frontline service provider’, for example, often having the same meaning). In England, the term ‘key worker’ has generally applied to low and moderate-income public sector workers whose wages are set at the national level (Morrison 2013). Under the early Key Worker Living programme, which was introduced in England in 2004, key workers were defined as national health service workers (including nurses, therapists and social workers, but excluding doctors and dentists); teachers; police; probation officers; educational psychologists, fire and rescue service staff and employees of local authorities and local education authorities (Airey and Wales 2019). However, national planning policy in England now allows for considerable flexibility in how ‘key worker’ is interpreted in local policy. As Morrison explains, in Cambridge, the term extends to public sector workers in research and development, with housing for those workers considered essential to support growth of the city’s research and education-based economy (Morrison 2013).

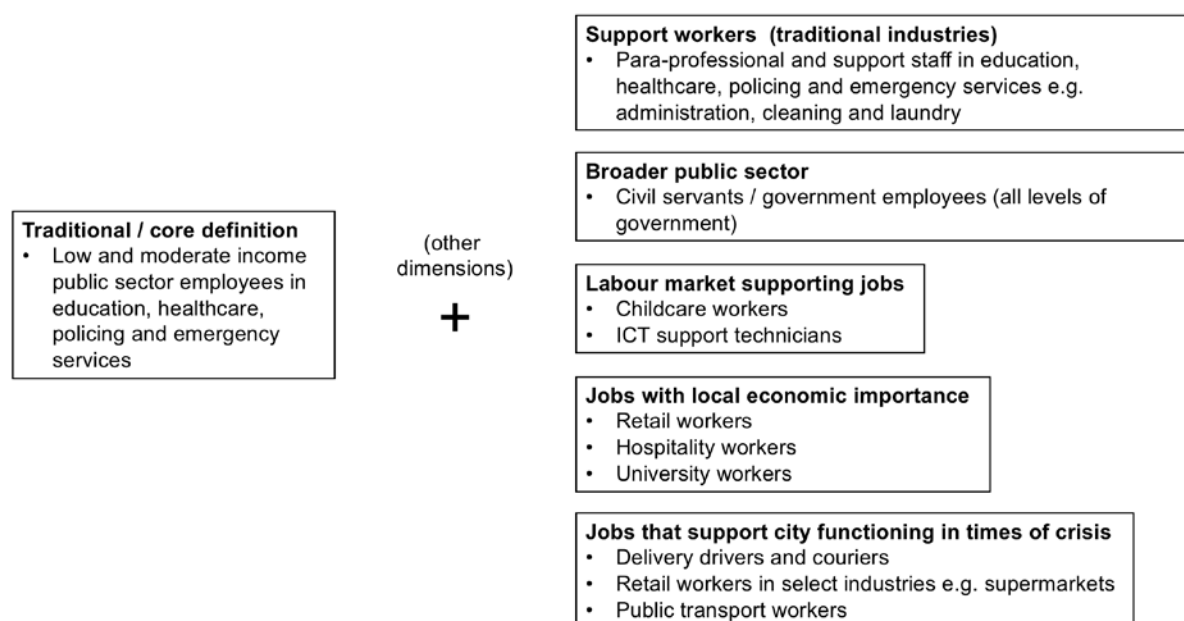
Our analysis of programs in the US, discussed in Section 2.4, revealed that while some US programs are narrowly focussed on one or two specific occupation groups, such as teachers or police officers, there are also examples of programs having a much broader reach, including para-professionals and support staff working in essential services such as healthcare and education, as well as public sector employees generally, working in all levels of government.

In the Australian context, there is no formal definition of key workers. While key public service workers including teachers, nurses, police and fire and emergency personnel are a consistent focus (Gurran, Gilbert et al. 2018b; PwC Australia 2019), specific studies and policy recommendations have responded to local contexts and labour market concerns. In some cases, definitions include workers who support the broader labour force, e.g. child care and aged care workers and ICT support professionals and technicians; as well as low paid workers contributing to local economies, such those working in hospitality and retail (see, for example, Yates, Randolph et al. 2006; City of Ryde 2016).

The COVID-19 pandemic has raised further questions about the scope of the key worker definition and what occupations are essential. As recently pointed out by the Mayor of London, the pandemic has exposed the city’s reliance on a broad range of workers beyond those traditionally classified as key workers, including delivery drivers and couriers and supermarket workers (Greater London Authority 2020). This suggests that while definitions are required for the purpose of data collection and analysis and for operationalising policies and programs, there is potentially a risk of setting too narrow a definition that excludes some of the many occupations that are important to the effective functioning of a city. In the London context, policy makers have suggested that there needs to be a balance between setting a clear definition and allowing flexibility for the definition to be adapted to different local economies and circumstances (Greater London Authority 2020).

Figure 3 provides an overview of the different key worker definitions identified in the course of the literature and policy review. The two sections that follow outline examples of policies and programs that have been introduced in England and the US since the early 2000s to support key workers (defined in these different ways) to access housing in metropolitan regions with high housing costs. The examples focus on the type of support (for example demand or supply side) and eligibility criteria.

Figure 3: Overview of key worker definition and varied dimensions



Source: Authors.

2.3 Examples of policies and programs in England

In England, policies and programs to support key workers to access housing have included demand and supply side support. Over time, support for key workers has generally been encapsulated within policies and programs for low and moderate-income households generally, including through the supply of intermediate affordable housing. Intermediate affordable housing tenures include those situated between social housing and market rate housing and include discounted market-rate rental housing and discounted market-rate and shared ownership housing for purchase (Monk and Whitehead 2010). These housing tenures have increasingly been a focus for delivery of affordable housing through the national planning policy known as 'Section 106' (S106). This policy requires developers to deliver a proportion of affordable housing (in accordance with local policy) as part of all significant new development (typically 10 or more houses) as a condition of development approval. Intermediate housing tenures require lower levels of government subsidy to deliver, because they target higher income earners who can afford to pay more for their housing.

Our review focussed on national level policies and programs as well as policies and programs in the Greater London region.

2.3.1 National

In England, the first comprehensive program providing housing assistance for named occupation groups was the central government's *Key Worker Living Program* which commenced in 2004. Under the program, key workers in named occupations were eligible for:

- equity loans of up to £50,000 (up to £100,000 for qualifying teachers in London) to support purchase of a new or established home, repayable upon sale or ceasing to be a key worker
- shared ownership whereby a key worker could purchase up to 25 per cent of the value of a new dwelling (with opportunity to scale up over time) and the remaining share owned by a registered affordable housing provider
- intermediate rental housing (managed by a registered affordable housing provider) for which rents are set at below 80 per cent of market value (Berry 2006; Airey and Wales 2019).

The UK national government allocated £690 million to the program. This allocation included funding in the form of capital grants to registered affordable housing providers to construct homes to be made available to key workers under the scheme (Airey and Wales 2019).

Funding for the program was not renewed. However, central government support for Homebuy, other forms of assisted ownership and discounted rate rental housing has continued, with eligibility now linked more generally to income level, rather than employment in a specific occupation (Airey and Wales 2019).

In the *National Planning Policy Framework* which establishes planning policy for England, affordable housing is defined as 'housing for sale or rent, for those whose needs are not met by the market'. The definition specifically mentions 'essential local workers' as one of those groups (Ministry of Housing Communities and Local Government 2019: 64). It is expected that affordable housing delivered through S106 developer contribution requirements is made available to those in need of affordable housing, including essential workers (Ministry of Housing Communities and Local Government 2019). This means that local governments must consider essential workers in assessing housing need in their local area as well as seeking affordable housing contributions from developers as part of significant new developments. However, in practice, whether and how different key workers are prioritised in intermediate housing allocations differs between local governments. In Greater London, for example, while many boroughs do prioritise people working in the borough and/or people working in certain occupations, the Mayor for London has not historically specified any criteria beyond the income limits for programs, which has resulted in local variation (Greater London Authority 2020).

In England, there have also been sporadic examples of the National Health Service (NHS) partnering with registered affordable housing providers to develop their surplus land for affordable housing for staff (Airey and Wales 2019). The NHS has partnered with community housing provider Thames Valley Housing, for example, to develop specialist accommodation comprising single bedrooms and shared living space as well as one-bedroom apartments (Metropolitan Thames Valley 2018) for NHS staff in Surrey. According to Thames Valley Housing, rents for these properties are significantly less than rents for similar market-rate properties and have been beneficial for staff recruitment to the area (Metropolitan Thames Valley 2018).

In 2017, a government policy was introduced requiring that NHS estate owners, in disposing of land for residential development, give NHS employees first offer of any affordable housing delivered as part of a development. As with all significant residential development in England, there is an expectation that developers will partner with an affordable housing provider and contribute a proportion of dwellings as affordable housing. The volume and tenure mix of affordable housing required is based on local government policy (which, in turn, reflects levels of local need and which is financially feasible). Therefore, requirements for affordable housing inclusion are not different to comparable non-NHS sites. But there is an expectation that NHS staff will be given the first opportunity in allocations (NHS Improvement 2019). The policy aims to support up to 3,000 NHS staff to access affordable housing, with specific eligibility criteria varying for each scheme (NHS Improvement 2019).

2.3.2 City

Reflecting national policy and programs, planning policy and funding programs in London also include a focus on delivering intermediate affordable housing tenures alongside new social housing. In this vein, the Mayor's *Affordable Homes Programme* provides funding support, including capital grants to developers/approved providers for development of:

- *London Living Rent* properties, where rents set at 30 per cent of gross median income for the applicable borough (with 20% variation allowed by ward), available to households earning up to £60,000 per year), and
- *London Shared Ownership* homes, available to households earning up to £90,000 per year (Greater London Authority 2016).

Eligibility is not restricted to particular occupations. In practice, however, many local governments prioritise local workers or specific occupations of key workers in allocating new intermediate affordable housing. But, as described above, there is considerable variation in policies and approaches (Greater London Authority 2020).

In addition, some housing associations give priority to key workers in allocating affordable housing (Airey and Wales 2019). For example, Peabody Housing Association has partnered with many key worker organisations, including London Local Authority Teachers, London Fire Brigade, London Ambulance Service, Metropolitan and City Police and Transport for London, to provide affordable accommodation for their workers (Peabody Organisation 2020). The Peabody's homes are former Crown Estate properties, typically priced between 20 to 35 per cent less than the average market rent (Peabody Organisation 2020).

However, the COVID-19 pandemic has renewed policy interest not only in increasing the supply of intermediate affordable housing, but in formalising and more strongly prioritising key workers in the allocation of that housing. As stated by the Greater London Authority:

The current context has brought into stark relief the role intermediate housing should play in London's future housing market...this also includes looking again at how intermediate housing can support key workers to move to, and remain in, London, to support resilience against current and future crises. (Greater London Authority 2020:3)

At the time of writing, the Mayor of London was consulting on proposed policy and program reforms aimed at increasing the supply of intermediate housing, particularly for key workers. Proposed initiatives include:

- introducing a Greater London Authority-wide definition of what constitutes a key worker (focussing on occupations that help the city function effectively) into policy
- requiring all local governments to prioritise defined key workers in their allocation strategies for intermediate affordable housing (with some flexibility for local governments to add additional occupations where there is a demonstrated need)
- protecting existing key worker housing (including staff accommodation and existing intermediate housing allocated to key workers) of sufficient quality
- encouraging new key worker housing supply, particularly by supporting public organisations wishing to develop their own surplus land to house staff or other key workers by developing best practice guidance and potential fast-tracking of development assessment (through the Mayor's already established fast track viability route), and
- increasing data on the performance of intermediate affordable housing, including who is accessing it; and, whether it is meeting the needs of target households (Greater London Authority 2020).

2.4 Examples of policies and programs in the United States

In the United States, initiatives have been introduced at the national, state and city level to support access to housing for specific occupation groups. These have predominantly focussed on the demand side and on supporting home purchase. Key programs are outlined below starting at the national and then moving to the state and city level. As outlined in section 1.3.1, our review did not cover every state and city, but rather focussed on those with the greatest housing affordability pressures.

2.4.1 National

At the national level, the *Next Door programs* provide grants and down-payment assistance for people in specific occupation groups. These programs have evolved from the *Officer Next Door* and *Teacher Next Door* programs that were introduced in the late 1990s and gradually extended to other professionals (C-Span 2000). They now cover a range of public service professionals including school administrative staff, college and university staff, police officers and law enforcement staff, firefighters, emergency services workers and support staff, healthcare workers, government personnel (at all levels of government) and former and active duty military personnel and veterans (Teacher Next Door 2020b).

Developed by the US Department of Housing and Urban Development, these programs were initially intended to encourage police officers and teachers to live in low and moderate-income neighbourhoods identified for revitalisation (US Department of Housing and Urban Development Office of Policy Development and Research n.d.). However, the programs appear to have evolved to focus now on improving access to housing for people in the eligible occupation groups in the context of affordability challenges and on incentivising workers to remain in their professions. The programs provide small grants (of between approx. USD \$4,000 and \$6,000), downpayment assistance of up to approximately USD \$10,000, discounts on title fees and access to home loans at favourable interest rates for purchase of homes on the open market. All of the above-mentioned occupations are eligible, there are no income limits, and applicants are not required to be a first homebuyer. The program is administered by a private organisation that is a licensed Real Estate Brokerage registered with the U.S. Department of Housing and Urban Development to sell HUD homes and represent buyers in the purchase of HUD-owned homes (Teacher Next Door 2020b; 2020c).

Taking up the initial aims of the early Next Door programs, the *Good Neighbour Next Door program* enables teachers, police officers, firefighters and emergency service workers to purchase specific 'listed' homes in distressed communities at a 50 per cent discount on the list price. This discount is implemented through a 'silent second' mortgage which requires no principle or interest payments. The criteria under the program is that the purchaser must occupy the house for at least three years (Teacher Next Door 2020a; US Department of Housing and Urban Development 2020).

2.4.2 State

At the state level, programs have developed to provide finance to developers to deliver affordable workforce housing, as well as to support access to finance for specific occupation groups.

In Massachusetts, under the *Workforce Housing Initiative*, the Massachusetts Housing Finance Agency provides funding to private and not-for-profit developers to create workforce housing units. The funding is in the form of subordinate debt. Developers can access loans of up to USD \$100,000 per unit (to a maximum of USD \$3,000,000 per project) at a rate of 0–3 per cent (Massachusetts Housing Finance Agency 2019).

This initiative was designed to support the creation of rental housing (through new construction and adaptive reuse developments) that is affordable for households whose incomes are too high for subsidised housing but are priced out by market rents. The program supports production of housing with rents affordable to individuals and families with incomes generally between 60 per cent and 120 per cent of Area Median Income (AMI), with 20 per cent required to be affordable to households earning below 80 per cent of AMI (Massachusetts Housing Finance

Agency 2020b). Workforce occupation and eligibility requirements vary by development and the needs and housing market characteristics of the local area (Massachusetts Housing Finance Agency 2019). The program is not designed to support developers in meeting inclusionary zoning requirements and funding is only available to support units that are delivered in addition to those obligations (Massachusetts Housing Finance Agency 2019).

Overall, MassHousing has invested more than \$100 million in the Workforce Housing fund to support the program. Since the program was introduced in 2016, loans have been granted for 41 developments. Of these 25 of which have been completed, including in the expensive housing markets of Boston and Cambridge (Massachusetts Housing Finance Agency 2020a).

In California, the California Housing Finance Agency (CalHFA), which is an independent agency within the California Department of Housing and Community Development, provides access to finance on favourable terms through the *School Teacher and Employee Assistance Program* to improve the affordability of home purchase for teachers and school staff in the state (California Housing Finance Agency 2020a). Specifically, the program provides eligible purchasers access to a deferred payment, simple interest subordinate loan (combined with a first mortgage through CalHFA). The additional loan, which can be for up to 4 per cent of the sale price can be put towards the downpayment or assist with closing costs. Eligibility is restricted to first home buyers purchasing for owner occupation (California Housing Finance Agency 2019). Each county within California has different income limits, with higher income limits, for example, in the San Francisco Bay region (California Housing Finance Agency 2020b).

2.4.3 City

Two of the most expensive cities in the US, New York City and San Francisco, have both introduced programs to assist specific types of essential workers to access housing.

The City and County of San Francisco offers demand size support to teachers and first responders (police and fire) through the *Downpayment Assistance Loan Program* (DALP) run through the Mayor's Office of Housing and Community Development. In the context of an educator shortage in the city, while general DALP loans are also available to households regardless of occupation, a specific amount of annual funding under the program is ringfenced for educators and first responders. Numbers are very limited, however, and pre-approved households are selected through a lottery process (City and County of San Francisco 2020a).

The program offers down payment loans of up to USD \$375,000 for first-time home buyers to purchase a property (as a primary residence) on San Francisco's open market. The DALP loan is a second silent loan that requires no repayments for 30 years, or until they sell the property. Buyers can resell the property at market price at which time they must pay back the principal amount, plus a share of appreciation (City and County of San Francisco 2020a).

In the context of an educator shortage within the city, the Mayor's Office of Housing and Community Development has recently committed funding to directly support the construction of affordable rental housing specifically for San Francisco teachers and related education support staff. The project will include over 100 rental units with a mix of bedroom sizes that will be rented at affordable rates to low, moderate and middle-income educator households (City and County of San Francisco 2020b). The project is on a site belonging to the School District.

Since 1999, the NYC Department of Housing Preservation and Development (HPD), in partnership with the HSBC Bank, has run the *NYPD Home Program* to assist uniformed members of the Police Department to purchase homes across the five NYC boroughs. This program supports the purchase of apartments, properties in cooperatives, and up to three-bedroom family homes. Eligible purchasers can access 95 to 100 per cent mortgage financing through HSBC, as well as up to USD \$3,500 in closing cost assistance. Each purchaser is required to contribute a minimum of 3–5 per cent of the purchasing price of the home towards closing cost, depending on the type of property (NYU Furman Center 2020).

Importantly, these programs sit alongside other programs in each city to support low and moderate-income households generally, to access housing. These include:

- inclusionary zoning schemes in each city that require private developers to include or fund affordable housing as part of their development requirements
- city funding for the construction of rental units affordable to low to moderate-income households (such as NYC's Mixed Income Program), and,
- financial assistance to support home purchase by moderate-income buyers (such as San Francisco's general DALP program) (City and County of San Francisco 2020c; 2020d) NYC Department of Housing Preservation and Development 2020a; 2020b).

2.5 Policies, programs and projects to support key workers in the Australian context

In Australia, there have been no federal or state housing programs or policies specifically designed to support key workers. Opportunities to secure affordable housing for key workers through the planning system have also been limited under state policy.

2.5.1 NSW

In NSW, state government interventions to improve housing affordability have not targeted specific occupation groups or households with defined income ranges. The focus has largely been on supporting first home buyers generally through grants and tax concessions and increasing housing supply generally through zoning land, creating pathways for faster development approval, and investment in infrastructure to support growth (NSW Government 2017a). This is coupled with renewal and construction of social housing for very low-income households.

The current metropolitan strategy for Sydney includes an objective for more 'diverse and affordable' housing, with the aim to improve affordability for 'a cross-section of workers' (NSW Government 2017b (Objective 11)). Likewise, the NSW Housing Strategy, which was in discussion paper stage at the time of writing, identifies housing 'for people working in essential services' as one of the state's housing needs (NSW Government 2020: 10). Both strategies point to the need to increase the supply of affordable rental housing to address the needs of low and moderate-income groups. Recent changes to strategic planning processes in NSW also mean that local governments are now required to produce local housing strategies and the NSW Government has introduced guidelines on the content and process. According to the guidelines, local governments are required to consider the needs of very low to moderate-income workers who perform essential services in the LGA but who are unable to live nearby due to the cost of housing (NSW Department of Planning and Environment 2018). However, as discussed below, statutory planning tools and funding to support the provision of affordable housing in response to identified needs remains somewhat limited.

The primary planning policy to encourage affordable housing for low and moderate-income groups in NSW is the *Environmental Planning Policy (Affordable Rental Housing)*. Introduced in 2009, this policy specifies zoning permissibility and development standards for secondary dwellings, boarding houses and infill, multi-unit housing developments including a proportion of affordable rental housing across the state. It also provides a density bonus for the latter two development types. While affordable rental housing delivered in infill multi-unit residential developments is required under the policy to be managed by a not-for-profit housing provider and rented at a discounted market rate to eligible households, boarding houses and secondary dwellings are not subject to any rental limits or eligibility criteria.

Research on the outcomes of the policy indicates that the volume of affordable rental housing delivered as part of multi-unit housing developments has been very minimal compared to overall housing approvals (Gurran, Gilbert et al. 2018a). There has been considerably more take up of provisions to encourage boarding houses and secondary dwellings. However, they are not generally meeting the housing needs of lower income households

(Troy, van den Nouwelant et al. 2019; 2020). While there is evidence that many secondary dwellings and boarding house rooms are being occupied by young professionals, some of whom may be essential workers (Troy, van den Nouwelant et al. 2019; 2020), due to their small size, the appropriateness of these housing types is limited to specific household types.

Recently, a policy reform has enabled local governments across the state to establish affordable rental housing target schemes and to seek affordable rental housing contributions from new development (with targets being subject to housing needs and viability evidence). Prior to this reform, mandatory inclusionary zoning was only permissible under NSW planning legislation in a few Sydney LGAs, and schemes delivered only very small numbers of affordable rental dwellings (Williams 2015; Gurran, Gilbert et al. 2018a). Likewise, provisions that allow councils to negotiate voluntary planning contributions at the time of rezoning or variation of development standards have resulted in very few affordable dwellings (Gurran, Gilbert et al. 2018a), although there are some exceptions (discussed below).

Policies and projects for key worker housing

Without state government directions or state government policies specifically targeted to delivering housing for key workers, local governments and other planning authorities have adopted their own policies and programs, although these are somewhat sporadic geographically and over time.

Within the Sydney metropolitan region, the middle ring suburb of Canada Bay was one of the first councils to secure key worker housing. Through Voluntary Planning Agreements (VPAs) with developers (enabled within NSW planning legislation), the local government secured 27 dwellings in 2016 that are managed by Bridge Housing and include units reserved for local hospital staff. Waverley council in the expensive eastern suburbs of Sydney has secured units through the Waverley Affordable Housing Program that are rented to local key workers at affordable rents. Under SEPP 70 and its Affordable Housing Program, Willoughby Council in Sydney's north has secured 42 units which are offered at 20 per cent reduced market rent to those employed in the health industry, retail, child care and transport sectors in Willoughby Council area. In 2016, the City of Ryde, which is home to a major university and research park, adopted an affordable housing strategy that includes a target to deliver 5 per cent of dwellings from 2016 to 2031 as affordable housing (City of Ryde 2016). Through inclusionary zoning policies, predominantly applying in the area around the university and research park, the approach has yielded more than 230 rental dwellings for key workers living or working in the Ryde council area.

The City of Sydney, relative to other local governments, has secured the largest volume of affordable housing through its urban renewal sites. Affordable housing has been delivered through longstanding inclusionary zoning schemes and VPAs on major redevelopment sites such as the harbourside Pyrmont and Ultimo (450), Green Square (100) and Harold Park, Glebe and Zetland redevelopment projects that have resulted in 80, 99 and 100 rental dwellings, respectively. City West Housing, which manages affordable rental housing delivered through some of these schemes, prioritises people who work in the City of Sydney LGA in their allocation policy (City West Housing n.d.). In absolute terms, the city is still falling short of its target for '7.5% [of all housing in the LGA] to be affordable housing delivered by not-for-profit or other providers' by 2030 (City of Sydney 2020), which would equate to 10,500 affordable homes (Morris and Hanckel 2017).

Small proportions of affordable rental housing for local workers have also been delivered in areas subject to special planning policies and processes, such as the former Sydney Olympic site. As the Olympic site has been redeveloped, the Sydney Olympic Park Authority has secured 46 dwellings to provide rental housing at 25 per cent reduced market rent for Sydney Olympic park workers in the health care, education, emergency services, law enforcement, aged care and child care sectors (echorealty 2020).

2.5.2 Victoria

In Victoria, state level strategies to improve housing affordability have also predominantly focussed on increasing overall housing supply, speeding up planning processes and improving access to housing for first home buyers through tax concessions. Funding has also been committed through Homes for Victorians to renew and develop new social housing for very low-income households (Victorian Government 2017a). To support access to home ownership for moderate-income households, the Victorian Government also recently introduced a small shared ownership pilot scheme (available for up to 400 purchases by eligible moderate-income households in defined locations/developments) (Victorian Government 2020). The current metropolitan strategy for Melbourne recognises the need for greater housing diversity and to increase the supply of housing at different pricepoints, but does not specifically mention housing for key workers or any particular occupation group (Victorian Government 2017b).

Policies and projects for key worker housing

As in Sydney, initiatives to provide key worker housing are also somewhat sporadic across LGAs and over time. The City of Melbourne and City of Yarra have introduced affordable housing strategies, though the supply of affordable rental housing for key workers remains inconsiderable. For example, the City of Melbourne, in partnership with developer PDG Corporation for the redevelopment of government land at Southbank, initiated to include 40 affordable housing units for low to middle-income workers, though key worker occupations are not specified (Round 2019). The City of Yarra adopted its Social and Affordable Housing Strategy in 2019 that aims to deliver affordable housing for low to middle-income workers through inclusionary zoning on new developments (City of Yarra 2019). Other than this, the Health Employees Superannuation Trust Australia (HESTA) Super Fund, First State Super, and Housing Choices Australia have acquired affordable rental units to provide 20 per cent reduced market rent for key workers, with 37 dwellings at Brunswick Nightingale Village, 55 dwellings at Moonee Ponds and 57 dwellings at Docklands, respectively.

2.6 Overview and implications

Overall, this component of the scoping study found that while the ‘key worker’ concept consistently encapsulates low and moderate-income public sector workers employed in teaching, healthcare, policing and emergency services, there is significant variation in occupation inclusion across locations and programs. This suggests that the concept can and has been adapted in practice to the needs of different local economies and in light of labour recruitment and retention challenges in different public services.

In both England and the US, programs have developed at the national, state and city level to support workers in specific occupations to access housing in the high cost regions where they work. As summarised in Table 1, types of support range from direct financial support to eligible key workers to purchase homes in the general housing market, to access to specific subsidised housing products delivered by private developers or affordable housing providers, with provision supported by planning requirements, capital grants and access to low cost finance for developers. Importantly, policies and programs support access to both rental and ownership housing. The former supports key workers to take up jobs in high housing cost locations (i.e. recruitment) and the latter supports longer term retention.

Table 1: Overview of types of support provided through different policies and programs

Type of support	Example
<ul style="list-style-type: none"> Downpayment assistance/assistance with purchase costs/fees 	<ul style="list-style-type: none"> Next Door programs (US) School Teacher and Employee Assistance Program (California, US) NYPD Home Program (NYC, US)
<ul style="list-style-type: none"> Access to 95–100% mortgage finance 	<ul style="list-style-type: none"> NYPD Home Program (NYC, US)
<ul style="list-style-type: none"> Shared equity loan or silent second mortgage (repayable at sale) 	<ul style="list-style-type: none"> Good Neighbour Next Door (US) (eligible properties only) Key Worker Living Program (England—past) (open market) Downpayment Assistance Loan Program (San Francisco, US)

Type of support	Example
<ul style="list-style-type: none"> Shared ownership (eligible properties) 	<ul style="list-style-type: none"> Key Worker Living Program (England—past) London Shared Ownership (London, England)
<ul style="list-style-type: none"> Subsidised rental (eligible properties) 	<ul style="list-style-type: none"> Key Worker Living Program (England—past) London Living Rent (England)
<ul style="list-style-type: none"> Capital grants to affordable housing providers for the development of affordable housing for key workers 	<ul style="list-style-type: none"> Key Worker Living Program (England—past) Homes for Londoners Affordable Homes Program (London, England)
<ul style="list-style-type: none"> Low rate loans to developers to develop new rental housing for moderate-income workers 	<ul style="list-style-type: none"> Workforce Housing Initiative (Massachusetts, US)
<ul style="list-style-type: none"> Provisions for voluntary negotiation of contributions of affordable housing as part of development 	<ul style="list-style-type: none"> Voluntary Planning Agreements (Sydney)
<ul style="list-style-type: none"> Planning/zoning requirements for developers to include or contribute to affordable housing as part of development 	<ul style="list-style-type: none"> National/Greater London Authority/Local Authority planning policy and S106 of the <i>Town and Country Planning Act</i> (England) Inclusionary zoning (small scale) (Sydney, Australia)
<ul style="list-style-type: none"> Support for employers/public entities to use land to develop housing 	<ul style="list-style-type: none"> Disposals policy for NHS (England) Fast-tracked approvals (London, England—under consultation)

Source: Authors.

By contrast, in NSW and Victoria, detailed recognition of the housing needs of essential workers in planning and housing strategies remains limited. This is changing in NSW with local governments now required to consider the housing needs of very low to moderate-income workers performing essential services in their LGA in the context of their local housing strategy. However, in the absence of enabling legislation or funding programs, initiatives by local governments, planning authorities and other organisations specifically to address the housing needs of key workers have been sporadic. Moreover, in NSW, policies and incentives to support the delivery of lower cost forms of market housing and affordable housing have focussed on the rental sector. Even if scaled up, it is questionable whether that housing would align with the aspirations of moderate-income key workers. We consider potential ways governments could better support access to housing for key workers in Chapter 5.

Finally, the question of which occupation groups should be prioritised for housing assistance through government policies and programs has arguably become more complex as a wider spectrum of working households now face significant challenges accessing appropriate housing in many major cities. Maintaining essential service standards has obvious and important public benefits, and provides a clear rationale for supporting key workers. However, assisting particular occupation groups to assess housing in contexts of wide-reaching housing need nevertheless involves difficult political decisions and raises questions about equity.

This is an important consideration in thinking about potential policies and programs for Australian cities, where the supply of affordable housing is very limited following decades of disinvestment in social housing, coupled with only limited and sporadic new supply. The remaining supply of social housing is highly targeted for very low-income households with priority needs, rather than low or moderate-income workers. In the international jurisdictions examined, policies and programs to support access to housing for specific occupation groups sit alongside or have evolved into broader policies and programs to support the supply of intermediate affordable housing and demand side support measures targeted to low and moderate-income households generally. This suggests a potential way forward that recognises the contributions many low and moderate-income workers make to the overall functioning and liveability of cities. We consider potential ways governments could support access to housing for key workers in Chapter 5. However, we now turn to examining evidence of housing affordability and the housing situation and commuting patterns of key workers in Sydney and Melbourne and their satellite cities and regions.

3. Evidence of the situation of key workers in Sydney and Melbourne - Part 1: indicative affordability analysis

- Across Sydney and Melbourne and their satellite cities and regions, LGAs with median rents and house prices that are affordable based on indicative key worker incomes are confined to outer suburban areas and satellite cities and regions.
- Across both greater metropolitan regions, no LGAs have a median rent for a two-bedroom property that is affordable to key workers earning low Q2 incomes, including laundry workers, commercial cleaners, delivery drivers and entry level fire and emergency service workers.
- No inner and few middle ring areas have median rents for a two-bedroom property that is affordable to key workers earning low Q3 incomes, including early career nurses and midwives and tram and train operators.
- Even for key workers earning Q3 incomes, LGAs with an affordable median unit price are limited to a few outer suburbs and satellite cities and regions.
- Only one LGA in the greater Melbourne region and two in the greater Sydney region have a median house price that is affordable to key workers earning low Q3 incomes. In Sydney both are located approximately 150km from the CBD.

This is the first of two chapters that examine evidence of the housing situation of different key worker occupation groups in Sydney and Melbourne and their satellite cities. This chapter presents the findings of our analysis of housing affordability. As described in Chapter 1, the analysis used median house price data from Corelogic (derived via SIRCA) (SIRCA 2020) and median rents reported by each state government, both at the LGA level (Data Vic 2020; NSW Department of Communities and Justice 2020) and income information derived from industry awards and job listing services for our selected occupations (Australian Government 2020; SEEK Australia 2020).

This analysis is intended to provide a broad indication of geographic patterns of affordability based on indicative key worker salaries and for different property types. We acknowledge that, in practice, house prices and rents for individual properties can vary considerably within local areas and that household incomes can range substantially based on the number of income earners, the hours individuals work (including whether they work full or part-time and whether they complete overtime hours) and their level of experience/career stage. This analysis is intended to illustrate where workers in different occupation groups on a single income could (and could potentially not) live. In the conclusion of this chapter we discuss scope for further analysis. Chapter 4 that follows presents evidence of where key workers actually live and the suitability and affordability of their housing based on 2016 Census data. The discussion commences with rental affordability, followed by home purchase affordability.

3.1 Rental affordability

As outlined in Chapter 1, we used median rents for different property types at the LGA level to examine broad geographical differences in rental affordability for different occupation groups across each Greater Metropolitan Region (GMR). A median rent was deemed to be affordable if it was less than or equivalent to 30 per cent of the gross weekly wage for the applicable income. Our analysis revealed that very few LGAs across each GMR have median rents that are affordable to the lowest paid key workers included in this analysis (earning wages that are at the low end of the second quintile for each metropolitan region). As shown in the tables below, there are no LGAs across Greater Melbourne and Geelong that are affordable on a weekly wage of \$790. Only two LGAs have affordable median rents within the Sydney GMR, but these are both over 100kms from the Sydney CBD and affordability is limited to one-bedroom properties.

Table 2: Number of LGAs with affordable median rent—Sydney

	Weekly wage	Annual Equivalent (full-time)	Indicative salary for	Affordable median rent (number of LGAs)		
				1 bedroom	2 bedrooms	3 bedrooms
Q2 (low)	\$ 790	\$ 41,080	Laundry worker	2	0	0
Q2 (low-mid)	\$ 960	\$ 49,920	Commercial cleaners, delivery drivers, fire and emergency workers (early career)	11	0	0
Q2 (mid)	\$ 1,150	\$ 59,800	Enrolled nurse, ICT Support technicians, child carer,	17	6	0
Q2 (high)	\$ 1,350	\$ 70,200	Social worker, aged and disability carer, community welfare worker	23	18	5
Q3 (low)	\$ 1,500	\$ 78,000	RN/midwife (early career), tram and train driver	27	19	12
Q3 (mid)	\$ 1,850	\$ 96,200	Teacher (early career)	39	28	20

Source: Authors; salary and rental price information derived from Australian Government 2020 and NSW Department of Communities and Justice 2020.

Note: There were 43 LGAs included in our analysis.

Table 3: Number of LGAs with affordable median rent—Melbourne

	Weekly wage	Annual Equivalent (full-time)	Indicative salary for	Affordable median rent (number of LGAs)		
				1 bedroom	2 bedrooms	3 bedrooms
Q2 (low)	\$ 790	\$ 41,080	Laundry workers	0	0	0
Q2 (low-mid)	\$ 960	\$ 49,920	Delivery drivers, child carers, fire and emergency workers (early career)	9	0	0
Q2 (mid)	\$ 1,150	\$ 59,800	Enrolled Nurse	21	9	0
Q2 (high)	\$ 1,300	\$ 67,600	Prison officer, Community Welfare Worker, ICT support technician	29	17	11
Q3 (low)	\$ 1,450	\$ 75,400	Aged and disability carer, RN/midwife (early career), tram or train driver	All LGAs—33	25	17
Q3 (mid)	\$ 1,600	\$ 83,200	Teacher (early career)	All LGAs—33	28	22

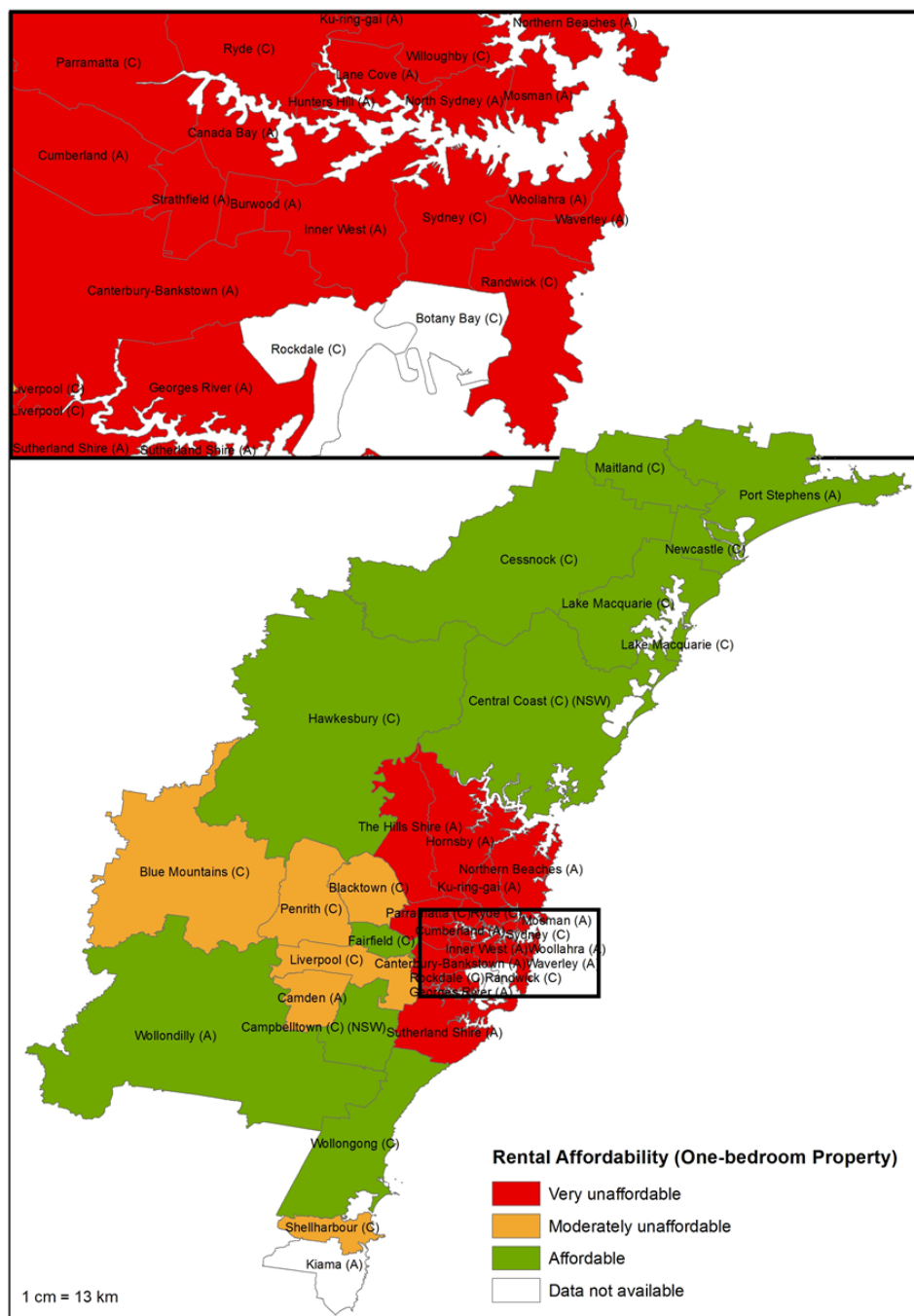
Source: Authors; salary and rental price information derived from Australian Government 2020 and Data Vic 2020.

Note: There were 33 LGAs included in our analysis.

As the tables show, the number of LGAs with affordable median rents generally increases with income. However, as illustrated in the maps below, affordability remains geographically limited to outer suburbs and satellite cities and regions. This is particularly the case for three-bedroom properties.

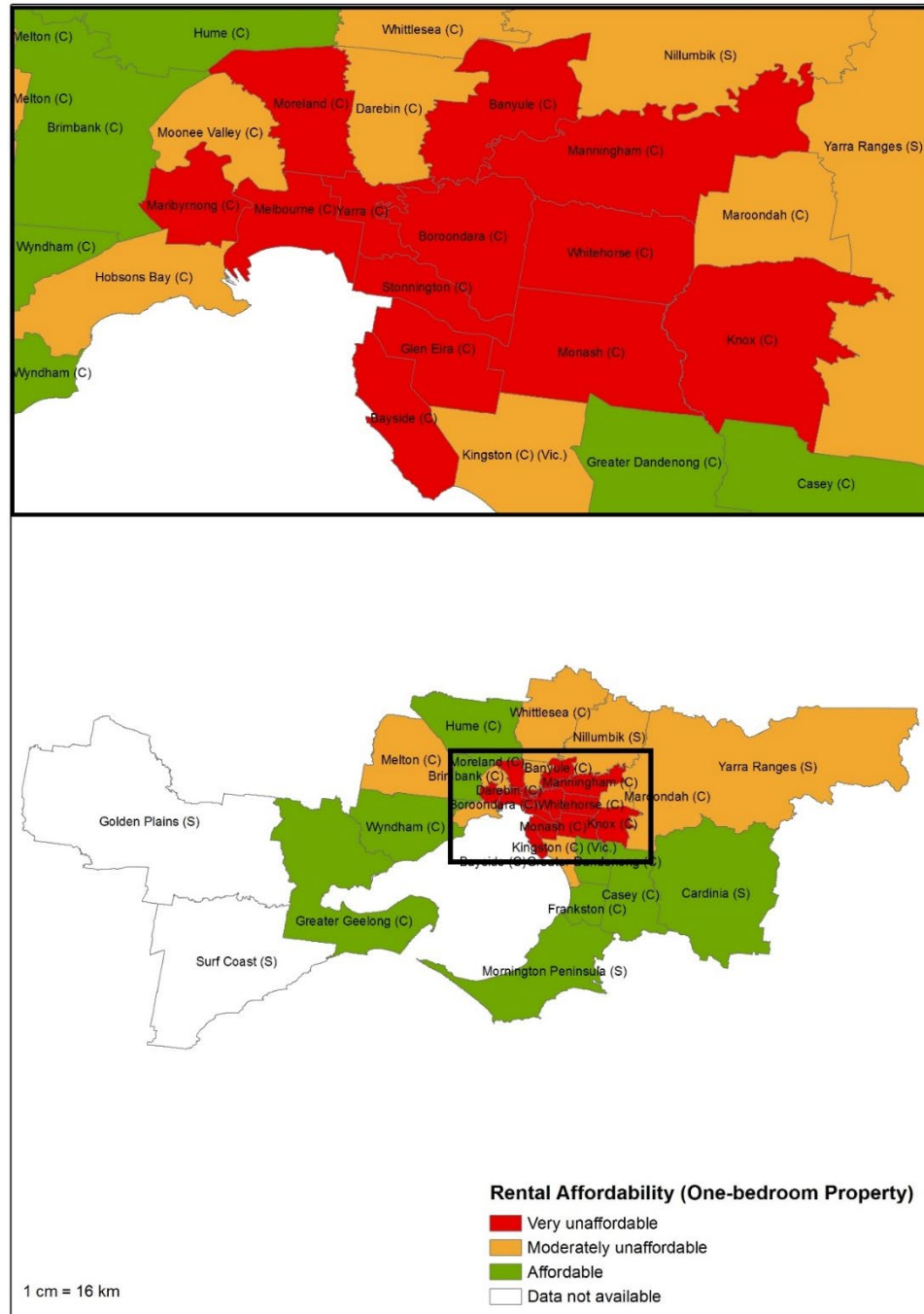
Figures 4 and 5 show the geographic pattern of affordability of a one-bedroom rental property on a wage of \$960 per week, which our data collection showed is broadly indicative of a wage for commercial cleaners, delivery drivers, and entry level fire and emergency workers. LGAs labelled red or orange in the maps are unaffordable. However, in LGAs labelled orange, the median rent for a one-bedroom property is only unaffordable by less than \$50 per week. As the map for Sydney shows (Figure 4), there are no inner LGAs with an affordable median one-bedroom rent and even fewer LGAs in middle and outer areas. A very similar pattern is apparent across the Melbourne GMR (Figure 5).

Figure 4: Affordability of median priced one-bedroom rental property with income of \$960 per week—Sydney



Source: Authors; rental price data derived from NSW Department of Communities and Justice 2020.

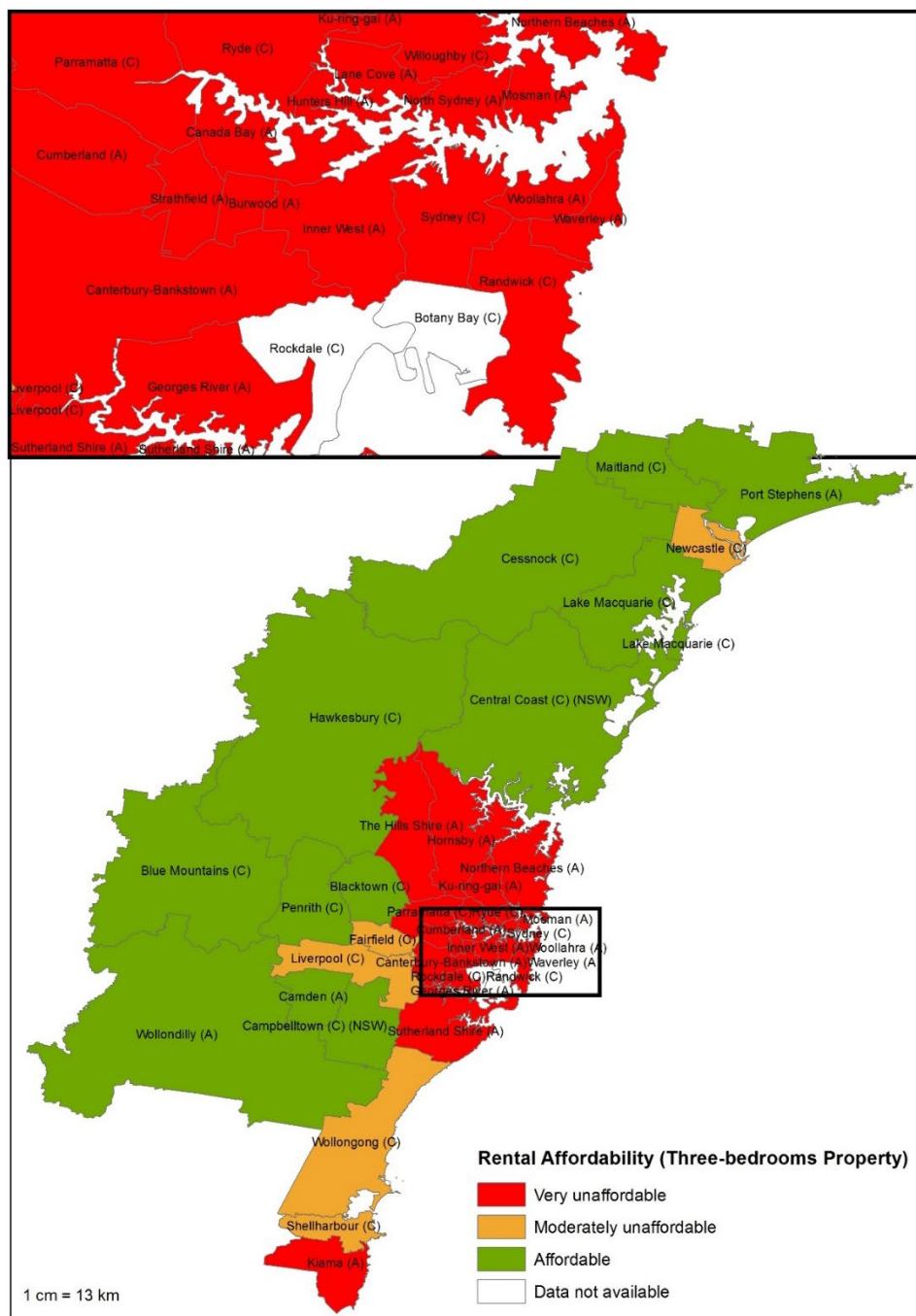
Figure 5: Affordability of median priced one-bedroom rental property with income of \$960 per week—Melbourne



Source: Authors; rental price data derived from Data Vic 2020.

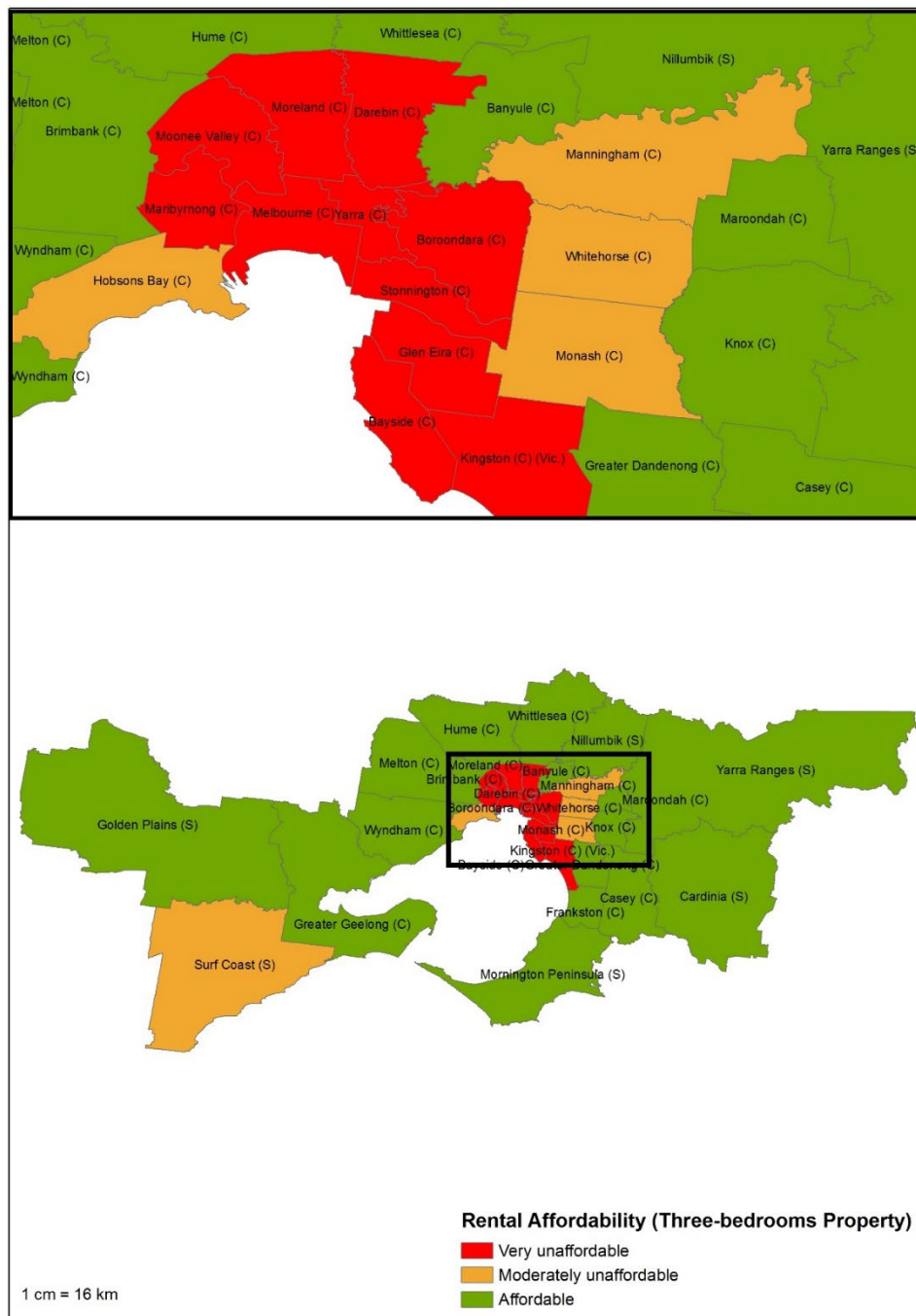
Rental housing affordability appears to be slightly better at a wage level of \$1,450/\$1,500 per week. Those wage levels are situated at the lower end of the third income quintile for each metropolitan region and are broadly indicative of wages for a full-time registered nurse or midwife with approximately five years experience and a full-time tram or train operator. However, as the maps illustrate, the affordability of larger rental properties, which would be required by families, remains geographically confined to outer suburbs and satellite cities and regions, particularly in Sydney (Figures 6 and 7).

Figure 6: Affordability of median priced three-bedroom rental property with income of \$1,500 per week—Sydney



Source: Authors; rental price data derived from NSW Department of Communities and Justice 2020.

Figure 7: Affordability of median priced three-bedroom rental property with income of \$1,450 per week—Melbourne



Source: Authors; rental price data derived from Data Vic 2020.

3.1.1 Availability of affordable rental properties

The availability of rental properties is another major factor in addition to affordability for understanding access to housing. In addition to our high level of analysis of the affordability of median rents across LGAs, we examined the extent to which affordable properties were available and tenanted in a given month using publicly available data for Sydney. Specifically, we used data on new rental bond lodgements made available by NSW Fair Trading (NSW Fair Trading 2020) to examine the proportion of new bonds in an indicative month (February 2020) that had starting rents that were affordable to households on different incomes, as well as their location and key characteristics.

As shown in Table 4, we found that in February 2020, only 2 per cent of new tenancies across Greater Sydney had starting rents that were at or below the affordability threshold for households earning \$790 per week gross (broadly indicative of a wage for a laundry worker). Just 5 per cent were affordable to households earning \$960 (broadly indicative of wages for a commercial cleaner, delivery driver and entry level firefighter) and 11 per cent were affordable with an income of \$1,150 (broadly indicative of the wage for an enrolled nurse, child care worker and ICT support technician). By contrast, at the highest income examined (broadly indicative for a teacher with five years' experience), 62 per cent of new bonds were affordable.

Table 4: Number and proportion of new bonds (private rental sector) in Greater Sydney with affordable rents (February 2020)

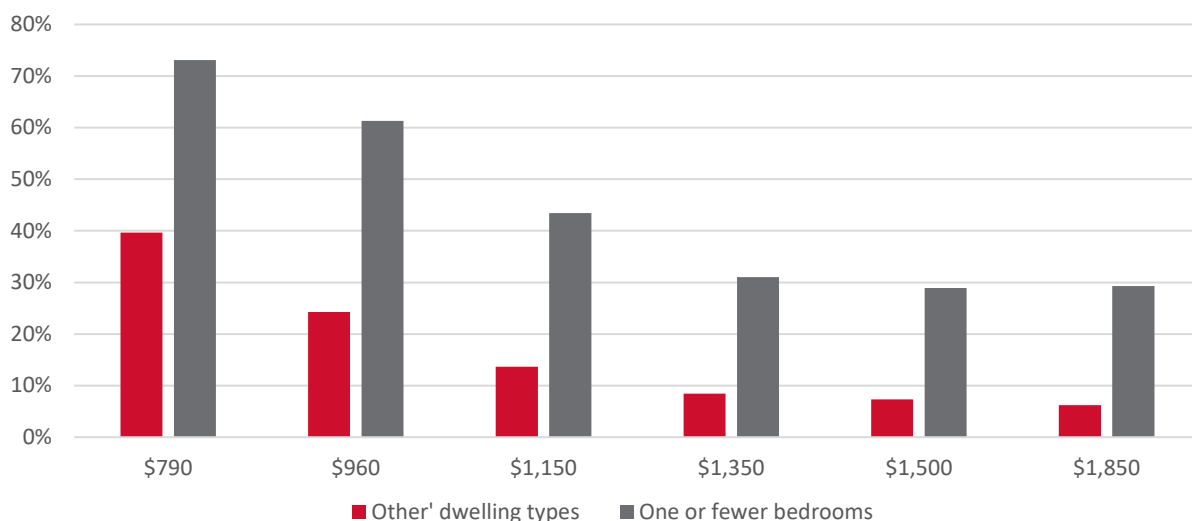
Weekly wage	Affordable rent (per week)	Number of affordable new bonds (unit, terrace or house)	Number of affordable new bonds (other dwelling type)	Total affordable new bonds	Proportion of new bonds in GMR that were affordable
\$790	\$237	370	243	613	2%
\$960	\$288	960	308	1,268	5%
\$1,150	\$345	2,536	402	2,938	11%
\$1,350	\$405	6,305	582	6,887	27%
\$1,500	\$450	9,363	739	10,102	39%
\$1,850	\$555	15,116	1,001	16,117	62%

Source: Authors; data derived from analysis of data from NSW Fair Trading 2020.

For each new bond lodged, NSW Fair Trading classifies the dwelling type as Flat/Unit, House, Townhouse/Terrace/Semi-detached or Other. "Other" may include, rented rooms, garages and car spaces' (NSW Fair Trading 2020). Our analysis revealed that a large proportion of new rental tenancies that were affordable at the lowest income thresholds were either classified as non dwellings; were rooms rather than dwellings; and/or were small properties consisting of one or no bedrooms. As shown in Figure 8, in the lowest income category examined, these 'Other' dwelling types made up 40 per cent of affordable new bonds across Greater Sydney, while 73 per cent of new tenancies affordable at that income level had one or fewer bedrooms. In the postcode areas within and immediately surrounding the CBD, there were very few new bonds affordable to households earning \$790 per week gross (15), and they are almost exclusively 'Other' dwelling types (with only one being for a flat).

At the highest indicative key worker income examined (\$1,850 per week gross) 6 per cent of affordable properties were 'other' types and 29 per cent had one or fewer bedrooms. The proportion of small properties in the affordable range is still relatively large given that dwellings with one or no bedrooms made up 8 per cent of Greater Sydney's dwelling stock at the time of the 2016 Census (ABS 2017). Moreover, in the postcode areas within and immediately surrounding the CBD, affordable tenancies remain almost exclusively one or no bedroom dwellings, meaning that the affordable properties that became available in that location in our sample month would only be appropriate for a very narrow range of household types.

Figure 8: Characteristics of properties by affordability at different low and moderate-income levels (gross per week)—Greater Sydney (February 2020)



Source: Authors; data derived from analysis of data from NSW Fair Trading 2020.

Overall, the results of the analysis suggest that, in practice, the choice of available and affordable rental properties may be very limited, particularly for key workers earning lower incomes. Even where available, affordable dwellings, particularly room shares, studios and one-bedroom units are only appropriate to a narrow range of individuals and household types. Consistent with the general spatial pattern of affordability of median rents discussed above, the supply of available and appropriate properties that are affordable to workers earning indicative key worker incomes in Sydney appears to be highly constrained or even non-existent in high cost inner city areas, particularly for the lowest income earners in our analysis.

3.2 Purchase affordability

Very few LGAs have median unit and house prices that are affordable on a key worker income

Using LGA median prices for units and separate houses, we also examined evidence of the broad geographic pattern of purchase affordability. A median sale price was deemed to be affordable if estimated mortgage repayments would not exceed 30 per cent of gross income for the applicable wage level examined. Further details of how affordability was calculated are set out in Chapter 1.

Using this approach, our analysis showed that very few LGAs across each GMR have median unit and purchase prices that are affordable on low and moderate-incomes that are indicative of key worker salaries. As shown in Tables 5 and 6, both median-priced houses and units are unaffordable across all or most of each GMR for workers earning low to mid-Q2 incomes. This range would likely encapsulate laundry workers, commercial cleaners, delivery drivers, early career fire and emergency workers, enrolled nurses and child care workers and ICT support technicians. Even among moderate-income key workers, including social workers, aged and disability carers, registered nurses, midwives and tram and train drivers, very few LGAs appear to have affordable median prices and those are limited to units in outer suburbs and satellite cities and regions. While affordability is somewhat improved for workers earning salaries in the third quintile range, a similar geographic pattern is apparent.

Table 5: Number of LGAs with affordable median purchase price—Sydney

	Weekly wage	Annual Equivalent (full-time)	Indicative salary for	LGAs with affordable median unit price	LGAs with affordable median house price
Q2 (low)	\$ 790	\$ 41,080	Laundry worker	0	0
Q2 (low-mid)	\$ 960	\$ 49,920	Commercial cleaners, delivery drivers, fire and emergency workers (early career)	1	0
Q2 (mid)	\$ 1,150	\$ 59,800	Enrolled nurse, ICT Support technicians, child carer,	3	0
Q2 (high)	\$ 1,350	\$ 70,200	Social worker, aged and disability carer, community welfare worker	6	1
Q3 (low)	\$ 1,500	\$ 78,000	RN/midwife (early career), tram and train driver	13	2
Q3 (mid)	\$ 1,850	\$ 96,200	Teacher (early career)	21	7

Source: Authors; salary and sale price information derived from Australian Government 2020 and SIRCA 2020.

Note: There were 43 LGAs included in our analysis.

Table 6: Number of LGAs with affordable median purchase price—Melbourne

	Weekly wage	Annual Equivalent (full-time)	Indicative salary for	LGAs with affordable median unit price	LGAs with affordable median house price
Q2 (low)	\$ 790	\$ 41,080	Laundry worker	0	0
Q2 (low-mid)	\$ 960	\$ 49,920	Commercial cleaners, delivery drivers, fire and emergency workers (early career)	0	0
Q2 (mid)	\$ 1,150	\$ 59,800	Enrolled nurse, ICT Support technicians, child carer	2	0
Q2 (high)	\$ 1,300	\$ 67,600	Social worker, aged and disability carer, community welfare worker	8	0
Q3 (low)	\$ 1,450	\$ 75,400	RN/midwife (early career), tram and train driver	10	1
Q3 (mid)	\$ 1,600	\$ 83,200	Teacher (early career)	14	4

Source: Authors; salary and sale price information derived from Australian Government 2020 and SIRCA 2020.

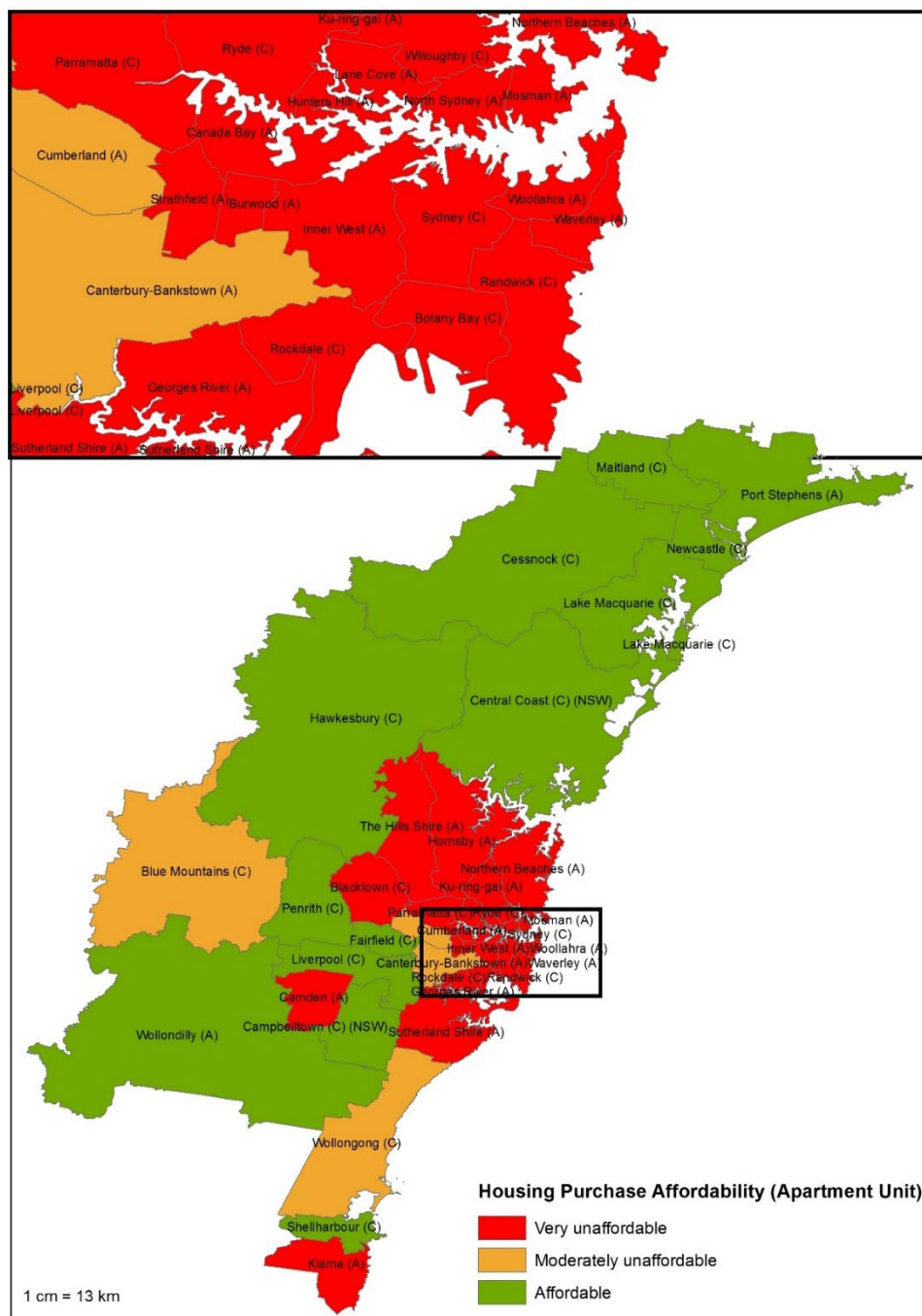
Note: There were 34 LGAs included in our analysis.

The figures below illustrate this geographic pattern. Consistent with the rental affordability maps, LGAs with median prices that were found to be unaffordable are coloured red or orange, with orange indicating an unaffordable price of less than \$49,000. LGAs that were found to have an affordable median price for the applicable dwelling type are labelled green.

At an income of \$1,450/\$1,500 which is situated at the lower end of the third quintile for each metropolitan region, our analysis showed that there are generally no LGAs with affordable median unit prices in the inner and middle ring LGAs of Sydney and Melbourne or in higher value outer areas, particular to the north in Sydney and east in Melbourne (Figures 9 and 11). Outer and regional coastal areas are unaffordable. In the Sydney GMR, this includes the Wollongong and Kiama LGAs and in the Melbourne GMR it includes Mornington Peninsula and the Surf Coast LGA.

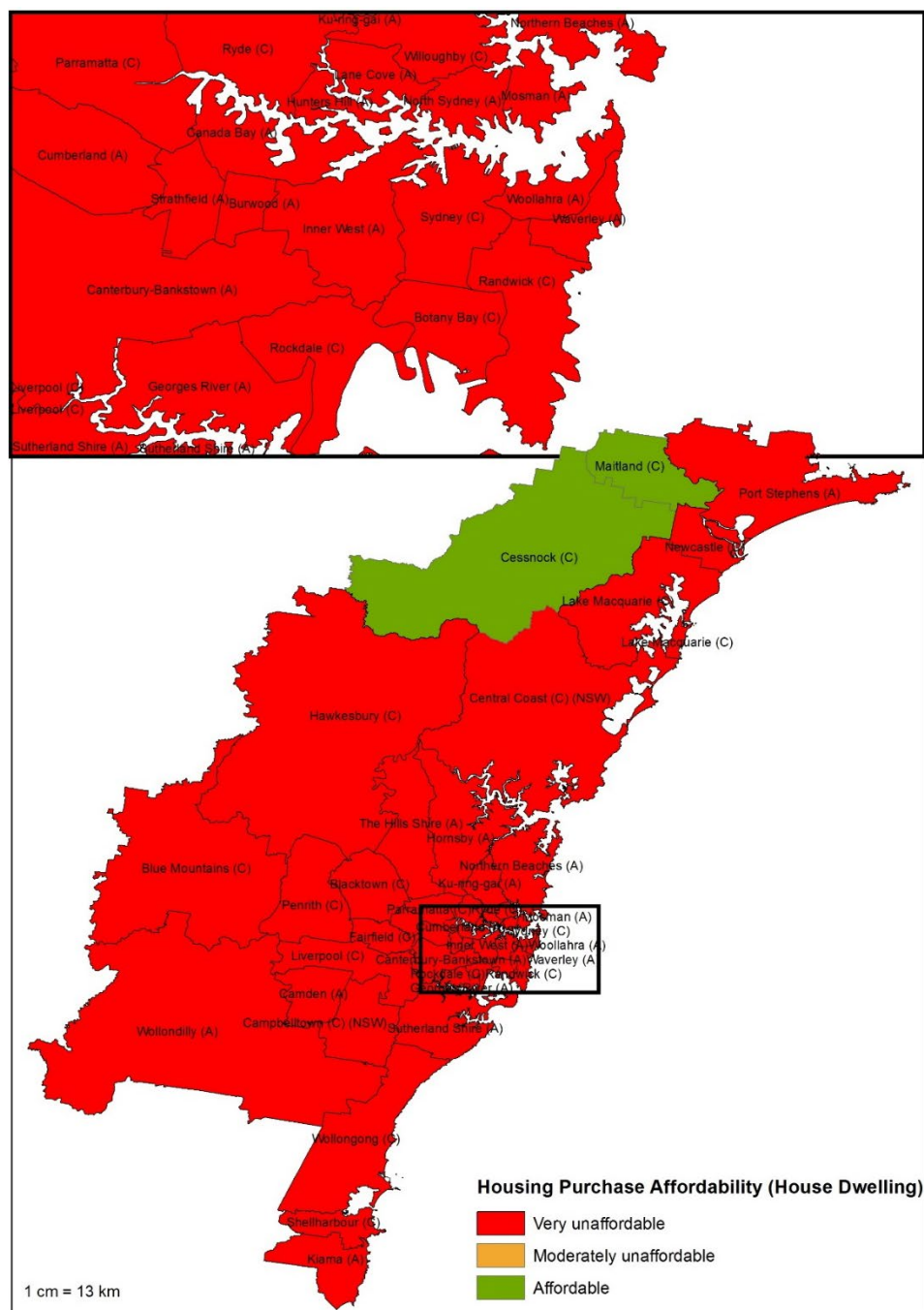
LGAs with affordable median prices for separate houses is considerably more limited. Across the Sydney GMR, only two LGAs were found to have affordable median house prices and both are located inland, outside the metropolitan region at more than 150kms from the Sydney CBD (Figure 10). In Melbourne, only the Golden Plains LGA, which is also inland and outside the metropolitan region, had an affordable median purchase price (Figure 12). Across both GMRs it is interesting to note that even the satellite cities of Wollongong and Geelong did not have affordable median purchase prices for detached houses.

Figure 9: Affordability of median-priced apartment for purchase on income of \$1,500 per week—Sydney



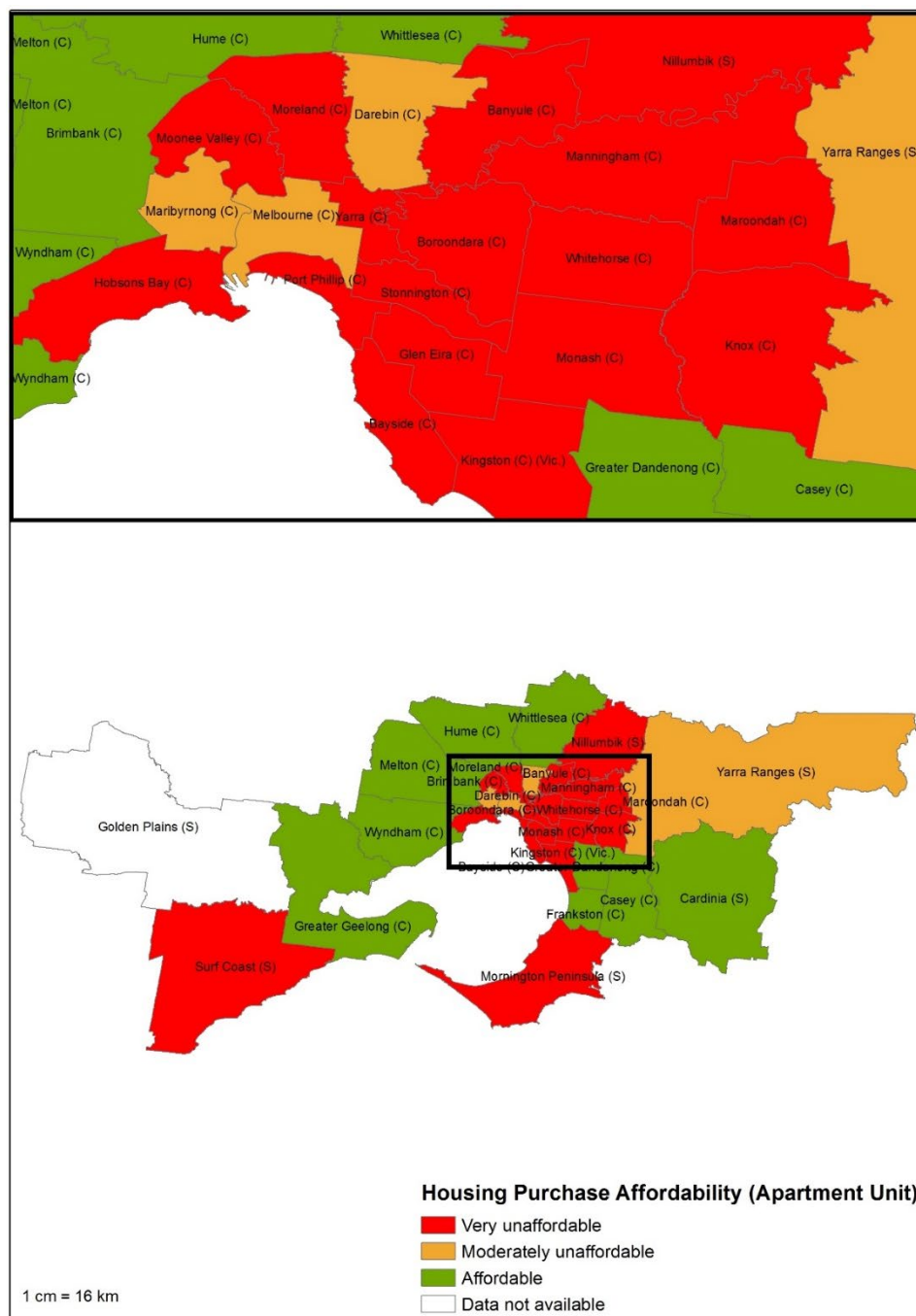
Source: Authors; purchase price data derived from SIRCA 2020.

Figure 10: Affordability of median-priced house for purchase on income of \$1,500 per week—Sydney



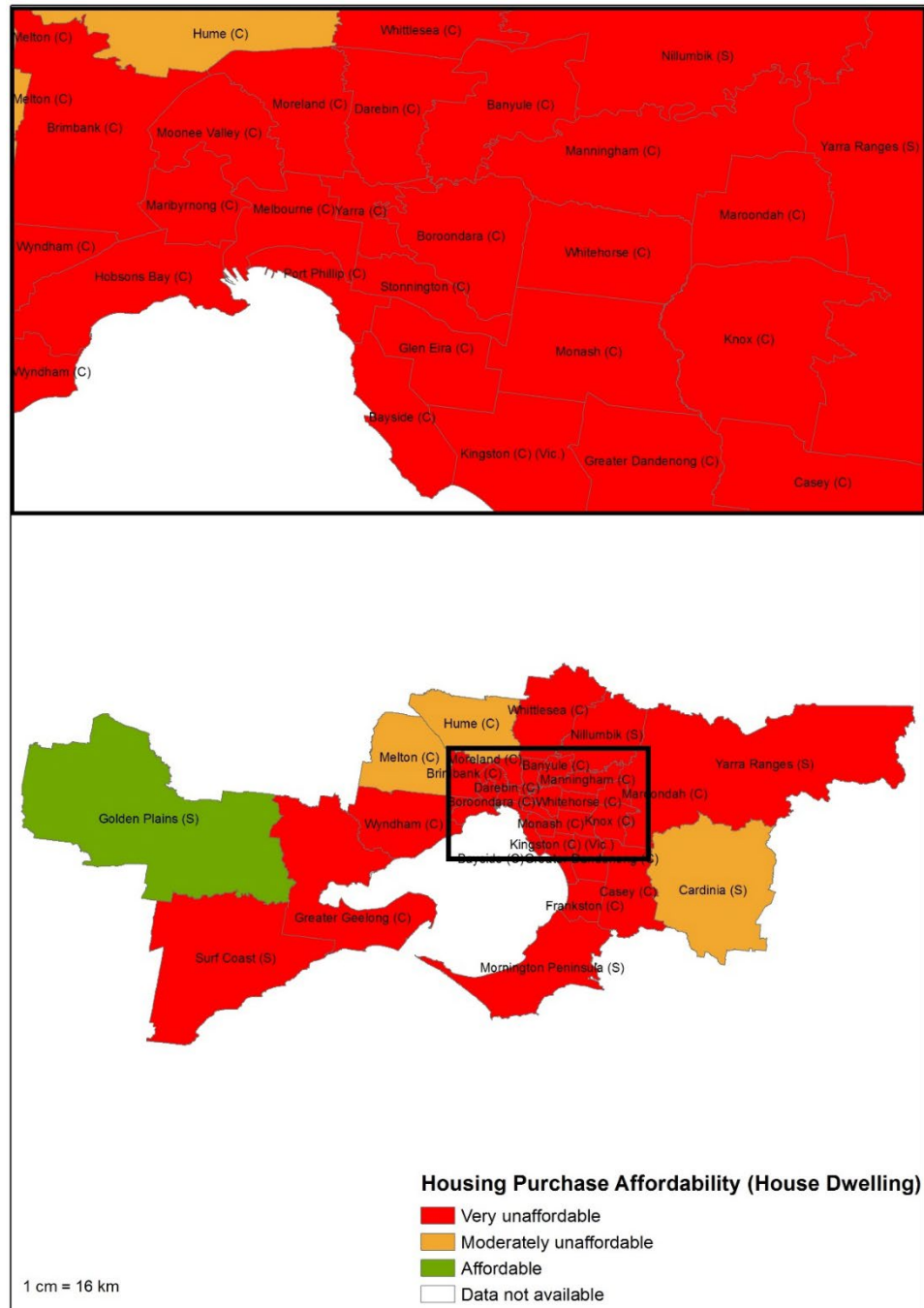
Source: Authors; purchase price data derived from SIRCA 2020.

Figure 11: Affordability of median priced apartment for purchase on income of \$1,450 per week—Melbourne



Source: Authors; purchase price data derived from SIRCA 2020.

Figure 12: Affordability of median priced house for purchase on income of \$1,450 per week—Melbourne

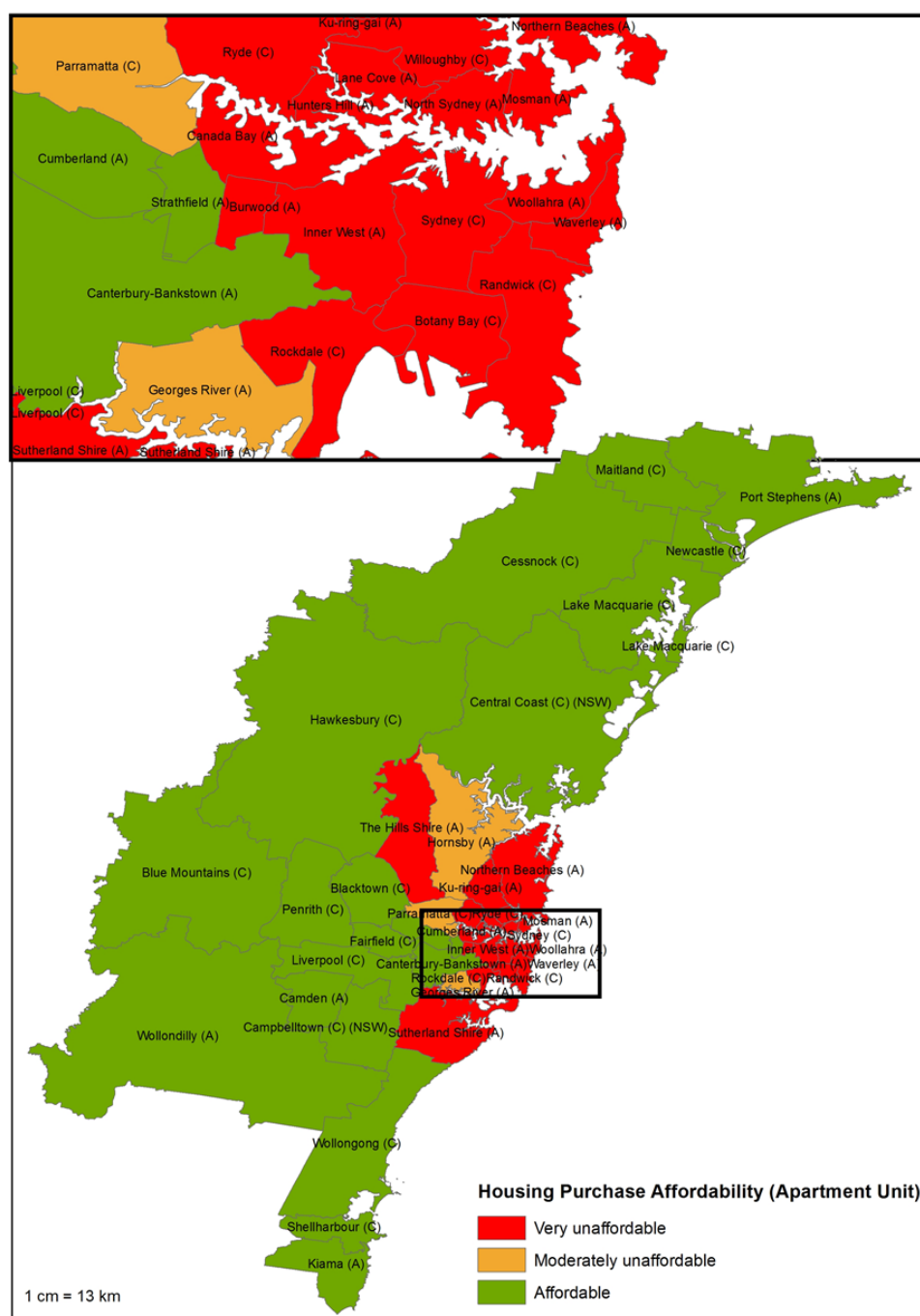


Source: Authors; purchase price data derived from SIRCA 2020.

Even at an income at the middle of the third quintile for each metropolitan region, which is broadly indicative of the salary for a teacher in an early career stage, affordability appears to remain highly constrained in higher value areas. As shown in Figure 13, median unit prices remain unaffordable in inner and middle ring LGAs of Sydney as well as outer ring LGAs located along the coast and in the traditionally high value north. The median price for a detached home is only affordable in one outer suburb and several satellite cities and regions that are generally more than 150km from the CBD (Figure 14).

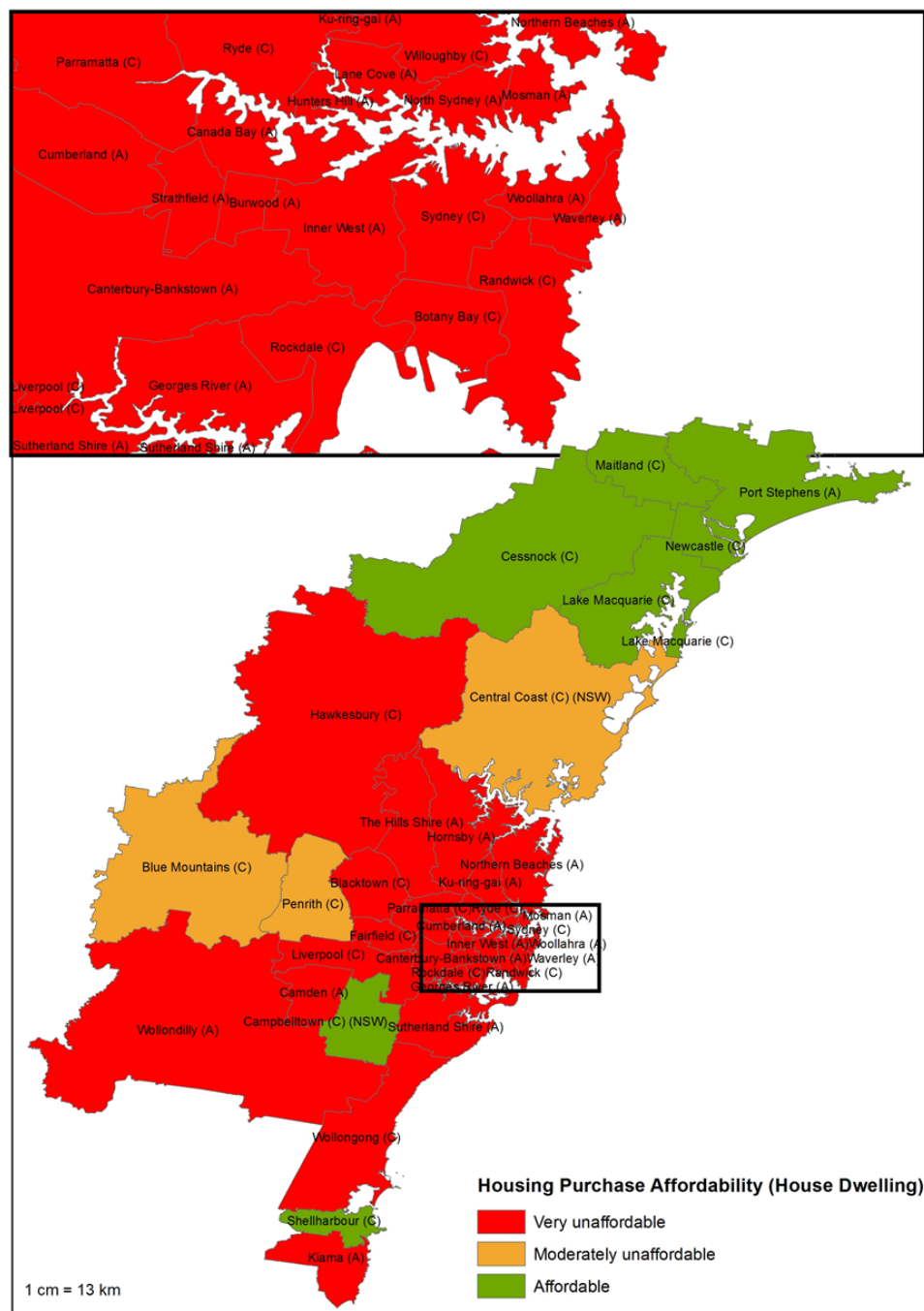
Across the Melbourne GMR, the pattern is slightly different for units, but similar for detached houses. The main difference is that the City of Melbourne has an affordable median unit price. However, affordability in surrounding inner and some middle ring suburbs, particularly to the traditional higher value east is very limited (Figure 15). LGAs with an affordable median price for detached houses is limited to a few inland outer suburbs and an inland LGA outside the metropolitan region boundary (Figure 16).

Figure 13: Affordability of median-priced apartment for purchase on income of \$1,850 per week—Sydney



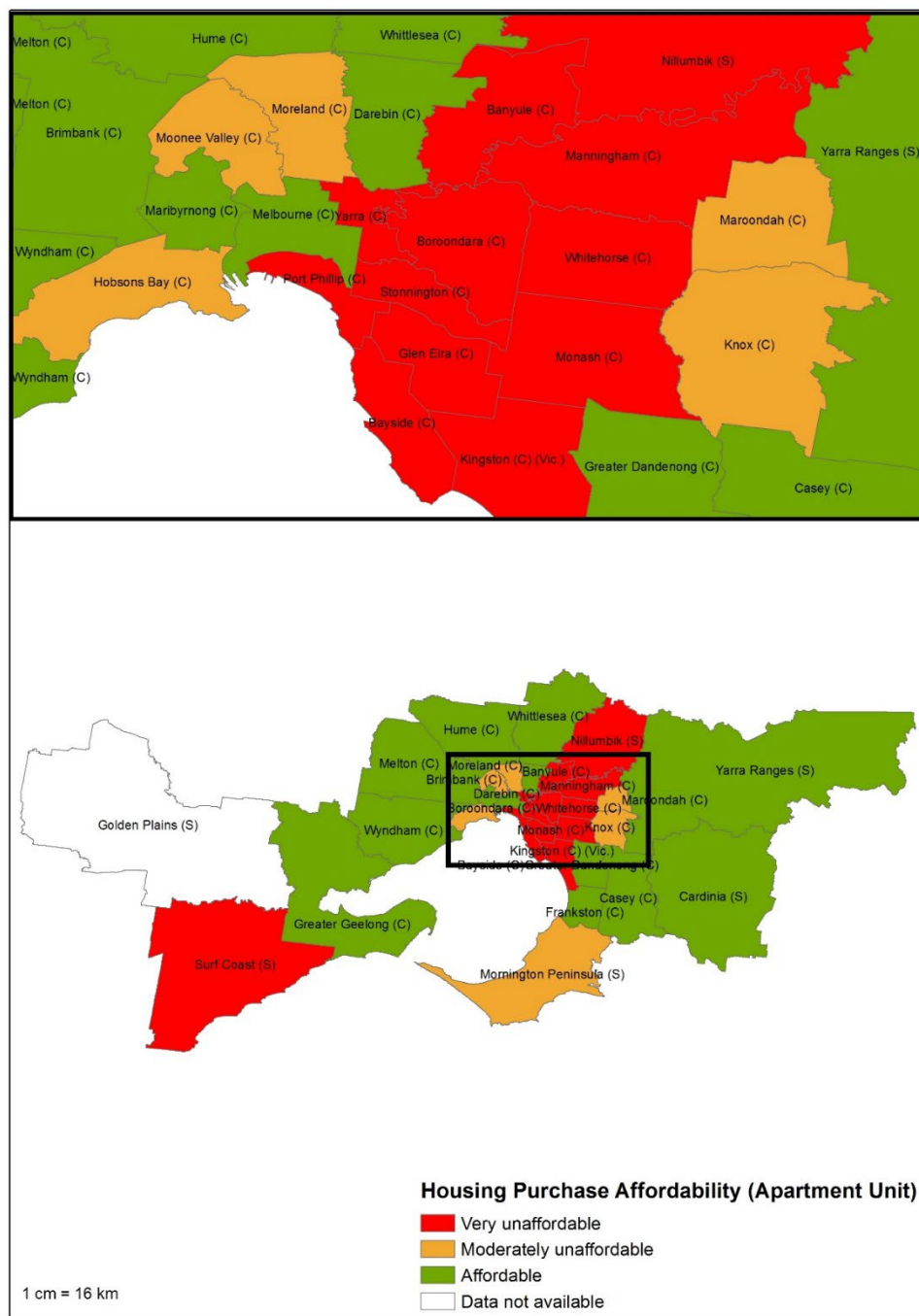
Source: Authors; purchase price data derived from SIRCA 2020.

Figure 14: Affordability of median-priced house for purchase on income of \$1,850 per week—Sydney



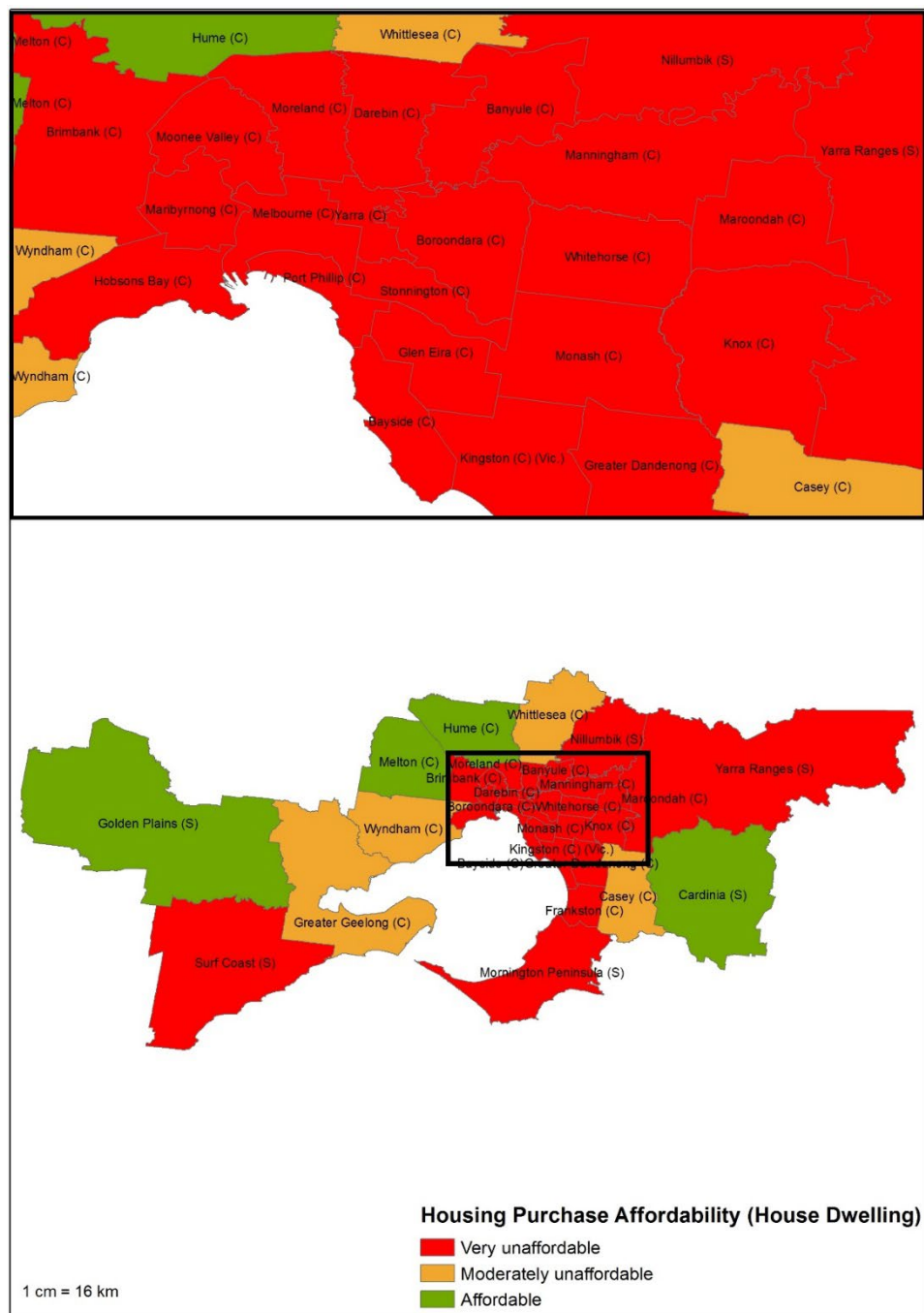
Source: Authors; purchase price data derived from SIRCA 2020.

Figure 15: Affordability of median-priced apartment for purchase on income of \$1,600 per week—Melbourne



Source: Authors; purchase price data derived from SIRCA 2020.

Figure 16: Affordability of median-priced house on income of \$1,600 per week—Melbourne



Source: Authors; purchase price data derived from SIRCA 2020.

3.3 Overview and implications

Overall, this high level analysis suggests that many workers on indicative key worker incomes would struggle to find a home in much of Sydney and Melbourne, with affordable LGAs generally being confined to outer suburbs and satellite regions. Unsurprisingly, affordability is worse for workers on incomes in the Q2 range, where even the affordability of rental properties is highly geographically constrained. While rental affordability appears to be better for key workers earning Q3 incomes, rental housing, particularly larger properties suited to families, remains unaffordable in inner and many middle ring LGAs. However, even with an income in the Q3 range, there are very few LGAs with median affordable housing prices and they are located at significant distances from each city's CBD. The analysis shows that even the satellite cities of Wollongong and Geelong now have median house prices that would be unaffordable to an early career registered nurse.

While the analysis showed an overall geographic pattern of affordability worsening closer to each city centre, the findings suggest that affordability is not just a problem in inner city areas. In fact, there is evidence that some coastal satellite regions also have median house prices and rents that are unaffordable on many key worker incomes. This includes Kiama in NSW and Surf Coast in Victoria, both of which are popular holiday and tourist locations and destinations for retirement and second home ownership. This suggests that in thinking about the key worker problem, there is a need to consider regional and peri-urban as well as major metropolitan areas.

Of course, this analysis only provides a high level indication of patterns of affordability based on LGA medians and single key worker incomes. In practice, prices and rents can range significantly within LGAs, as can the availability of property, while key worker household incomes and housing needs vary significantly in practice, for example across single or dual income households, career stages and hours worked. Further research could repeat this analysis on a finer spatial scale and/or look at real volumes of sales transactions and new rental bonds for different income levels and locations. A key question for that analysis would also be whether Q2 income households, for example, are occupying affordable rental properties that are becoming available in different locations. Further research should also examine patterns of affordability for different household types, including dual income households, dual income households with dependent children and single income key worker households with dependent children. Finally, there is an opportunity for qualitative research with key worker households themselves to examine the challenges and trade-offs they face finding appropriate housing in each metropolitan region and its satellite cities and regions.

4. Evidence of the situation of key workers in Sydney and Melbourne - Part 2: analysis of census data

- **Key workers are more likely than the labour force generally to reside in outer suburbs and satellite cities, to commute 30kms or more to work, and to commute by private car.**
- **31,000 key workers in Sydney and over 18,000 key workers in Melbourne live in overcrowded homes, with the greatest prevalence in inner subregions and among lower paid occupation groups.**
- **Over 52,000 key workers in Sydney and over 37,000 in Melbourne are living in households that can be classified as being in housing stress, equating to 20 per cent and 17 per cent of key workers in each greater city region, respectively.**
- **Between 2011 and 2016, affordable outer suburbs and satellite cities gained key worker residents, while inner and expensive middle ring subregions experienced a net loss.**

This chapter outlines the findings of our analysis of 2016 census data to capture evidence of the actual housing situations of key workers across a range of occupation groups (and incomes) in Sydney and Melbourne and their satellite cities and regions. As outlined in Chapter 1, existing research evidence suggests that low and moderate-income working households are responding to high housing costs close to areas of employment by living in more affordable areas and commuting long distances (Dodson, Li et al. 2020); living in job rich locations but paying unaffordable housing costs (Hulse, Reynolds et al. 2019); and sharing well located housing (van den Nouwelant, Crommelin et al. 2016) but with potential implications for suitability.

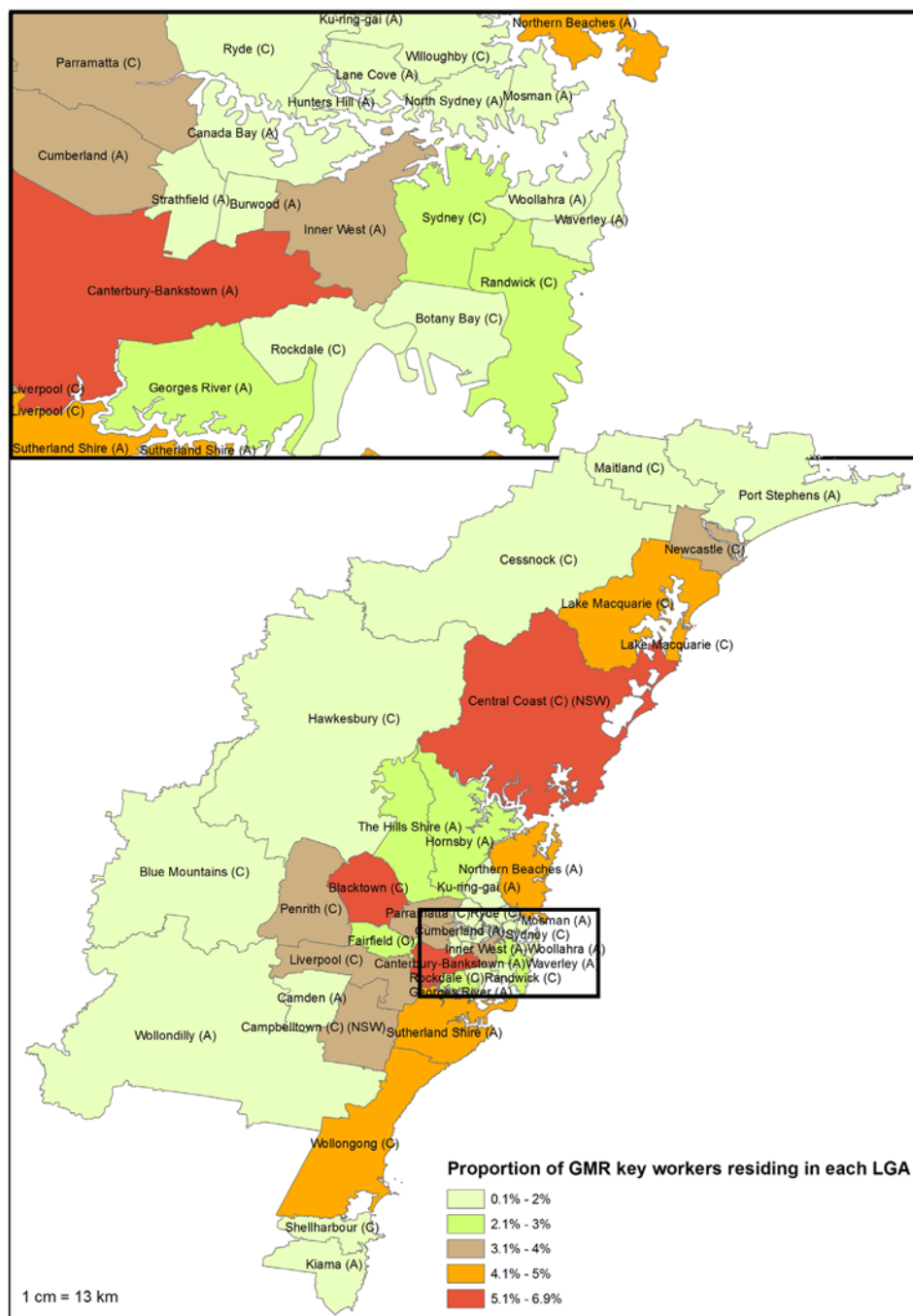
This chapter examines the extent to which these findings are applicable to key workers. The subsections below outline our main findings, including evidence of where key workers live and the characteristics of their households, housing and housing costs; the distance key workers travel to work (commuting patterns); and, the extent to which key worker households are paying unaffordable housing costs. We also examine evidence of whether key workers are leaving more expensive metropolitan subregions.

4.1 Residential location and characteristics of households and housing

4.1.1 Location of residence and housing tenure

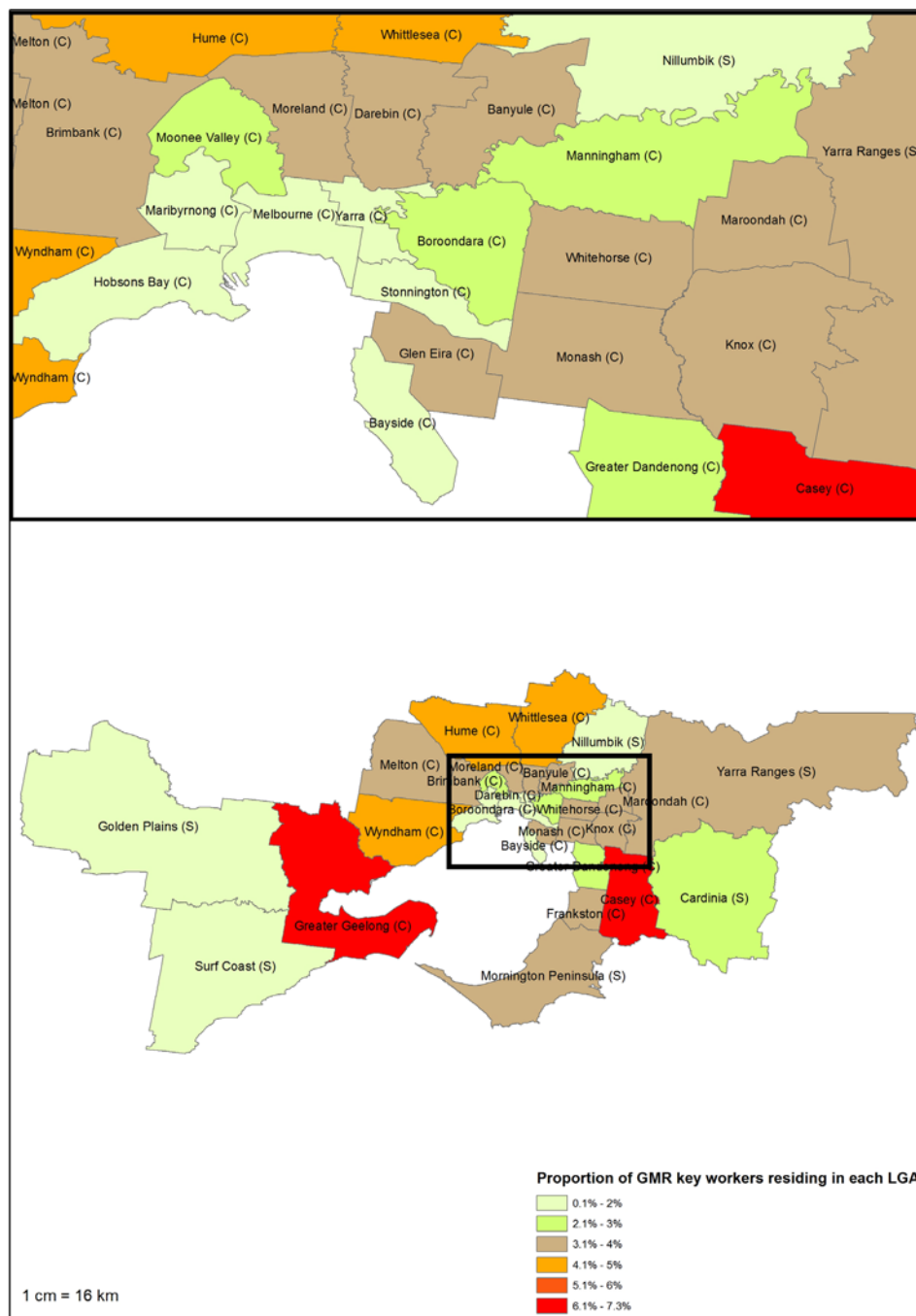
Our analysis of location of residence revealed that individuals in the 21 occupation groups examined are more heavily concentrated in outer suburbs and satellite cities (Figures 17 and 18). As discussed in the previous chapter, median house prices and rents in those locations are significantly more affordable than in more central metropolitan areas.

Figure 17: Proportion of Greater Metropolitan Region key workers residing in LGA—Sydney (2016)



Source: Authors; data derived from ABS 2016m.

Figure 18: Proportion of Greater Metropolitan Region key workers residing in LGA—Melbourne (2016)



Source: Authors; data derived from ABS 2016m.

Recognising that resident population differs between local areas, we undertook a shift share analysis to compare how the distribution of key workers in our 21 occupation groups compared to that of the labour force generally at the time of the 2016 Census. The results reinforce the above finding, showing that relative to the general labour force, key workers are much more heavily concentrated in outer suburbs and satellite city areas and significantly underrepresented in higher value inner city locations. The tables below show the 12 LGAs with the highest and lowest relative proportion of key workers. Figures (in brackets) above 1 indicate that key workers are more concentrated relative to the labour force generally and figures below 1 indicate that key workers are less concentrated than the labour force generally. As the figures show, the high, relative concentration of key workers in outer LGAs and satellite cities and the very low relative concentration in inner and some middle ring LGAs is more pronounced in Sydney than in Melbourne.

Table 7: LGAs with high proportion of key workers relative to distribution of labour force (2016)

Sydney		Melbourne	
Blue Mountains	1.47	Geelong	1.30
Kiama	1.34	Golden Plains	1.23
Shellharbour	1.34	Maroondah	1.18
Lake Macquarie	1.29	Surf Coast	1.17
Central Coast	1.29	Whittlesea	1.16
Wollongong	1.27	Frankston	1.15
Newcastle	1.25	Banyule	1.14
Maitland	1.22	Yarra Ranges	1.13
Campbelltown	1.18	Mornington Peninsula	1.11
Port Stephens	1.17	Nillumbik	1.11
Camden	1.17	Cardinia	1.10
Blacktown	1.16	Casey and Hume	1.09

Source: Authors; data derived from ABS 2016i; 2016m.

Table 8: LGAs with low proportion of key workers relative to distribution of labour force (2016)

Sydney		Melbourne	
Woollahra	0.44	City of Melbourne	0.54
City of Sydney	0.50	Stonnington	0.62
Mosman	0.52	Yarra	0.68
North Sydney	0.56	Boroondara	0.73
Waverley	0.59	Bayside	0.74
Willoughby	0.66	Manningham	0.84
Hunters Hill	0.67	Monash	0.89
Ku-ring-gai	0.70	Hobsons Bay	0.92
Canada Bay	0.73	Glen Eira	0.93
Lane Cove	0.75	Moonee Valley	0.93
Inner West	0.82	Maribyrnong	0.95
Randwick	0.84	Brimbank	0.97

Source: Authors; data derived from ABS 2016i; 2016m.

In both city regions, the proportion of key workers who are owners with a mortgage or who are renting is broadly consistent with the general labour force (ABS 2016j; 2016k). However, unsurprisingly given the affordability patterns captured in Chapter 3, the proportion of key workers who are renting is significantly higher in more expensive inner subregions. Renting is also more prevalent among some occupation groups, including nursing support and personal care workers, commercial cleaners, laundry workers, delivery drivers, aged and disability carers, welfare support workers and child care workers. Overall, 107,000 key workers in Sydney and 83,000 key workers in Melbourne are renting, the vast majority of whom are in the private rental sector (ABS 2016k).

4.1.2 Household composition and evidence of sharing and overcrowding

The analysis of household composition revealed that key workers in our 21 occupation groups tend to reside in larger households than the population generally. This is partially due to the age profile of households, including the large proportion of key workers with dependent children. However, our analysis also revealed incidences of key workers living in multi-family and group households.

In Sydney, over 19,000 key workers were living in multi-family households at the time of the 2016 Census. That included over 1,200 living in three or more family households, the majority of whom were key workers with children. In Melbourne, over 10,000 key workers were living in multi-family households, including over 500 living in multi-family households of three or more families. In both cities, over 15,000 key workers were living in group households (ABS 2016f).

Table 9: Types of households key workers reside in (2016)

	Sydney	Melbourne
Couple family with no children	68,600	62,200
Couple family with children	173,000	145,000
One parent family	37,300	30,100
Two family household	18,200	10,000
Three or more family household	1,200	500
Lone person household	28,000	28,000
Group household	16,000	15,000

Source: Authors; data derived from ABS 2016f.

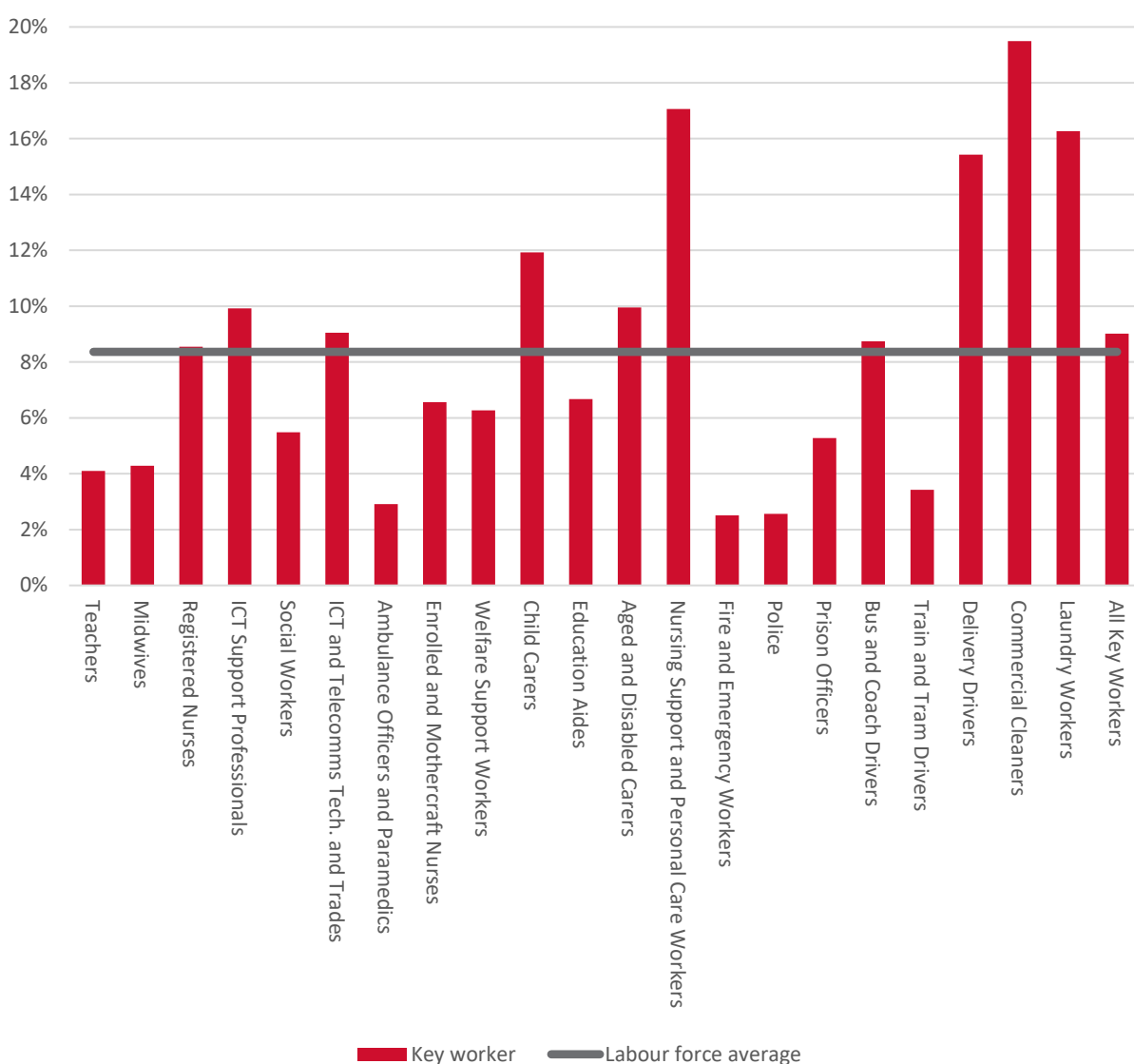
Note: Figures rounded to nearest hundred.

Key workers in the lower paid occupations analysed were more likely than other key workers, and the labour force generally, to be part of larger households (e.g. of six or more people) and to live in multi-family or group households. We found that key workers residing in two and three family households was more prevalent among laundry workers, commercial cleaners, delivery drivers, bus and coach drivers, nursing support and personal care workers, aged and disability care workers and child care workers. Commercial cleaners, delivery drivers, aged and disability care workers, and ICT support and telecommunications technicians and trade were more likely to live in group households (ABS 2016e; 2016f).

While larger households are more likely to live in overcrowded conditions, living in a larger household is not necessarily an indication that an individual's housing situation is unsuitable (ABS 2016i). To gauge housing suitability, the Australian Census captures information on the number of bedrooms in a household relative to the number required according to the Canadian National Occupancy Standard (CNOS) which determines need based on the age and relationship of household members. While the CNOS is based on assumptions regarding the acceptability of room sharing that may not accord with all individuals, it is a widely accepted measure of overcrowding.

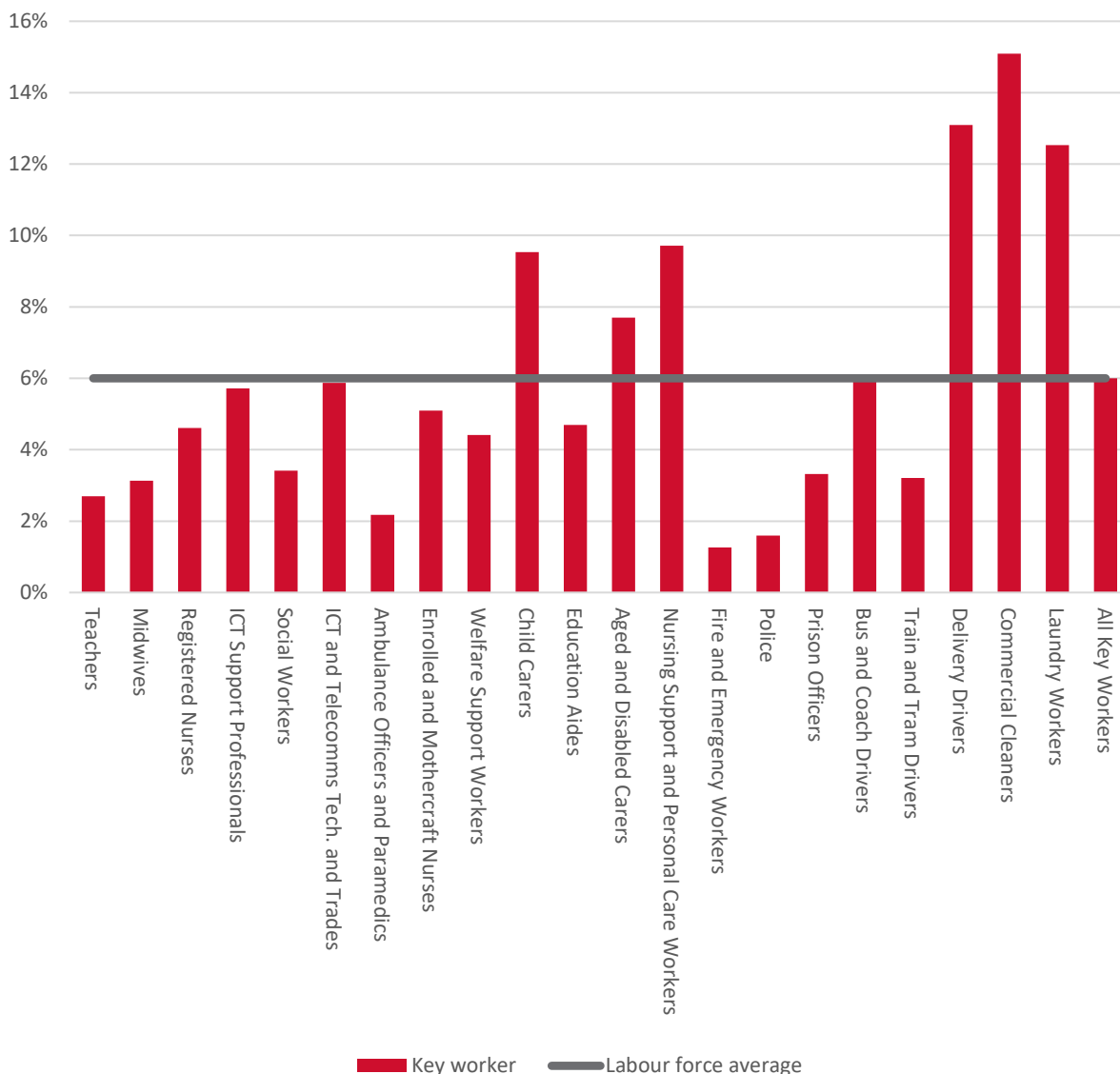
Our analysis found that according to the CNOS, 31,000 key workers in Sydney and over 18,000 key workers in Melbourne were living in overcrowded homes at the time of the 2016 Census. In Sydney, over 8,800 key workers were living in homes where two or more additional bedrooms were needed. In proportional terms, overcrowding was more prevalent among the lower paid occupation groups including laundry workers, commercial cleaners, delivery drivers and nursing support and personal care workers (Figures 19 and 20). However, the analysis found that there were 3,489 teachers, 4,475 Registered Nurses and midwives, 4,462 child care workers and 2,335 aged and disability care workers in the Sydney GMR living in overcrowded conditions. Likewise in Melbourne there were 1,934 teachers and 2,079 Registered Nurses and Midwives living in overcrowded households (ABS 2016h). Unsurprisingly, incidences of overcrowding are higher among key workers living in multi-family and group households.

Figure 19: Proportion of key workers living in unsuitable housing by occupation—Sydney (2016)



Source: Authors; data derived from ABS 2016g; 2016h.

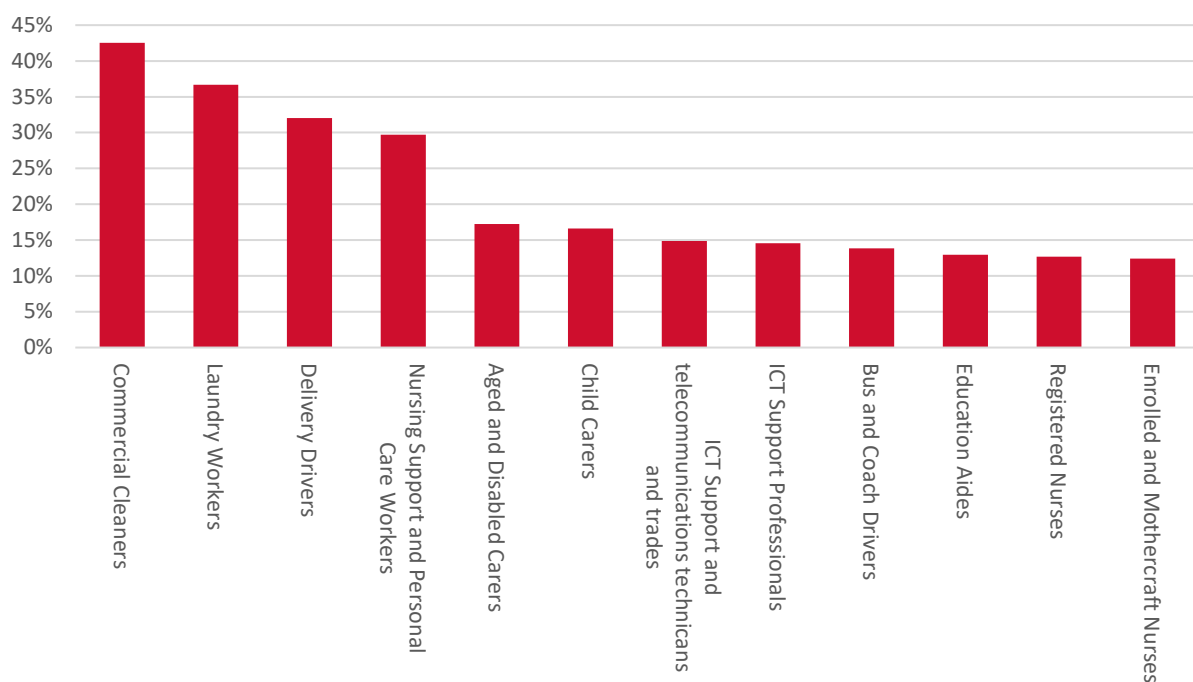
Figure 20: Proportion of key workers living in unsuitable housing by occupation—Melbourne (2016)



Source: Authors; data derived from ABS 2016g; 2016h.

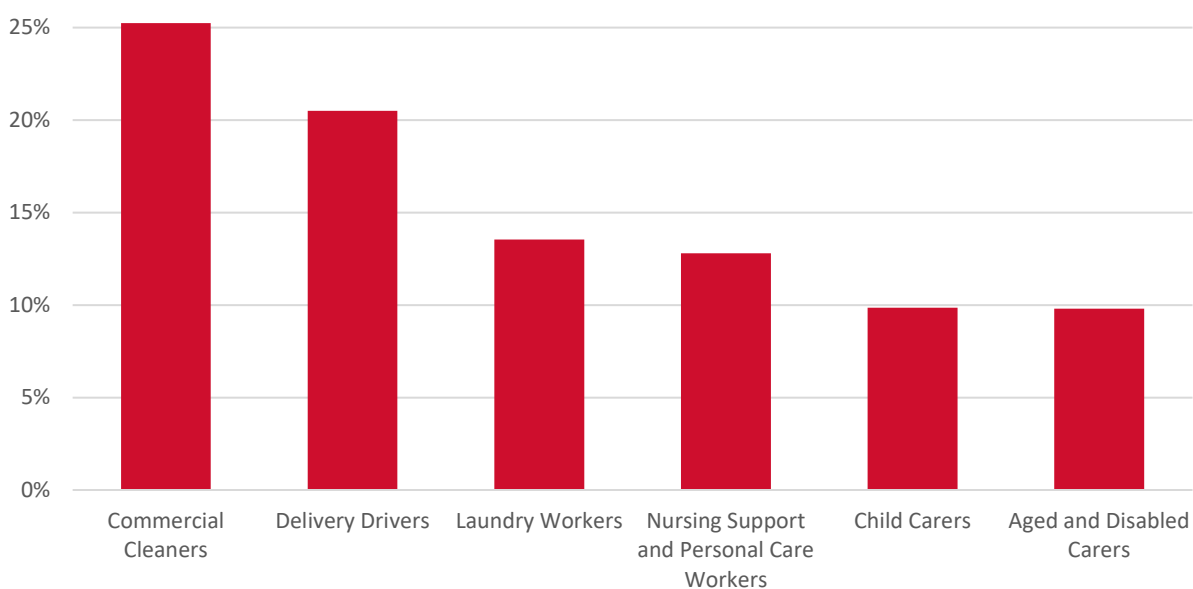
The proportion of key workers living in overcrowded homes was highest in inner subregions among lower paid occupation groups. As shown in the figures below, almost half of commercial cleaners living in inner subregions of Sydney in 2016 were living in overcrowded homes. Around a third of nursing support and personal care workers (30%), delivery drivers (32%) and laundry workers (37%) were also residing in overcrowded homes (Figure 21). While lower proportions of key workers living in inner Melbourne subregions were living in unsuitable housing in 2016, proportions were still high (over 10%) for lower occupation groups (Figure 22).

Figure 21: Proportion of key workers in select occupation groups living in unsuitable housing—inner subregions—Sydney (2016)



Source: Authors; data derived from ABS 2016h.

Figure 22: Proportion of key workers in select occupation groups living in unsuitable housing—inner subregions—Melbourne (2016)



Source: Authors; data derived from ABS 2016h.

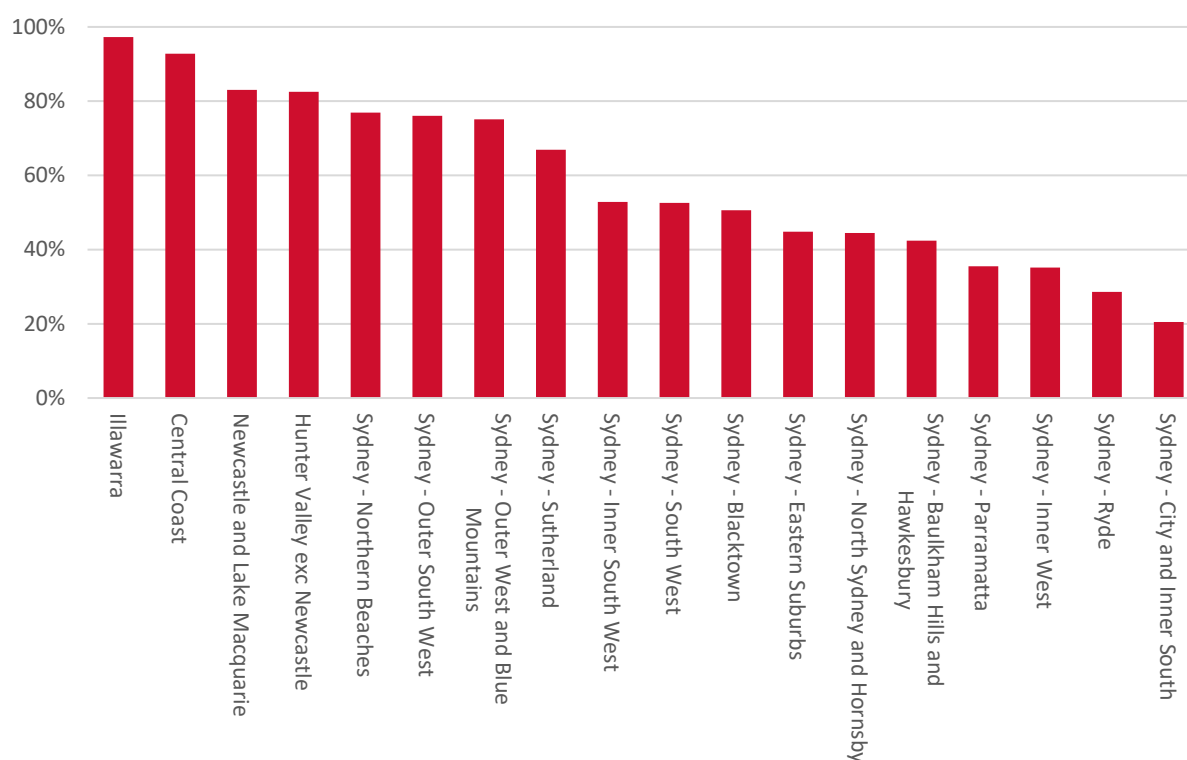
4.2 Commuting patterns

Using 2016 Census data, we examined evidence of where key workers work, the extent to which they live and work in the same subregion, and the distance and mode by which they travel to work. Our analysis showed that key worker jobs are distributed across each GMR, but over a third are located in inner subregions (over 118,000 jobs in Sydney (35%) and 105,000 jobs (36%) in Melbourne). While some key worker jobs are more dispersed, others are more heavily concentrated in inner subregions. The latter include jobs in ICT support and telecommunications, laundry and commercial cleaning, tram and train operations, policing, fire and emergency services, and nursing and midwifery.

We found that more key workers work in inner subregions than also live there, suggesting that the majority commute in. This was determined by examining employment self-containment (the proportion of the labour force both living and working in the same region). Opportunities for employment self-containment are highest where there is a balance of jobs and affordable housing in an area or subregion. Low instances of employment self-containment suggest that an area either has a lack of jobs suited to its population or that a job-rich location lacks suitable, desirable and/or affordable housing.

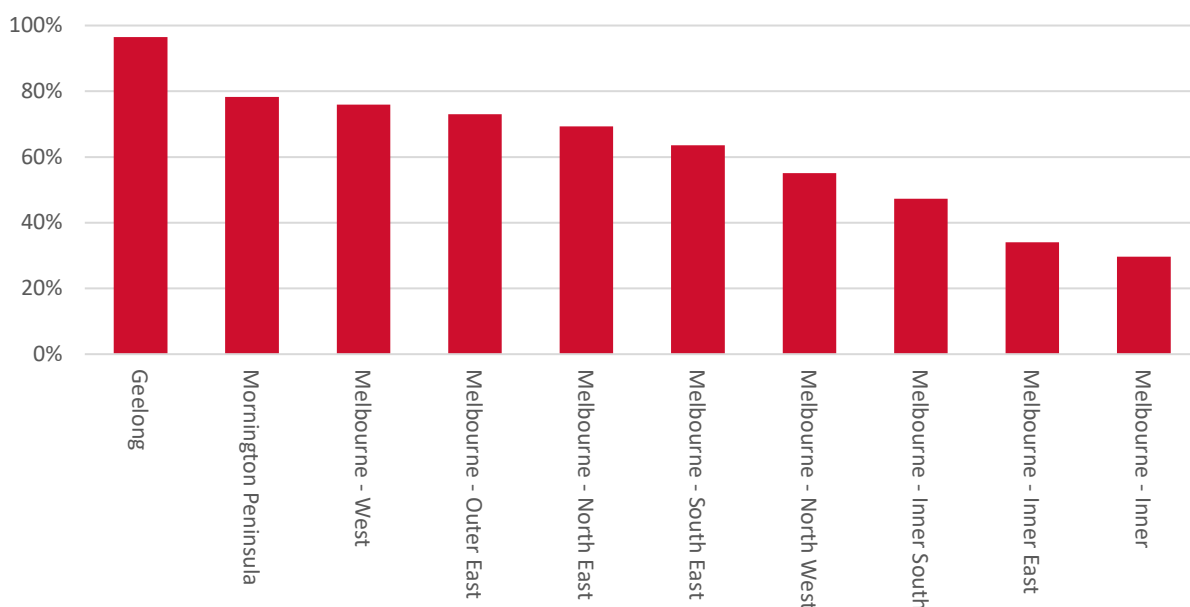
Our analysis found that employment self-containment among key workers is significantly lower for inner subregions than for outer subregions and satellite city areas. In Sydney, 21 per cent of key workers who work in City and Inner South live there, while 29 per cent working in Ryde and 35 per cent working in Inner West also live there. By contrast the majority of key workers working in Outer West and the Blue Mountains (75%), Outer South West (76%), Newcastle and Lake Macquarie (83%), Hunter Valley (83%), Central Coast (93%) and Illawarra (97%) also live there (Figure 23). In Melbourne, 30 per cent of key workers who work in Inner Melbourne and 34 per cent who work in Inner East also live there, compared to over three-quarters of key workers working in the West (76%), Mornington Peninsula (78%) and Geelong (97%) (Figure 24) (ABS 2016c; 2016d).

Figure 23: Employment self-containment—key worker occupations—Sydney (2016)



Source: Authors; data derived from Australian Bureau of Statistics 2016d.

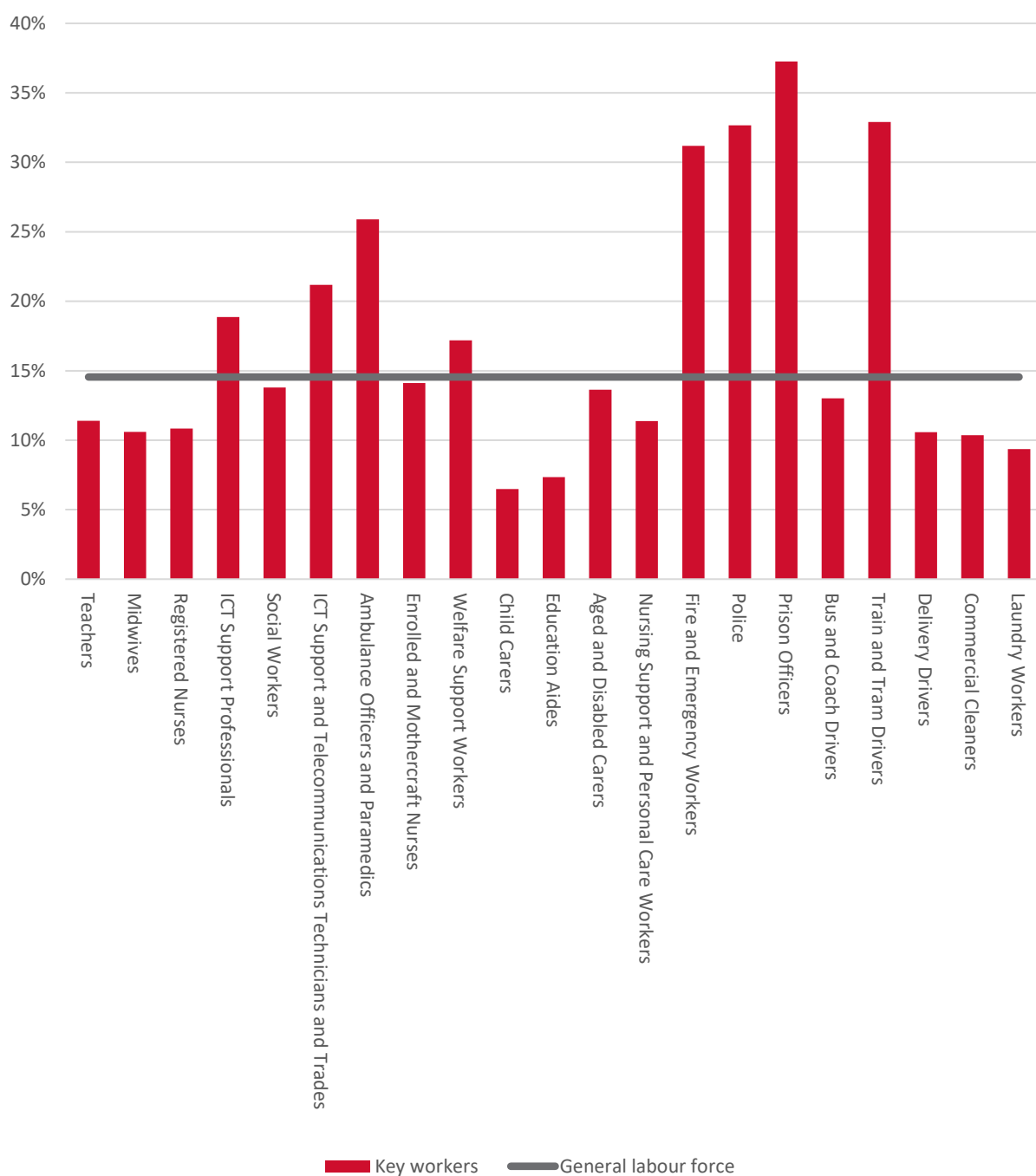
Figure 24: Employment self-containment—key worker occupations—Melbourne (2016)



Source: Authors; data derived from Australian Bureau of Statistics 2016c.

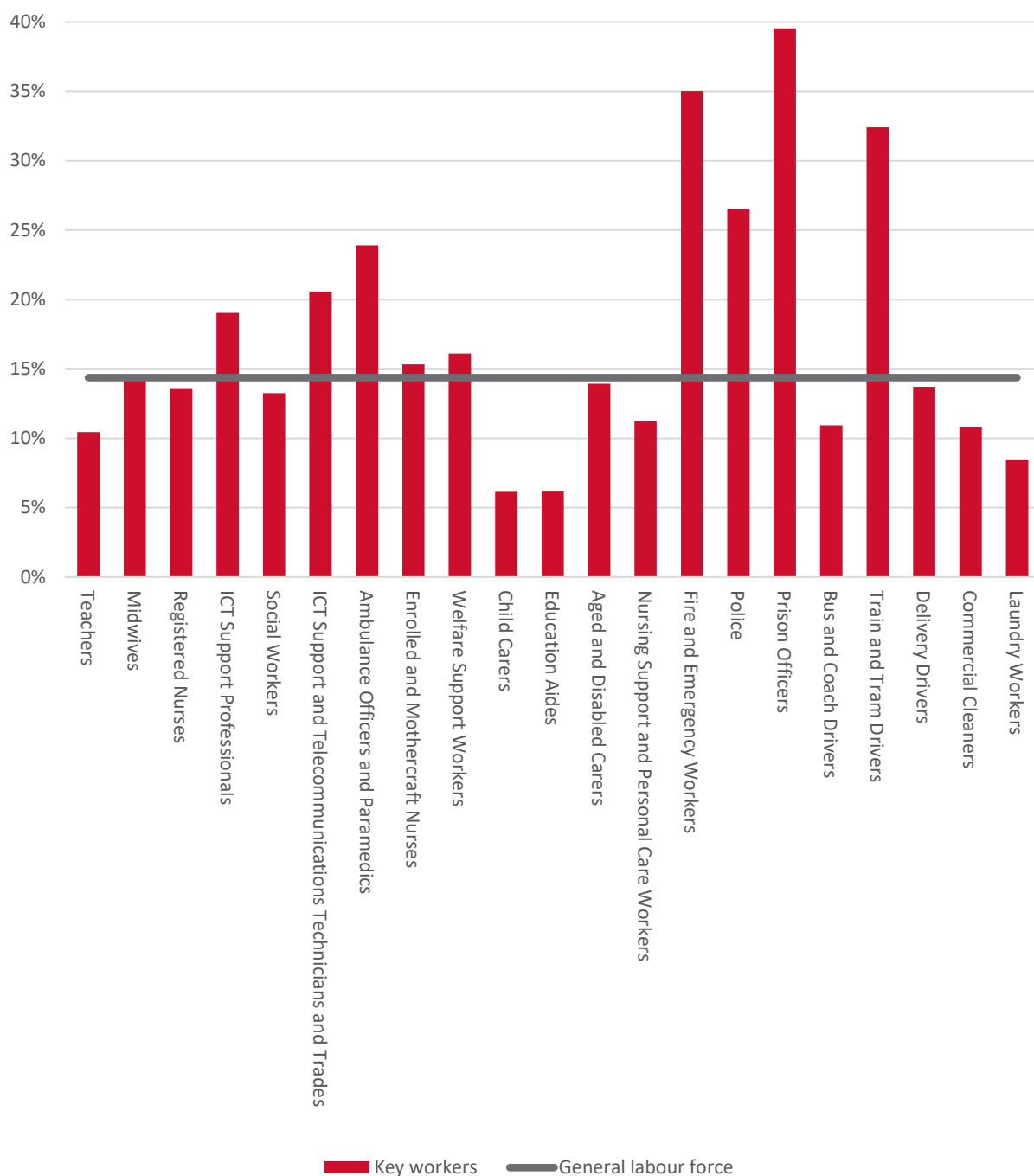
Our analysis of commuting distances revealed that in both Sydney and Melbourne, the proportion of workers commuting 30kms or more to work is higher overall than for the general labour force (ABS 2016a; 2016b). Across the Sydney GMR, just under 44,000 key workers commute over 30kms to work, and just under 16,000 commute 50kms or more. In Melbourne, just under 38,000 key workers commute 30kms or more and over 10,000 commute 50kms or more. The proportion of workers commuting over 30kms is higher for some occupation groups, while for others it is slightly lower than or equal to the proportion commuting that distance in the labour force generally (Figures 25 and 26) (ABS 2016a; 2016b). In both cities, longer distance commuting is more frequent among prison officers, fire and emergency workers, tram and train drivers, police, ambulance officers and paramedics, ICT and telecommunications professionals and trades and welfare support workers (ABS 2016b).

Figure 25: Proportion of key workers (by occupation) who commute 30kms or more, compared to general labour force Sydney — (2016)



Source: Authors; data derived from ABS 2016a; 2016b.

Figure 26: Proportion of key workers (by occupation) who commute 30kms or more, compared to general labour force—Melbourne (2016)



Source: Authors; data derived from ABS 2016a; 2016b.

The analysis also showed that significant numbers of key workers who work in inner subregions commute long distances into work. In both Sydney and Melbourne, over 3,000 key workers who work in the three inner subregions we examined for each city indicated in the census that they commute over 50km to work.

Compared to the general labour force, more key workers in both Sydney and Melbourne commute by car and fewer use public and active transport (Table 10) (ABS 2016n; 2016o). This may be because key worker jobs are often in dispersed locations, not serviced by main public transport routes. It also may be because many key workers, particularly those employed in health care, policing and emergency services commence and conclude shifts at times of day when public transport is not available and is infrequent and when walk or cycle is not safe or feasible.

Table 10: Key workers' mode of travel to work (2016)

	Sydney		Melbourne	
	Key worker	General labour force	Key worker	General labour force
Public transport	12%	21%	9%	16%
Vehicle	70%	60%	73%	65%
Active transport	4%	5%	4%	4%
Worked at home or did not go to work	13%	13%	14%	13%

Source: Authors; data derived from ABS 2016n; 2016o.

4.3 Housing stress

Housing stress is traditionally defined as households (typically low and moderate-income) spending more than 30 per cent of their gross household income on rent or mortgage payments. There are limitations to this approach, particularly that it does not take account of different household structures or the relative burden of non-housing costs, such as transport (Rowley and Ong 2012). However, it offers a starting point for comparing housing affordability across different subregions.

In light of research evidence that lower income households may take on unaffordable housing costs in order to locate within a reasonable distance of metropolitan region jobs (Hulse, Reynolds et al. 2019), we used custom data supplied by the ABS to examine rates of housing stress by subregion across our selected occupation groups at the time of the 2016 Census (ABS 2020b). It was only possible to determine whether an individual was in a household that could be classified as being in housing stress for 88 per cent of the key workers in the dataset (i.e. housing costs or income could not be determined for 12%). Therefore, actual rates of housing stress among our occupation groups could be higher than the determinable cases identified.

Our analysis revealed that across metropolitan Sydney and the satellite cities, at the time of the 2016 Census over 52,000 essential workers were living in households that could be classified as being in housing stress. That equates to approximately 20 per cent of the key workers in our dataset. Of those, over 25,000 (16%) were purchasing with a mortgage and approximately 26,800 (26%) were renting. Across Greater Melbourne and the Geelong region, over 37,000 individuals working in key worker occupations could definitely be classified as being in housing stress (17%), including over 21,000 mortgagees (15%) and over 16,000 renters (20%) (based on analysis of ABS 2020b data).

The proportion of key workers in housing stress was, unsurprisingly, found to be higher among workers in lower paid occupations. Across the Sydney GMR, overall rates of housing stress were highest (29–30% of individuals) among commercial cleaners, delivery drivers and laundry workers. A further 25–26 per cent of aged and disability care workers, child carers, bus drivers and nursing support and personal care workers were definitely in housing stress. The proportion of renters in housing stress was generally higher than home purchasers. For example, 37 per cent of delivery drivers, 36 per cent of commercial cleaners, and 34 per cent of child care workers in the rental sector were found to be in housing stress (based on analysis of ABS 2020b data).

An almost parallel pattern was found across the Melbourne GMR, although the percentage of individuals in housing stress overall was slightly lower than in Sydney. Rates were found to be highest among commercial cleaners (26%), laundry workers (26%), delivery drivers (25%) and child carers (23%), with higher rates among renters in those and other lower paid occupations ((based on analysis of ABS 2020b data).

While the proportion of key workers, by occupation category, who could definitively be identified as being in housing stress was highest for lower paid occupations, there were still large numbers of key workers in higher paid occupations (i.e. earning Q3 incomes) who were found to be in housing stress. For example, across the Sydney GMR, close to 8,000 teachers and over 7,000 Registered Nurses and midwives were in housing stress at the time of the 2016 Census. The equivalent numbers for the Melbourne GMR were close to 6,000 and over 5,000, respectively (based on analysis of ABS 2020b data).

Across occupation groups, rates of housing stress were found to be higher in inner subregions than across each GMR as a whole. The tables below show rates of housing stress among key workers in selected lower salary occupations in Central City and Inner South, Eastern Suburbs and Inner West (Sydney) (Table 11) and Inner, Inner East and Inner South (Melbourne) (Table 12). As shown, over a third of renters in lower paid occupations who are living in inner Sydney and inner Melbourne are in housing stress. The proportion is close to half (of individuals whose income and housing costs could be determined) among some occupation groups in inner Sydney, including delivery drivers and laundry workers.

Table 11: Proportion of individuals in households experiencing housing stress, select occupations (2016)—inner Sydney subregions

Occupation	Percentage of renters in housing stress	Total percentage in housing stress
Delivery drivers	46%	44%
Laundry workers	43%	41%
Commercial cleaners	42%	40%
Aged and disability carers	40%	36%
Enrolled and mothercraft nurses	38%	36%
Child carers	41%	33%
Nursing support and personal care workers	32%	31%
Bus and coach drivers	35%	30%
Educational aides	41%	29%
Welfare support workers	28%	23%

Source: Authors; figures based on analysis of ABS 2020b data.

Table 12: Proportion of individuals in households experiencing housing stress, select occupations (2016)—
Melbourne GMR

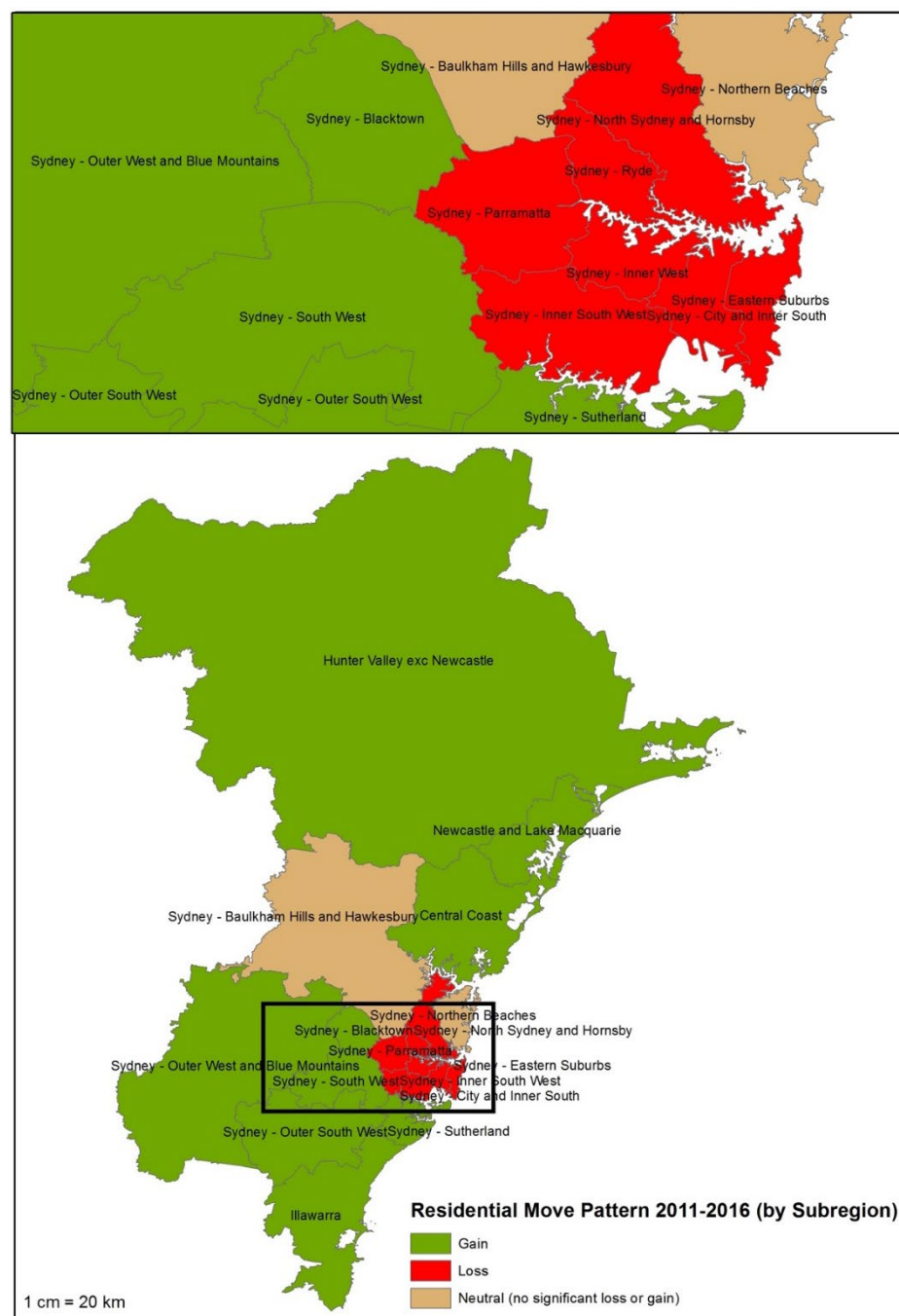
Occupation	Percentage of renters in housing stress	Total percentage in housing stress
Commercial cleaners	36%	34%
Delivery drivers	39%	33%
Laundry workers	33%	29%
Nursing support and personal care workers	30%	28%
Aged and disability carers	30%	27%
Child carers	32%	27%
Enrolled and mothercraft nurses	28%	23%
Bus and coach drivers	24%	22%
Educational aides	31%	21%
Welfare support workers	20%	17%

Source: Authors; figures based on analysis of ABS 2020b data.

4.4 Residential moves away from expensive areas

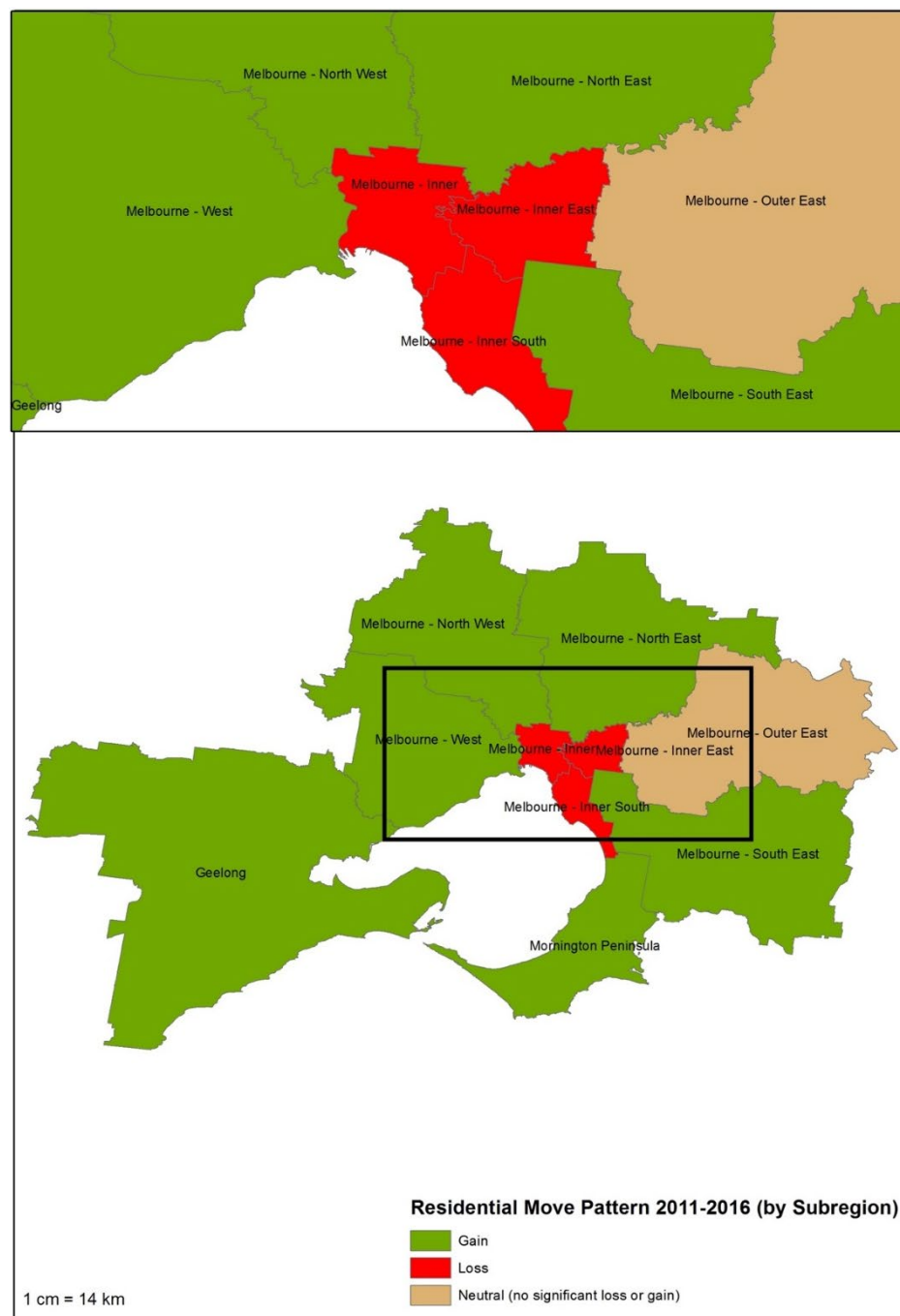
In light of claims that key workers are leaving expensive city areas, we compared where key workers reported they lived at the time of the 2016 Census to where they said they lived in 2011. Our analysis found that more key workers reported living in inner subregions in 2011 than reported living there in 2016. The figures below show the subregions that appear to have gained key workers between 2011 and 2016 and those that lost key worker residents. It suggests that key workers are tending to move away from more expensive inner-city areas and to less expensive outer suburban areas and satellite cities (ABS 2016p; 2016q). Further analysis of residential moves by age cohort suggests that while more key workers (aged 20–29) had migrated into the city from suburban areas between 2011 and 2016, there was a significant movement away from inner-city areas (the outward migration described above) among key workers aged 30–44.

Figure 27: Key workers residing in each subregion in 2016 relative to 2011—Sydney



Source: Authors; data derived from ABS 2016q.

Figure 28: Key workers residing in each subregion in 2016 relative to 2011—Melbourne



Source: Authors; data derived from ABS 2016p.

4.5 Overview and implications

Analysis of the housing situation of key workers in different occupation groups using 2016 Census data revealed further evidence that some key workers are facing challenges accessing appropriate and affordable housing. Lower paid workers and those residing in inner subregions are much more likely to be in the private rental sector, to live in overcrowded/unsuitable housing, and to be in housing stress. Overall, this suggests that many key workers are residing in more affordable outer suburbs and satellite cities due to affordability constraints. This pattern may become more concentrated in future if patterns of residential moves towards outer suburbs and satellite cities continue over the next census period.

It is impossible to know from the data the extent to which renting rather than purchasing and living in overcrowded households reflects choices and tradeoffs versus a lack of alternative options. Nevertheless, it is reasonable to assume that at least some, if not the majority of individuals captured in our analysis, were in housing situations that reflect significant constraints rather than lifestyle preferences. It's also unclear how our measure of housing stress relates to households' own perception of their financial burden, particularly when considering housing combined with transport and utility costs. This could be addressed through further research examining different measures of financial burden and by capturing key workers' perceptions of the affordability of their housing and transport costs, their housing aspirations and their perception of housing options. We explore some of these themes in the final chapter.

Finally, the findings of this analysis represent a snapshot in time in 2016. More longitudinal data using the indicators demonstrated here will be needed to effectively monitor the housing situation of key workers in Sydney and Melbourne and their responses to changing market conditions over time. In particular, it will be important to monitor whether incidences of overcrowding, housing stress and residential moves away from expensive subregions are growing in frequency over time.

5. Industry and policy perspectives

- **Housing affordability affects individual key workers and their housing options in different ways, reflecting demographic characteristics including age, income level (including household income), the security or precarity of employment, and family characteristics.**
- **Younger key workers who have not purchased homes, those on lower incomes, those in single person or single income households and those with dependent children face the greatest challenges accessing appropriate and affordable housing.**
- **Long commutes, housing stress and housing insecurity exacerbate the stress and fatigue many key workers already experience in the workplace due to the physically demanding nature of jobs, long shifts and in some cases, requirements to work anti-social hours.**
- **Governments could help key worker households to access appropriate housing by increasing the supply of dedicated affordable housing across both rental and ownership tenures, supporting a purpose-built rental housing sector, helping key workers to access information about housing options, and subsidising transport costs for key workers.**

This chapter reports the findings of our interviews with individuals from organisations representing key workers and with expertise in Sydney's economy, planning system and housing. Owing to the COVID-19 situation, interviews were conducted remotely by phone or videoconferencing. The interviews were designed to triangulate and extend the findings of the quantitative analysis by capturing qualitative information on the extent to which housing affordability is an issue for workers in different employment sectors and demographic groups and the locational aspects of key worker jobs. They also sought information that was not possible to obtain from Census data, for example, on whether housing affordability in high cost areas is impacting recruitment and retention of key workers and how high housing costs and/or long commute times are affecting the wellbeing and work performance of key workers themselves. Finally, the interviews sought to capture participants' perspectives on what governments at all levels could do to address the issues and challenges identified.

5.1 Perceptions of housing challenges faced by key workers in Sydney and their implications

5.1.1 Demographic and locational factors influencing housing affordability

Consistent with the findings of our Census data analysis, the interview findings confirmed that housing affordability is an issue for key workers, but that severity depends on demographic factors, particularly age and income, as well as location. Younger key workers and key workers in occupations characterised by lower pay and casual employment and/or short-term contracts—regardless of age—were seen to be the most significantly impacted by high housing costs. As interviewees explained, these groups face significant affordability barriers to home ownership, and can even face difficulty accessing appropriate rental housing, particularly in high demand areas due to high rents and low vacancy rates. Interviewees pointed out that barriers to accessing housing for those demographic groups is not just about the cost of housing. They explained that key workers who have just finished their study or training, for example, may not have proof of income to show a prospective landlord. Casual workers can lack evidence of certain future employment making them less favourable to landlords in competitive rental markets.

Housing affordability was also seen to be a significant issue for key workers on single incomes. Interviewees explained that while older key workers in higher paid occupations are generally appropriately housed, with many having purchased homes when prices were more affordable, individuals who fall out of homeownership, for example, as a result of relationship breakdown, can face significant issues finding affordable housing. Within both higher and lower paid occupation groups, older single women were highlighted as a group that is particularly affected in the above scenario. One interviewee gave the example that older single women in lower paid social services and welfare support roles, many of whom reside in the private rental sector, face significant risk of retiring into poverty.

These affordability problems were seen to be particularly acute for key workers residing in inner and coastal suburbs of Sydney. As one interviewee explained, government plans for major redevelopment in the Sydney to Bankstown corridor, described as one of the last remaining affordable inner and middle ring areas, could mean that there is even less opportunity for low and moderate-income workers to locate close to the city in the future. While predominantly a metropolitan region problem, several interviewees also pointed out that access to appropriate housing that is affordable can also be an issue in high value regional areas, particularly in regional coastal areas that are popular tourism and retirement destinations.

5.1.2 Evidence of how key workers are responding to housing affordability challenges

Again, the interviews confirmed and extended the findings of the quantitative analysis in terms of understanding how different key workers are responding to poor housing affordability close to metropolitan region jobs. Consistent with the discussion of affordability challenges generally, interviewees explained that while responses include house sharing, relocating to less expensive locations and commuting long distances, how different key workers are responding to poor housing affordability varies, particularly by life stage. They explained that younger

key workers tend to cope with higher central city housing costs by share housing in central locations or by living with parents (often in more suburban locations). Younger and early career key workers were seen as willing to trade off privacy by living in shared accommodation in order to gain experience working in inner city locations or with specific employers.

However, interviewees with experience of different occupation groups explained that the willingness to share tends to decline over time, with career progression often coinciding with new life stages (such as wanting to move in with a partner or have children). Interviewees explained that it is often at those points that some key workers look to relocate to more affordable areas. Interviewees explained that home ownership is a strong aspiration among many key workers, and relocation is partially being driven by a desire to access affordable ownership. One interviewee explained, for example, that it is common for city police officers working in inner Sydney to seek transfers to suburban and regional areas as they progress in their career, due to the nature of the work, lifestyle preferences, and housing affordability. As a result, inner city areas often have vacancies. Interviewees also explained that while the movement of more experienced key workers away from central city jobs is not resulting in major labour shortages, it has resulted in a shortage of more experienced workers in inner areas. One interviewee, speaking about the community services sector, explained that it can be difficult to fill more senior roles in inner city areas.

The interviews revealed that while relocation to live and work in more affordable housing market areas is an option for some key workers, that option is not available to all. As interviewees explained, key workers may be limited in the location of their employment due to the availability of jobs at a given time, or due to a particular specialisation. For example, highly specialised nurses typically can only work in specific hospitals, which tend to be located in central city locations. Likewise, community services workers who work with specific populations, such as people experiencing homelessness, have to work where those populations are most heavily concentrated which is often central city areas. An interviewee also explained that in occupations where work is piecemeal and contracts are short, such as in many community service roles, workers will generally take the work that is available, regardless of the location.

Due to the disconnect between the location of some key worker jobs and the location of affordable housing that meets household needs and preferences, many key workers commute long distances. Across the occupation groups discussed in the interviews, examples were given of workers commuting from the Blue Mountains, Central Coast and Illawarra to the Sydney CBD. As interviewees explained, long commutes are financially costly, particularly if made by car. In addition to the cost of running a private car, interviewees explained that toll charges and parking costs can significantly impact on net wages and are particularly problematic for key workers on lower incomes. They also explained that long commutes contribute to stress levels and fatigue as well as affecting emotional wellbeing by restricting leisure and family time. One interviewee, discussing the community services sector, explained that workers often leave the sector due to issues of work-life balance. Although not the only reason, the interviewee explained that long commutes are an exacerbating factor. Another interviewee pointed out that long commutes can significantly reduce sleep time between shifts. Although not widespread, the interviewee explained that there have been instances of emergency services workers sleeping in their cars between shifts in order to avoid long commutes to and from home.

5.1.3 The unique nature of key worker jobs and the implications of housing stress, unsuitability and long commutes

The housing affordability challenges and responses discussed above, including homesharing, relocating and long distance commuting, are not unique to key workers and have been documented across the wider labour force and population. However, a significant theme that emerged from the interviews is that due to the unique nature of their jobs, these pressures are heightened for key workers, sometimes impacting their capacity to perform their jobs.

Unlike many professional level jobs, key worker jobs require physical presence. Their work cannot be performed remotely. Therefore, they do not have the option of compensating for long commute times by periodically working from home.

Likewise, while workers whose duties are performed in centralised locations at regular business hours have significant opportunity to manage commuting costs by using public transport, opportunities for key workers to commute by public transport are limited by the geographical dispersal of many jobs and anti-social working hours. Interviewees explained that many key worker jobs, particularly those in community services, aged and disability care, child care, teaching and healthcare (outside of major hospitals) are often highly dispersed across suburban areas. Interviewees pointed out that places of work such as group homes, women's refuges, aged care facilities and child care centres are often located in residential areas, not close to high frequency public transport. Some workers in aged and disability care have to travel to different peoples' homes throughout their shifts.

Even where key worker jobs are located on major public transport routes, interviewees explained that many key worker jobs are required to be performed 24 hours a day or during anti-social hours, limiting the possibility of using public transport. This includes, for example, workers in healthcare, policing, emergency services, community services and cleaning. Interviewees pointed out that the need to commute by private car reflects both the lack of public transport available during anti-social hours and concerns about personal safety in the context of needing to walk and using public transport at night. This necessity to commute by car, particularly if travelling a long distance, can incur significant costs. As discussed earlier, these can include the financial costs of running a private vehicle, road tolls and parking—all of which can significantly deduct from overall wages—as well as physical and emotional costs.

For these reasons, key workers who have the opportunity to find work closer to home, in more affordable areas, may be incentivised to do so. However, as interviewees explained, this creates wider difficulty for recruiting essential workers in public and private service sectors, particularly those that require a high degree of skills and training. Interviewees emphasised that it is important for key service providers to retain at least some more experienced workers to ensure service quality and to fill higher level management and supervisory roles.

Interviewees explained that another unique feature of some key worker jobs is that at least some workers need to reside close to where they work in order to fill shifts or roles at short notice and/or to respond quickly to emergency situations. This was seen as essential for the operation and quality of healthcare and emergency services, as well as crisis support services. Interviewees explained that, in order to be 'on-call', workers generally need to be able to get to their place of employment within 20 minutes. As one interviewee discussed, it is often the younger workers who reside closer to work (for example, in shared housing) who are most able to be on call/respond. However, due to lower levels of experience, those are not necessarily the best people to respond to emergency situations. Again, the interviewee explained that this can negatively affect the quality of services. One interviewee explained that the ideal policing model is to have workers reside in the communities they serve. However, achievement of that model is difficult in expensive housing market areas.

Ultimately, in discussing the nature of key worker jobs, interviewees emphasised that key workers, in contrast to workers in many other occupations, often perform physically demanding jobs, have long working hours (e.g. 12-hour shifts) and, in some cases, work in high stress situations with high likelihood of exposure to vicarious trauma. Long commutes and housing stress and/or insecurity can serve to exacerbate already high levels of stress and fatigue accrued in the workplace. As interviewees explained, that raises concerns not only about workplace performance/the quality of essential public services, but also concerns about workplace health and safety and long-term retention of workers.

When people have to travel a great distance to work...when we're talking about people who have a very intense job working with... traumatised people, working shift work patterns and often long days, we are concerned about the exacerbation of fatigue and the implications that come with the exacerbation of fatigue. That's about the safety of the essential workers themselves—like, are they going to have a car accident or a workplace accident because of fatigue—but also the safety of the vulnerable people they are interacting with, around the quality of support they're receiving. (Participant 2)

5.2 Potential ways governments could assist key workers to access housing and/or jobs in expensive housing markets

When asked what governments could do in response to the issues discussed above, a number of interviewees pointed out that there are systemic problems with the housing system that are likely to continue to make it difficult for essential workers, and others on low to moderate-incomes, to access housing in high cost subregions unless they are addressed. In this vein, interviewees identified a need for significant investment to increase the overall supply of affordable housing and, to a lesser extent, investment in public transport infrastructure on a broader scale. Several interviewees explained that in the current context of very limited social and affordable housing supply, many key workers would feel uncomfortable occupying affordable housing, even if in need and if homes were available. This came out particularly strongly in terms of key workers who work with vulnerable persons and in community services who are acutely aware of the volume of unmet affordable housing need in Sydney. Interviewees also pointed out that, in practical terms, key workers, like most low and moderate-income workers, have incomes that generally preclude them from accessing social housing, although they are insufficient to afford market prices and rents in many housing market areas. In addition to significantly scaling up the supply of affordable housing, interviews pointed to a need to diversify affordable housing tenures and forms of housing assistance to extend, in particular, to assisted home ownership.

Requiring local governments in NSW to produce local housing strategies that consider the needs of very low to moderate-income workers employed in essential services (NSW Department of Planning and Environment 2018), was seen to be a positive first step in addressing key worker housing needs in Sydney. However, as discussed in Chapter 2, in seeking to address those needs, local governments are limited to a narrow range of planning tools. These include allowing for higher densities of development and releasing land to encourage increased housing supply generally and enacting inclusionary zoning to deliver affordable rental housing for up to moderate-income households. The housing able to be delivered through these mechanisms was found to be somewhat misaligned with what interviewees with experience representing different key worker occupation groups believed key workers require and aspire to. Home ownership opportunities, in particular, are seen as important for long-term retention in an area and as a reward for doing difficult and, in some cases, dangerous jobs.

Interviewees familiar with Sydney's planning and housing systems identified a number of ways that governments could use the planning system or other levers to support and encourage increased supply of affordable rental housing or subsidised home ownership. This could potentially be provided by employers on their own land and/or as part of new mixed use developments. However, it was also noted that some key workers prefer some geographic separation from the people or communities they serve. It was suggested that shared ownership may be a better way to support key workers into ownership than grants or subsidies for key workers to buy in the open market. First home buyer grants generally are thought to be inflationary, while shared ownership models offer an opportunity to recycle the subsidy.

The interviews revealed that affordability is not the only barrier to key workers accessing housing. Interviewees explained, for example, that upon graduating from training and commencing their first job, key workers can face challenges finding appropriate accommodation near their work due to limited timeframes and competition in the rental market. The example was given of commencing police officers, who typically have a very limited timeframe to find accommodation after being assigned to a Police Area Command and no evidence of income to show a landlord after completing nine months of intensive training. This can present challenges in very tight central city rental markets. Several interviewees believed that increased supply of purpose-built, professionally-managed rental housing could play a role in helping key workers to access housing in areas with currently low rental vacancy. One interviewee suggested that governments or key worker employers could potentially work with large-scale landlords to get them to allocate a proportion of properties for key workers commencing jobs in the area or to prioritise key workers among applicants. Key workers commencing jobs could then be directed by their employers to particular organisations or buildings, which would help them to secure accommodation in a short timeframe.

Another interviewee also saw a potential role for governments in helping key workers to access information about housing options in specific locations. The interviewee suggested that this could be, for example, through a website listing affordably-priced homes for rent or purchase in areas close to major key worker employers such as hospitals, as well as affordable housing units specifically dedicated for key workers, where available. The idea was based on the new platform Welcome Mat (<https://www.welcomemat.com.au>), which lists affordable housing vacancies across community housing providers in NSW and allows users to search properties by eligibility criteria.

Beyond housing, several interviewees suggested that support could also be in the form of subsidising transport costs for lower income key workers having to travel by private car due to anti-social working hours or dispersed work locations. As one interviewee explained:

We need good public transport [and] subsidised public transport, but we also need subsidies around private transport. The fact that [workers] are commuting from Penrith and the Blue Mountains to work in the inner city, the tolls you are catching on the M4 and Westconnex tunnel. Then you throw parking in. That can be their whole wage. (Participant 2)

The interviewee suggested that relief from or reduced toll charges, for example, could reduce the cost burden of commuting and assist with overall living costs.

5.3 Overview and implications

Overall, the interviews confirmed the findings of the quantitative analysis, revealing that housing affordability is a significant issue for many key workers in Sydney. However, the findings also suggest that key worker status alone is not necessarily indicative of a need for housing assistance, with individuals' challenges related to other factors including age and career stage, income (including overall household income), job security, family composition (and consequent housing needs) and location of employment.

While housing affordability is now a widespread issue in Sydney, the interviews revealed a number of reasons why governments should seek to improve access to housing for workers in essential services, alongside broader initiatives to improve access to housing for low and moderate-income earners. The first, and perhaps most obvious, is that the services key workers provide support the functioning of cities and have important and much broader-reaching public and economic benefits. Second, unlike workers who may have opportunities to work remotely, key worker jobs must be performed face-to-face in specific locations and, for some occupation groups, particularly those in healthcare, policing and emergency and community services, it is important that workers are able to access their place of employment quickly to respond to spikes in demand and emergency or crisis situations. Finally, many workers in essential services perform physically demanding jobs, work long shifts, work during anti-social hours and/or, work in high stress situations. Housing stress and insecurity and long commutes can exacerbate the stress and fatigue resulting from performing their essential duties. That, in turn, can negatively impact service quality, including through an inability to retain more experienced workers in the long term.

Interviewees identified a number of ways governments could address some of the challenges identified. These included supporting increased supply of purpose-built, professionally-managed rental housing in areas of low rental vacancy; developing housing for key workers on public land near major key worker employers, such as hospitals, and through inclusionary zoning requirements in major renewal areas, particularly health and education precincts; by providing support for alternative housing models that support long-term affordability, such as community land trusts; and through a government-run shared ownership scheme, such as the one currently being piloted in Victoria.

Overall, the interviews conducted as part of this scoping study have provided some initial insight into the housing challenges and aspirations of key workers; recruitment and retention challenges faced by employers; and potential government responses. However, further research should engage directly with key workers in different occupations to further gauge their housing challenges, aspirations and the trade-offs they are making, as well as the views of key worker employers regarding housing-related difficulties they face in recruiting or retaining staff and potential solutions.

6. Policy development options

In the context of declining housing affordability and related concerns about spatial mismatches between housing opportunities and jobs, this research was designed to scope evidence on the impact of rising housing costs on low and moderate-income key workers. A decade and a half since the issue was last examined by Australian researchers, the study sought to gauge:

- whether and how governments in Sydney and Melbourne and select international jurisdictions are considering key worker housing needs and supporting them to access appropriate housing
- evidence of housing affordability and the housing situation and commuting patterns of key workers across a range of occupation groups in Sydney and Melbourne, and
- potential ways that Australian governments could respond to any issues identified.

The sections that follow bring together the overall research findings, focussing particularly on the implications for policy development. We also discuss areas for further research stemming from the findings and the necessary limitations of this scoping study.

6.1 How should a ‘key worker’ be defined and what is the rationale for addressing key worker housing needs?

The literature and policy review conducted for this study revealed that there is no single or universal definition of what constitutes a key worker. Nor is the term itself consistent across place or time, with essential worker, for example, often used interchangeably. The term broadly refers to workers who perform services that support the functioning of cities but who earn low and moderate-incomes, presenting challenges for accessing appropriate and affordable housing in expensive housing markets. Traditional or ‘core’ occupation groups include education, healthcare, policing and emergency services, but definitions often reflect local economic characteristics and labour shortages or recruitment and retention challenges in specific public services. The COVID-19 pandemic appears to have renewed policy awareness of the important roles played by key workers not only in supporting the functioning of cities, but the overall resilience of cities and their populations in times of crisis, as well as suggesting a need for an expanded definition.

There is a clear rationale for supporting key workers (however locally defined) to access housing in unaffordable regions or subregions. The most obvious of these is that there are wider public and economic benefits arising from high-quality essential services and a well-functioning city. The nature of key worker jobs also makes their housing needs an important public policy consideration. These jobs demand physical presence and, for some occupation groups physical proximity to work is essential in order to respond to spikes in demand for essential services and emergency situations. They also tend to be physically demanding, characterised by long shifts, and, in some cases, performed during anti-social hours and in high stress situations with potential for exposure to vicarious trauma. Housing stress and insecurity and long commutes can exacerbate the fatigue and stress which is already accrued in the workplace, with implications for worker health and safety, long-term retention and the quality of essential services. Finally, because key worker jobs are population-serving, there are often (but not always) opportunities to work in a broad range of locations where there is a population. This means that for some key workers, there is no need, and certainly no incentive, to work in high housing cost areas or regions, meaning that those areas can experience recruitment and retention challenges.

6.2 Are key workers in Sydney and Melbourne struggling to afford housing?

The research revealed evidence that some key workers in Sydney and Melbourne are struggling to afford appropriate and affordable housing. This is evident in instances of housing stress and overcrowding, which affect a surprising proportion of key workers. Our analysis of 2016 census data revealed that approximately 20 per cent of key workers across Sydney and 17 per cent across Melbourne and their satellite cities were in households that could be classified as being in housing stress at the time of the 2016 census. In Sydney, over 30,000 key workers live in overcrowded homes.

In both cities, the proportion of key workers in households that could be classified as being in housing stress or overcrowded was found to be greatest among key workers in lower paid occupations, as well as in inner subregions. However, there was also evidence of housing stress and overcrowding among key workers earning incomes in the Q3 range. In Sydney, for example, close to 8,000 teachers were found to be in households that could be classified as being in housing stress and approximately 4,500 registered nurses and midwives were living in overcrowded homes. This suggests that housing affordability problems are extending beyond the lower income groups typically considered in need of housing assistance to also include workers earning incomes in the Q3 range. This points to a need for policy makers to look beyond those traditionally considered in need of housing support in analysing housing needs.

The research also revealed that key workers in both metropolitan regions and their satellite cities commute further, on average, than the general labour force and are more likely to commute by private car. The interviews revealed that commuting by private car is a necessity for many key workers owing to the dispersed locations of key worker jobs (which are often located in residential areas away from public transport) and, in some cases, the need to travel to work during anti-social hours. This finding suggests that while the dispersed nature of key worker jobs means there is considerable opportunity for key workers to live and work in the same subregion, contributing to the 30minute city aspiration, that that is not occurring in practice in inner subregions. While reasons are multifaceted, the lack of appropriate and affordable housing is an important factor.

Analysis of Census data showed that key workers are more heavily concentrated in outer suburbs and satellite cities than the labour force generally while being underrepresented in inner and higher value areas. We also found that between 2011 and 2016 inner subregions of both cities experienced a net loss of key worker residents while outer suburbs and satellite cities experienced a net gain. Interviewees explained that there is a strong aspiration among key workers for home ownership, and that some key workers are moving to more affordable housing market areas as their career progresses in order to attain it, as well as to access larger family homes for those who have children. Our analysis of geographic patterns of housing affordability suggest that this trend is likely to continue in future with LGAs with a median price a key worker could afford generally limited to a few outer suburbs and satellite cities, even for key workers on incomes in the mid Q3 range.

Finally, as the interviews revealed, key worker status alone is not necessarily indicative of a need for assistance. In reality, the challenges that key workers face in accessing appropriate and affordable housing are related to age, income level (including total household income), employment security and household composition. Younger workers who are not in the housing market, key workers on single incomes (including older key workers in the private rental sector) and family households requiring larger homes were some of the groups identified as in particular need. These demographic characteristics will be important for considering not only the types of tenures of housing required to address key worker housing need, but also for defining eligibility criteria for potential support programs.

6.3 What policies and programs or policy reforms could support key workers to access housing in expensive housing markets?

The findings discussed above suggest that there is a clear rationale to assist key workers to access housing close to where they work, and that failure to do so could threaten public health, safety and the overall liveability of cities. While the housing needs of essential workers are beginning to be noted in planning and housing strategies, neither of the Australian metropolitan regions we examined have quantified this need, developed clear definitions of what constitutes a key or essential worker, or set any specific targets. In NSW, at the time of writing, local governments were being required to consider very low to moderate-income essential service workers who work in the LGA but cannot afford to live there in the context of their local housing strategies. However, statutory planning tools and funded programs to support the provision of affordable housing for low and moderate-income earners is currently limited. Moreover, as the interviews with industry experts revealed, the focus in NSW on affordable housing for rent is misaligned with the housing aspirations of many key workers, which is for home ownership. This finding is consistent with recent research that has highlighted the statutory limitations local governments, in particular, face in addressing housing affordability problems in their local area (Morris 2021; Paris, Beer et al. 2020), and suggests there is considerable scope for policy development.

Overall, the research suggests a need for governments to work to increase the overall supply of housing that will be affordable to low and moderate-income workers over the long term, as well as for government in NSW to also consider ways to support home ownership opportunities for low and moderate-income households.

Specific policy approaches and strategies could include:

- using public sector land to deliver affordable housing for key workers
- allowing/encouraging employers to develop homes for key workers (for example, by allowing housing in non-residential zones, but only for the purpose of affordable key worker housing)
- initiating inclusionary zoning requirements to deliver affordable housing for key workers in health and education precincts
- supporting models that can secure affordability over the long term, such as community land trusts
- supporting/encouraging more superfunds to invest in housing for key workers
- developing a government shared ownership program for properties delivered through some of the above mechanisms.

While not replacing the need for affordable housing, government support for the development of a purpose-built and professionally-managed rental housing sector in Australia could also assist key workers to access housing, particularly upon initial recruitment to new jobs and in rental markets with low vacancy rates. The value of a scaled-up purpose-built rental housing sector would be maximised if landlords were required to lease a proportion of units to key workers; prioritise key workers in tenancing decisions; and/or include a proportion of affordable rental housing for low and moderate-income key workers in their developments. Governments could also help key workers to access information about affordable housing options (market rate and affordable housing) near to major key worker employers and in expensive housing market areas, for example, through a centralised property listing and enquiry service.

Addressing the supply side of the housing market would help to secure affordable housing for key workers over the long term, regardless of future house price increases. But other options include subsidising transport costs for low-income workers and/or subsidising wages in central city locations and/or high housing cost subregions.

Implementation of these approaches will require governments to define what a key worker is and to prioritise particular occupation groups, or individuals within those groups with demonstrated housing need, for assistance. Although there are compelling reasons for governments to enact policies and programs to support access to housing for workers providing essential public services, there are nevertheless equity considerations. In

Australia's largest cities, housing affordability is a far-reaching issue, and access to welfare support and affordable housing is limited. Research shows that there is now a significant cohort of people who cannot afford market rate housing, but who are also unlikely to be prioritised for affordable housing (Hulse, Reynolds et al. 2019). This makes prioritising access to assistance and, particularly to assisted home ownership, a difficult political decision.

In this context, governments in Australia have a number of options. One is to take a view that all workers make important contributions to the performance of cities and to work to significantly expand 'intermediate' forms of housing (between market rate and social housing) and housing assistance. The alternative is to take a targeted approach, focussing on specific occupation groups where there is evidence of risks to the quality of essential services arising from worker recruitment or retention problems. A third option would be to initially implement or pilot new policies and programs targeted to eligible low and moderate-income working households with defined occupations of key workers, but to expand them over time to a much wider cohort. In England and the US, planning policies and programs to assist key workers to access housing sit alongside or have evolved into more general policies and programs to support low and moderate-income working households, including through access to intermediate housing tenures (delivered through the planning system and financial incentives and support) and help-to-buy programs.

Further research on the issue of key worker housing affordability and access would help to develop the evidence base to inform these definitional questions and policy design decisions.

6.4 What further research is needed to support policy development?

As a scoping study, this research was necessarily selective in its geographic scope and depth and timeframe of analysis. It has, nevertheless, uncovered evidence that housing affordability for key workers is an issue in Sydney and Melbourne, likely extending to other urban and regional Australia as well. Four areas to focus further research are discussed below.

Finer grain affordability analysis

While the scoping study generated evidence of broad geographic patterns of housing affordability for different property types and indicative key work incomes, we recognise that in practice, prices and rents vary significantly across LGAs, that the volume of properties becoming available in different locations and at different price-points also varies and that affordability and need also relates to overall household income and household composition. Further research should explore these variables in greater detail, for example, repeating the affordability analysis on a finer spatial scale and modelling different households' income and composition scenarios (such as households with or without dependent children); and examining the extent to which property becoming available in different locations is affordable to key workers using real property transactions data.

Longitudinal analysis

By relying on 2016 Census data and rental, sales and income information for selected years and quarters, the analysis presented here provides a snapshot in time. A longitudinal study using the variables developed for this analysis would provide additional insight to support policy development by capturing trends over time. There is also scope for repeating the study following the next Census to examine whether and to what extent outcomes such as housing stress and overcrowding, and long commuting distances have worsened since 2016.

Perspectives of key workers and employers

The small quantitative component of this study uncovered rich information on the nuances of key workers' housing challenges and the appropriateness and potential effectiveness of different policy responses. However, this component of the research was limited to engagement with industry experts, specifically, individuals from organisations representing different occupations of key workers, and policy experts able to provide insight on the issue in relation to Sydney's housing market, economy and planning system. It was necessary to begin by scoping

these higher-level perspectives. However, further research should seek to capture the perspectives of key workers themselves, across both Sydney and Melbourne. This would generate more detailed information on:

- key workers' housing aspirations
- the trade-offs that key workers are making in practice and how these would be affected by different housing options
- the extent to which households classified by conventional measures as being or not being in housing stress perceive the affordability of their housing and commuting costs
- key workers' perceptions of what acceptable commuting times are in different locations, and
- the extent to which the above vary across occupation types, income levels and other demographic and household characteristics.

This information would inform where best to target potential interventions as well as the design of specific policies and programs.

Further research should also seek to capture the perspectives of key worker employers across the public and private sectors. This would allow for further exploration of recruitment and retention challenges in different locations and the extent to which these are seen to reflect limited housing opportunities and/or the cost of living. Given the finding that less experienced key workers tend to reside in the inner city, it would also provide an opportunity to further explore whether employers feel that skill levels are mismatched to jobs/employer needs in different locations.

Peri-urban and rural dimensions

Finally, both the analysis of geographic patterns of housing affordability and the interviews revealed that housing affordability for key workers is not just a problem in inner areas of metropolitan regions. It is also an issue in peri-urban coastal areas and areas that are popular destinations for retirement and second-home ownership. This suggests a need for further research to examine the rural/regional dimension of the key worker problem and to identify potential policy responses that might be suited to peri-urban and regional areas.

6.5 Conclusion

Australia has recently undergone a period of rapid house price inflation. Over this time, however, there has been very little policy or research consideration of the implications for low and moderate-income workers employed in providing essential public services, including in the nation's most expensive housing markets. In this context, this research was designed to scope evidence of both practice in planning for and responding to the housing needs of key workers, variously defined, as well as evidence of whether key workers in Sydney and Melbourne are experiencing problems accessing appropriate and affordable housing near to where they work and the implications of this.

The research findings add another dimension to the developing body of Australian research examining the implications of spatial mismatches between jobs and affordable housing, suggesting that the provision of affordable housing for low and moderate-income workers, particularly those in essential services, is not just about the economic productivity of cities, but about the functionality of cities too. This extends to issues of public health and safety and resilience to deal with unexpected events, as well as general liveability. In so doing, it suggests a further rationale for policy makers to address declining housing opportunities for low and moderate-income working households in expensive housing markets.

In future, even if central cities become less of a focus for settlement/population growth, there will nevertheless be a need to plan for affordable housing for essential workers where there is population and housing demand. By capturing evidence of geographic patterns of housing affordability and the challenges and choices facing key workers in Sydney and Melbourne and their satellite cities, this scoping study is a first step in developing an evidence base to support government responses, as well as providing a basis for further research and policy development.

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