



THE UNIVERSITY OF
SYDNEY



Key worker housing affordability in Sydney

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*A report prepared for Teachers Mutual Bank, Firefighters Mutual Bank,
Police Bank and My Credit Union*

January 2018

Citation: Gurrán, N., Gilbert, C. Zhang, Y., Phibbs, P. 2018 “Key worker housing affordability in Sydney”, Report prepared for Teachers Mutual Bank, Firefighters Mutual Bank, Police Bank and My Credit Union, The University of Sydney, Sydney.

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Summary

Australia's key workers are increasingly locked out of home ownership, particularly in the metropolitan housing markets of Sydney and Melbourne. Significant price pressure over the past five years has made saving for a deposit and financing a loan prohibitive for many aspiring home owners on moderate incomes such as teachers, police, and nurses. If current patterns continue these essential workers will remain stuck in the private rental system, unable to compete with investors and upgraders to purchase their own home.

In response to this issue, Teachers Mutual Bank, Firefighters Mutual Bank, Police Bank and My Credit Union have commissioned the University of Sydney's Urban Housing Lab to examine the housing situation of key workers in Greater Sydney Metropolitan Region, Australia's most expensive housing market.

This report draws on census and housing market data to examine home purchase affordability for key workers in Sydney, focusing on teachers, nurses, ambulance officers, fire/emergency workers, and police. The emphasis is on younger key workers who are yet to make their first home purchase and who face new affordability barriers which were not encountered by previous key worker cohorts for whom home ownership has largely been achieved. The report also highlights the economic and social implications of declining housing affordability for key workers in metropolitan Sydney, including the implications of the ensuing choices key workers must make. These choices include relocating to more affordable areas, facing long commutes to work, or "opting out" of home ownership in order to rent closer to employment.

Key points

- In performing their roles in education and public health and safety, **key workers significantly influence the social and economic wellbeing of cities**. Failure of regions to attract and retain key workers can generate large social and financial costs for society. On the other hand, research suggests that supporting key workers to live in high values areas can have significant 'spillover' benefits for economic efficiency and productivity.
- **In Sydney there is a growing spatial mismatch between where key workers live and work**. Although key worker jobs are situated throughout the metropolitan region, and particularly in inner Sydney, the majority of the metropolitan region's key workers reside in outer ring suburbs.
- **There is evidence to suggest that high house prices and rents are "pushing out" some of Sydney's key workers**. Since 2006, **some inner and middle ring subregions of metropolitan Sydney have experienced a net loss of key workers** meaning that more key workers left the subregion than moved in, while outlying areas including the Illawarra, Newcastle and the Hunter Valley have experienced net gains.
- **Home purchase affordability is declining for key workers who are seeking to purchase a house for the first time**. Many key workers currently live in their own home. However, our analysis suggests that even dual income key worker households looking to purchase a home for the first time would struggle to find an appropriate home in most inner and middle ring suburbs of Sydney.
- **Single key workers face particular barriers to home purchase**. Based on median house prices in 2016, a single enrolled nurse (with 5 years' experience) would need to travel to Cessnock, which is approximately 150 km from central Sydney, in order to find an affordable home to purchase. A single teacher (mid level graduate), with a slightly

higher income, would only be able to purchase a median priced home in a few locations, including Wyong, Cessnock, Lake Macquarie, Maitland, Port Stephens and Shellharbour, all of which are more than 75km from the Sydney CBD.

- **Home purchase affordability is also constrained for key worker couple households with children.** The majority of Sydney's inner and middle ring suburbs are unaffordable for key worker couple households with children.
- **Some key worker groups, such as nurses and police, also struggle to find affordable rental accommodation in Sydney's inner and middle ring.** Further, local government areas with the most affordable rental prices (which are predominantly outer urban) also tend to have the lowest stock of private rental housing units, particularly smaller (one bedroom) rental properties. This means that while renting might theoretically be affordable in some locations, affordable private rental housing is often not available.
- **Housing affordability for key worker groups is likely to decline further without effective market innovation or policy change.** Compared to contract workers and those in less stable employment, key workers have steady and predictable incomes, enabling them to service a mortgage. However, without some intervention to improve purchase affordability, home purchase rates amongst key workers will fall.
- **There are some locations across the Sydney metropolitan region where house prices or rents are only just out of reach for key workers, so modest interventions to improve access to home ownership could increase the extent of locations that are potentially affordable.** For higher income key workers and dual income key worker households, our analysis shows that there are a number of inner and middle ring suburbs that are only unaffordable by up to \$50,000. Market strategies (e.g. innovative design or products) and or policy interventions (to help secure affordable housing opportunities within new development) might be particularly effective in these contexts.

1. Introduction

Key workers – such as teachers, nurses, ambulance officers, fire/emergency workers, and police – play an essential role in Sydney’s economy and social fabric. Performing critical education, health care, emergency and policing services across the entire Sydney metropolitan region, key workers are nevertheless increasingly struggling to find affordable housing in many parts of the city. In particular, younger key workers who are yet to make their first home purchase are facing new barriers to ownership in the context of escalating house prices and a tight rental market.

This report examines the current housing situations of key workers in the Greater Metropolitan Region of Sydney (GMR). It estimates home purchase affordability across the GMR and also examines evidence of how key workers live, work and travel. The primary focus is on home purchase affordability for teachers, nurses, ambulance officers, fire/emergency workers, and police. We also examine social and economic implications of declining housing affordability, including evidence that key workers are being “priced out” of inner and middle ring Sydney, are increasingly forced to endure longer car based commutes to work, and face new barriers to home ownership as they progress through their life course.

Who are key workers?

Key workers (also referred to as essential workers) are people whose occupations are considered essential to the functioning of cities, but who are typically on fixed, low to moderate, wages (Yates, Randolph et al. 2005). Occupations that are considered to be ‘essential’ differ between jurisdictions and can include anything from service sector workers to medical and emergency service personnel. While a broad range of low-paid occupations are important for a city’s function and economic performance, key worker occupations typically consistently include those pertaining to education, health and emergency and policing services.

In this report we focus on six specific occupations, each with different income levels:

- Teachers (including early childhood, primary, secondary and special needs teachers);
- Registered nurses;
- Enrolled and mothercraft nurses;
- Ambulance officers and paramedics;
- Fire and emergency service workers; and,
- Police

These key worker groups account for a significant 6 per cent of Sydney’s total workforce.

Key workers and housing affordability – a growing problem for global cities

The housing needs of key workers have attracted policy concern in Australia and internationally (Productivity Commission 2004, ODPM 2005b, Productivity Commission 2014). In global cities such as London and New York, businesses and governments have long been concerned that high property prices and rents are creating shortages across the key professions considered in this report (ODPM 2005a, 2005b, Mayor of London 2014, New York City 2014). Schools are finding it difficult to attract and retain teachers; hospitals are experiencing chronic problems in recruiting nurses; police and ambulance workers are unable to live near the neighbourhoods they service. This can have negative implications for the functioning and quality of essential public services. Therefore, well located, affordable housing for key workers is not solely a social welfare concern, but is also an important economic issue (Berry 2006). In the UK, where there is a long history of government support for affordable housing generally, government interest in the location and affordability of housing for key workers has been particularly fuelled by economic efficiency concerns, including the need to mitigate risks of service overload and breakdown and to reduce costs for recruitment and training by limiting worker turnover (Berry 2006).

In cities such as New York, London and San Francisco, such concerns have led to the introduction of specific initiatives and policies to help key workers access homes in higher cost locations at more affordable prices or rents (Morrison 2010, Lazarovic, Paton et al. 2016). These include low cost and shared equity home purchase models, and dedicated affordable rental housing, often supported by a combination of government or planning system mandates, incentives, or subsidies.

Research suggests that such efforts to support key workers to settle and remain in higher value urban locations have significant benefits that extend beyond the households who are assisted. This is because the services that key workers perform contribute to economic productivity in ways that far exceed the remuneration (pay) of individual workers (Urwin, Gould et al. 2016). Research in the US, for example, has found that each additional registered nurse adds USD 9,900 per annum to national productivity (through reduced mortality and faster recovery times), and produces a cost savings in terms of medical expenditure (reduced hospital stays) per registered nurse of around USD 46,000 (Dall, Chen et al. 2009, Keepnews 2011). Likewise in the US, increased quality of teaching has been found to positively impact students' future earnings (Hanushek 2011). Reflecting these types of impacts, recent research into the cost / benefit of an affordable housing development in London found that a housing development for 214 workers (52 per cent of which are key workers) produces a benefit to London's economy of £3.85 million per annum, significantly exceeding the development's £2 million subsidy cost (Urwin, Gould et al. 2016).

In Australia, however, key worker housing needs have been somewhat overlooked in policy terms. This may be because in many parts of Australia beyond the capital cities, housing appears relatively affordable for key workers. Further, in contrast to other parts of the world, Australia's housing affordability pressures and, in particular, barriers to first home ownership, appear to be a more recent phenomenon which has affected key workers only over the past decade.

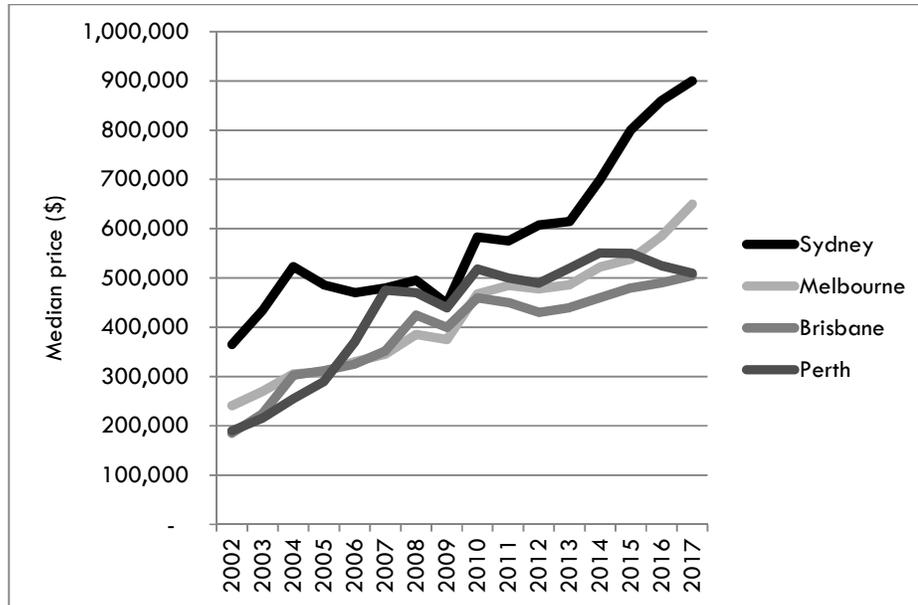
Key workers and housing aspirations over time

Like many Australians, most key worker households have traditionally aspired to, and achieved, home ownership. In fact, historically rates of home ownership are even higher for key workers than for Australians generally, likely because they have been able to service mortgages owing to their stable employment and steady incomes.

However, over the past decade, rising house prices and rents across Australia's capital cities have made it more difficult for lower and middle income households, including key workers, to

achieve home ownership. Younger households aspiring to enter home ownership have been particularly affected in cities like Sydney and Melbourne where median house prices have more than doubled since 2006 (Australian Bureau of Statistics 2017a) (Figure 1).

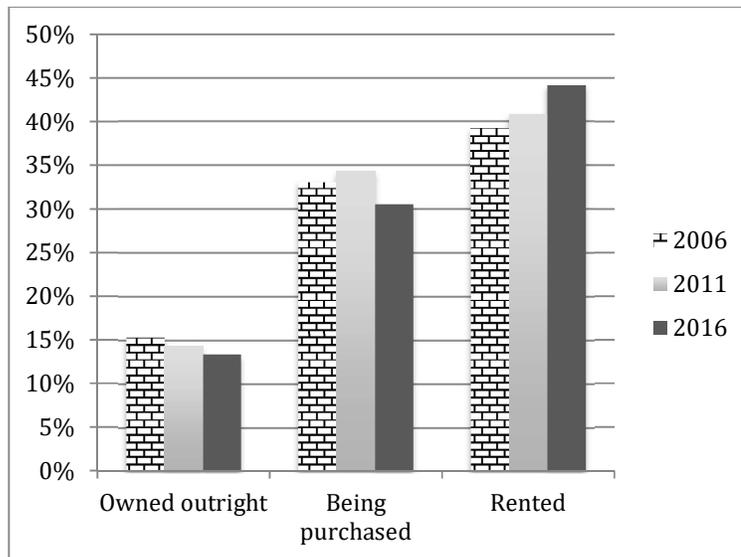
Figure 1: Median price of established houses - select capital cities



Source: authors; data derived from ABS 2017a

Rising house prices have also made it more difficult for low and moderate income earners to save a deposit for their first home. Therefore, although in overall terms housing affordability for those with existing mortgages improved over the past decade in the context of low interest rates, the “deposit gap” – the amount of money needed to secure a loan – represents a new barrier to first home buyers. Over time this has meant that overall rates of home ownership in Australia have fallen (Yates 2016). Younger households in particular, are remaining in the private rental market for longer or failing to achieve home ownership at all (Figure 2).

Figure 2: Change in housing tenure, 20-35 year olds, Sydney GMR



Source: authors, data derived from Australian Bureau of Statistics 2007, 2012b, 2017d

Since most key worker jobs serve resident or visiting populations, they tend to be concentrated in areas that are more densely populated and or have a high number of daily workers or visitors – such as Sydney’s central city areas and surrounding suburbs. It is often these locations where there is greatest competition for housing and, consequently, pressure on house prices and rents. In these locations, key workers, whose incomes are typically set according to state or national industry award schemes, may be unable to compete for appropriate housing with higher paid workers or investors. Nor are key workers generally eligible for significant housing assistance, with income eligibility criteria limiting access to rental assistance payments and social housing.

If key workers are unable to access appropriate and affordable housing within the locality or subregion in which they work, they either have to find housing that is farther from work (and pay the added financial and social costs of long commute times), or move to take up jobs in more affordable (often suburban or regional) locations. Where this occurs, the higher value central city locations that depend on key workers may not be able to attract or retain the workforce required to meet the city’s needs.

For local areas and subregions, lack of appropriate and affordable housing for key workers could mean that the quality of local services is compromised, as competition for jobs decreases and more senior / experienced workers depart (Berry 2006).

Housing affordability challenges are particularly acute for younger key workers who are on lower starting incomes than their more senior colleagues and are also unlikely to be existing homeowners. Research from the UK suggests that most key workers aspire to home ownership, and expect the same housing opportunities as their peers in other highly skilled professions (Scanlon 2010). Younger key workers may tolerate shared and poor quality accommodation in central city locations, but are likely to move to seek better quality accommodation and home ownership as they age and gain professional experience (Berry 2006). If Sydney’s younger key workers are unable to access housing that meets their needs and aspirations and instead take up jobs elsewhere, it may be difficult to replace older key workers as they retire.

Our approach to examining key worker housing affordability in Sydney

To examine housing affordability for key worker groups in Sydney we focus on home purchase affordability for first home buyers. We also examine related indicators, including where key workers live relative to places of employment, the way they travel to work, and where they relocate (move house). Our geographic scale is the Greater Metropolitan Region of Sydney (GMR), which stretches for approximately 150 kilometers north, west, and south of Sydney's CBD.

Housing affordability is a household consideration

Housing affordability – the cost of housing relative to income – must be understood on the basis of household rather than individual incomes (Yates, Randolph et al. 2005). That is because people who form a household usually share their housing and other living expenses. In this report we consider affordability for individual key workers, as well as for couple households in which a key worker is the primary or highest wage earner.

Whether or not a household has dependant children also affects the amount of money they have available to pay for housing as well as the type of housing they require. Therefore, we also consider housing affordability for single income and dual income key worker households with dependants.

Measuring housing affordability

There are different ways to measure housing affordability. The most common measure used in Australia focuses on housing costs as a proportion of household income. Since housing costs will be a higher burden for lower and moderate income groups, affordability measures should focus both on the total income as well as the amount spent on housing. Therefore in Australia, standard policy metrics define “affordable housing” as housing which costs up to 30 per cent of household incomes across very low, low, and moderate (up to 120 per cent of area median) income bands (Yates, 2016). The incomes of key worker groups in this report fall broadly within this income band.

When very low, low, and moderate income households are paying more than 30 per cent of their income on housing, they are said to be in “housing stress”.

The “30 per cent” rule can be used to test the affordability of rental payments as well as mortgage repayments. However, home purchase affordability is slightly more complex since households need to save a deposit which typically amounts to 20 per cent of the purchase price. Therefore, in examining home purchase affordability in this report we examine both the “deposit gap” – the years needed to save a deposit – as well as mortgage serviceability.

There are limitations to the “30 per cent” affordability measure. For lower income earners, “after housing costs” income might be a more accurate indicator of housing cost burdens. In addition, when households need to travel further as a consequence of needing to move to more affordable areas, lower house prices or rents are often offset by higher transport costs. This is particularly the case where household have to commute by private car (Dodson and Sipe 2008).

It is difficult to measure these after housing and commuting costs in a generalisable way. However, such financial pressures should be considered as part of the wider housing affordability burdens faced by key workers living in major metropolitan regions. In this report we include this analysis by examining where key workers live in Sydney relative to their employment, the ways in which they travel to work, and the extent to which key workers are moving from central employment (and high cost housing) areas to other locations within the GMR.

Data sources

Key sources of information used in this report include the NSW Rent and Sales Report (Sept. Quarter 2016 sales¹, Dec. Quarter 2016 rents) (NSW Government 2016), and current key worker income scales (obtained from the relevant industry awards). We use data from the 2006, 2011, and 2016 Census to examine where key workers in the GMR live and work, how they commute to work and how this has changed over time. We also examine the tenure of their housing and the types of homes in which they live. Finally we examine “residential mobility” – that is, whether key workers have moved in the past ten years, where they have moved from, and where they have moved to.

The study focuses on the whole Sydney GMR, which includes the Sydney metropolitan region and its hinterland, incorporating outer GMR locations including the Illawarra and Newcastle and the Hunter. Two geographic units are used for analysis: the local government area (LGA) (smaller); and, the subregion (larger) (ABS Statistical Area 4 (SA4)). In reporting on local government area level data, LGAs are discussed in terms of their location relative to the central city (i.e. inner, middle or outer ring). These location classifications come from the NSW Rent and Sales Report. We use ‘OGMR’ to refer to outer GMR locations, including Cessnock, Kiama, Lake Macquarie, Maitland, Newcastle, Port Stephens, Shellharbour and Wollongong.

Structure of this report

From this introductory section, the structure of the report is as follows.

- **Section Two examines Sydney’s key worker population**, including where key workers live relative to concentrations of employment, and the extent to which Sydney regions have retained, gained, or lost key worker residents. Section two also reports on key worker commuting patterns.
- **Section Three examines housing affordability for key workers**. It examines home purchase affordability, identifying the localities in which key worker households can afford to purchase a home and how this has changed over time. Purchase affordability is examined both in terms of deposit savings required and borrowing capacity scenarios.

Section Four summarises the findings of this analysis and highlights the social and economic implications of the trend towards declining home purchase affordability for Sydney’s key workers.

Full data tables, additional maps for specific occupation categories and details of the key assumptions used in the analysis are set out in appendices to this report.

¹ Note that these were the latest published figures at the time of analysis. Sydney’s median house prices across all dwellings rose again in the December 2016 quarter.

2. Sydney's key worker population

Snapshot

- Sydney's 156,000 key workers (teachers, nurses, emergency service workers and police) are employed across the GMR, but are more likely to live in middle and outer suburbs.
- This trend is increasing - in general, inner ring suburbs have lost key worker residents in recent years, while outer and greater metropolitan areas have gained key workers.
- Key workers are more likely to commute by private car to work than Sydney's general population. More than three quarters of key workers drive to work compared to only 43.5 per cent of the general workforce. This imposes social and economic costs on key workers and their families.

Sydney's key worker population

There are around 156,000 teachers, nurses, ambulance/paramedic officers, fire and emergency workers and police across Sydney's GMR, amounting to 6 per cent of the region's total workforce (Australian Bureau of Statistics 2017k).

Housing tenure

Australia's key workers have traditionally aspired to, and have achieved home ownership. As shown in Table 1, around 80 per cent of teachers, ambulance officers and paramedics, fire/emergency workers, and police live in their own home, which is higher than the general population (at around 77 per cent). Rates of private renting amongst key workers are slightly lower than for the general working age population, with the exception of registered nurses and enrolled and mothercraft nurses who have slightly higher rates of renting (Table 1) (Australian Bureau of Statistics 2017d)

Between 2011 and 2016 the proportion of the working age population owning a home outright or owning with a mortgage declined (2 per cent), and the proportion that are renting increased (3 per cent). A similar pattern is observed across the key worker groups, with the proportion of private renters also increasing. The greatest increase was amongst registered nurses (almost 5 per cent between 2011 and 2016). However, there was a very small decline in the proportion of ambulance officers and paramedics in the private rental sector between the two census periods, and the proportion of police in the private rental sector remained relatively stable (Australian Bureau of Statistics 2012b and 2017d).²

² The data may reflect the age profile of different key workers as well as where they live, with those living in more affordable outer suburban areas more likely to be homeowners.

Table 1: Housing tenure of key workers compared to general working age population (2016)

	Owned outright	Owned with a mortgage	Rented
Teacher	24.3%	53.0%	20.2%
Registered Nurse	17.3%	46.1%	33.3%
Ambulance Officer and Paramedic	16.1%	58.0%	21.4%
Enrolled and Mothercraft Nurse	18.2%	42.4%	35.7%
Fire and Emergency Worker	17.9%	58.7%	18.5%
Police	13.5%	64.1%	19.7%
General working age population (20-64)	19.2%	37.5%	32.9%

Source: authors, data derived from Australian Bureau of Statistics 2017d (NB: Rows do not sum to 100%)

Lone person key worker households are less likely to own their home and are more likely to rent than key workers generally (Table 2). Nevertheless, rates of home purchasing (owning with a mortgage) are still higher than for the general population, although outright ownership tends to be lower.

Table 2: Housing tenure of lone person key worker households (2016)

	Owned outright	Owned with a mortgage	Rented
Teacher	24.8%	41.1%	30.0%
Registered Nurses	21.1%	34.8%	39.2%
Ambulance Officers and Paramedics	13.3%	47.9%	30.3%
Enrolled and Mothercraft Nurses	20.3%	24.2%	55.3%
Fire and Emergency Workers	20.4%	38.2%	30.1%
Police	10.5%	51.2%	34.0%
Lone person households (20-64)	20.1%	24.5%	48.5%

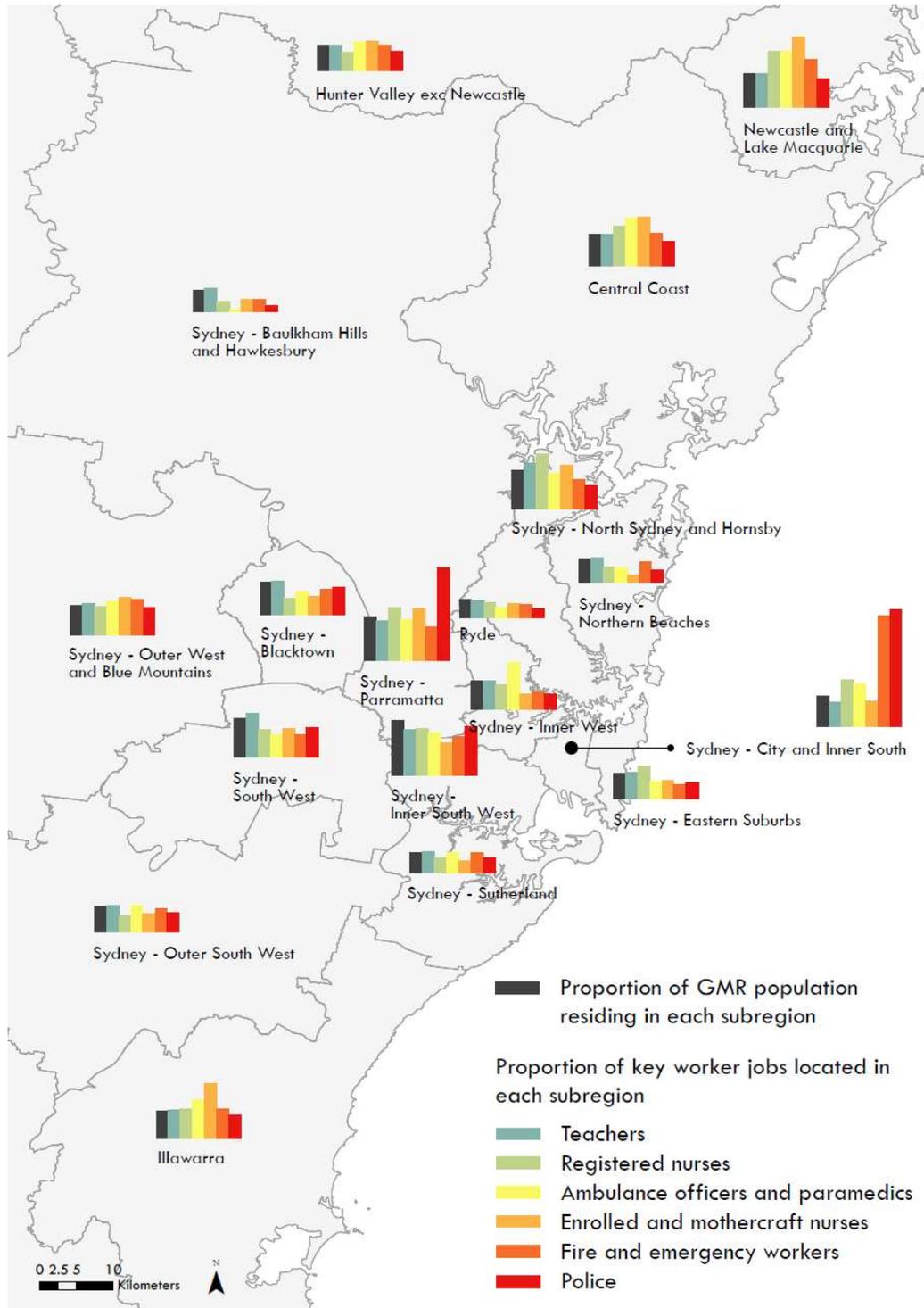
Source: authors, data derived from Australian Bureau of Statistics 2017f (NB: Rows do not add up to 100%)

This data suggests that established key worker households already in home ownership have been insulated from rising house prices. Declining housing affordability is an issue which particularly affects younger, often millennial key worker cohorts in the private rental market.

Where do Sydney's key workers work?

Employment opportunities for key workers are geographically dispersed, but for some professions, jobs are more concentrated in Sydney's major centers. As shown in Figure 3, there are particular concentrations of police and emergency service worker jobs in inner Sydney as well as a high proportion of policing jobs in Parramatta, where there are large influxes of daily workers and visitors. The location of other jobs is more dispersed, generally following settlement patterns.

Figure 3: Proportion of key worker jobs, by profession, located in each subregion (2016)



Source: authors, data derived from Australian Bureau of Statistics 2017

Table 3 shows the spatial distribution of key worker jobs across the GMR, in terms of the numbers of key worker jobs per 1,000 residents.

Table 3: Number of key worker jobs per 1000 residents (2016)

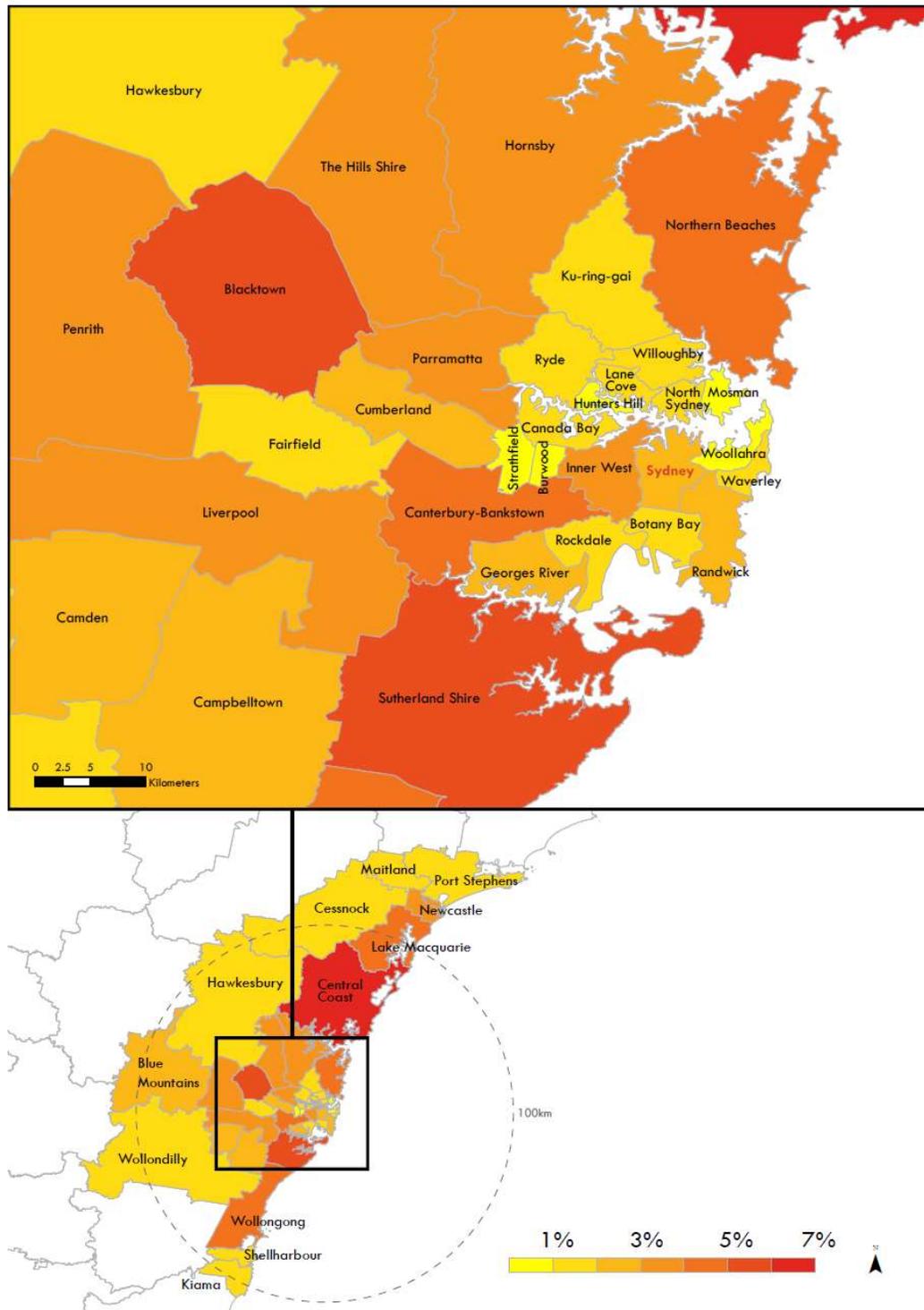
Subregion (SA4)	Teachers	Registered Nurses	Ambulance Officers and Paramedics	Enrolled and Mothercraft Nurses	Fire and Emergency Workers	Police	Total
Central Coast	14.3	10.5	0.6	1.4	0.6	1.5	28.7
Hunter Valley exc Newcastle	14.5	6.3	0.5	1.1	0.6	1.5	24.4
Illawarra	14.3	9.0	0.6	1.8	0.6	1.6	27.8
Newcastle and Lake Macquarie	14.1	13.8	0.7	1.8	0.8	1.6	32.7
Southern Highlands and Shoalhaven	13.4	9.5	0.7	1.6	0.6	1.3	27.2
Sydney - Baulkham Hills and Hawkesbury	15.4	4.1	0.0	0.5	0.3	0.5	20.9
Sydney - Blacktown	14.5	4.1	0.3	0.5	0.4	1.6	21.4
Sydney - City and Inner South	11.2	13.0	0.6	0.7	2.0	7.5	35.0
Sydney - Eastern Suburbs	14.2	10.6	0.3	0.6	0.3	1.2	27.4
Sydney - Inner South West	11.8	7.1	0.3	0.5	0.4	1.7	21.9
Sydney - Inner West	14.1	7.2	0.7	0.5	0.3	1.1	23.8
Sydney - North Sydney and Hornsby	16.5	11.8	0.4	1.0	0.4	1.1	31.3
Sydney - Northern Beaches	14.3	5.2	0.3	0.3	0.5	1.0	21.5
Sydney - Outer South West	14.9	5.4	0.4	0.6	0.5	1.5	23.4
Sydney - Outer West and Blue Mountains	14.7	8.0	0.5	1.1	0.7	1.8	26.7
Sydney - Parramatta	13.1	10.3	0.4	1.1	0.4	4.1	29.4
Sydney - Ryde	14.0	7.3	0.2	0.7	0.4	1.0	23.7
Sydney - South West	16.2	6.1	0.2	0.7	0.3	1.5	24.9
Sydney - Sutherland	14.7	6.3	0.4	0.5	0.5	1.5	23.8

Source: authors, data derived from Australian Bureau of Statistics 2017l and 2017n

Where do Sydney's key workers live?

Figure 4 shows the proportion of key workers that live in each LGA. It shows that Sydney's keyworkers tend to live in outer ring and outer GMR LGAs, and are particularly concentrated in Sutherland, Blacktown and the Central Coast.

Figure 4: key workers residing in LGA as proportion of total GMR key worker population (2016)



Source: authors; data derived from Australian Bureau of Statistics 2017k

To account for differences in the size of LGAs and the distribution of the GMR's population generally, we also examine the distribution of key workers relative to the distribution of the general labour force. We do this by taking the proportion of key workers in each LGA relative to the GMR key worker population and dividing it by the LGA's general workforce as a proportion of the GMR general workforce.

$$= \% \text{ GMR key workers resident in LGA} \div \% \text{ of GMR labour force residing in LGA}$$

This approach allows us to compare the distribution of key workers across the GMR, relative to the distribution of the labour force generally. Based on this formula, a score below 1 indicates that an LGA has a relatively low concentration of resident key workers, meaning that the proportion of key workers residing in that LGA is low relative to the number of workers generally. Conversely, LGAs that scored above 1 have a relatively high concentration of resident key workers. LGAs that score 1 or very close to 1 (i.e. 0.97 to 1.03) are relatively balanced, meaning that the proportion of key workers residing in that LGA generally follows the distribution of the GMR labour force.

The analysis shows that key workers tend to be more concentrated on the metropolitan fringe, with inner and middle ring suburbs predominantly having a low proportion of key workers and the majority of outer ring suburbs and outer GMR locations having a comparatively high concentration (Table 4). This pattern likely reflects housing affordability, but may also relate to factors including where key workers and their partners work.

Table 4: Relative key worker concentration by ring (2016)

Concentration of resident key workers	All LGAs	Inner ring LGAs	Middle ring LGAs	Middle-outer ring LGAs*	Outer ring LGAs	Outer GMR LGAs
Low	23	8	11	1	2	1
Balanced	4	1	0	1	2	0
High	16	0	0	0	9	7

Source: authors; data derived from Australian Bureau of Statistics 2017k

*middle-outer ring LGAs refers to LGAs created in the 2016 council amalgamations from the amalgamation of a middle ring and an outer ring LGA. These include Cumberland and Northern Beaches

Table 5 shows the top five LGAs with comparatively low key worker populations and the top five LGAs with comparatively high key worker populations (using the above measure). Again, the spatial pattern primarily reflects a hollowing out of key worker residents in more affluent inner areas in favour of the outer ring.

Table 5: LGAs with highest and lowest relative concentrations of key workers

Top five most 'unbalanced' LGAs	
Low key worker population	High key worker population
1. City of Sydney	1. Kiama
2. Woollahra	2. Blue Mountains
3. Mosman	3. Camden
4. Fairfield	4. Wollongong
5. Waverley	5. Sutherland

Source: authors; data derived from Australian Bureau of Statistics 2017k

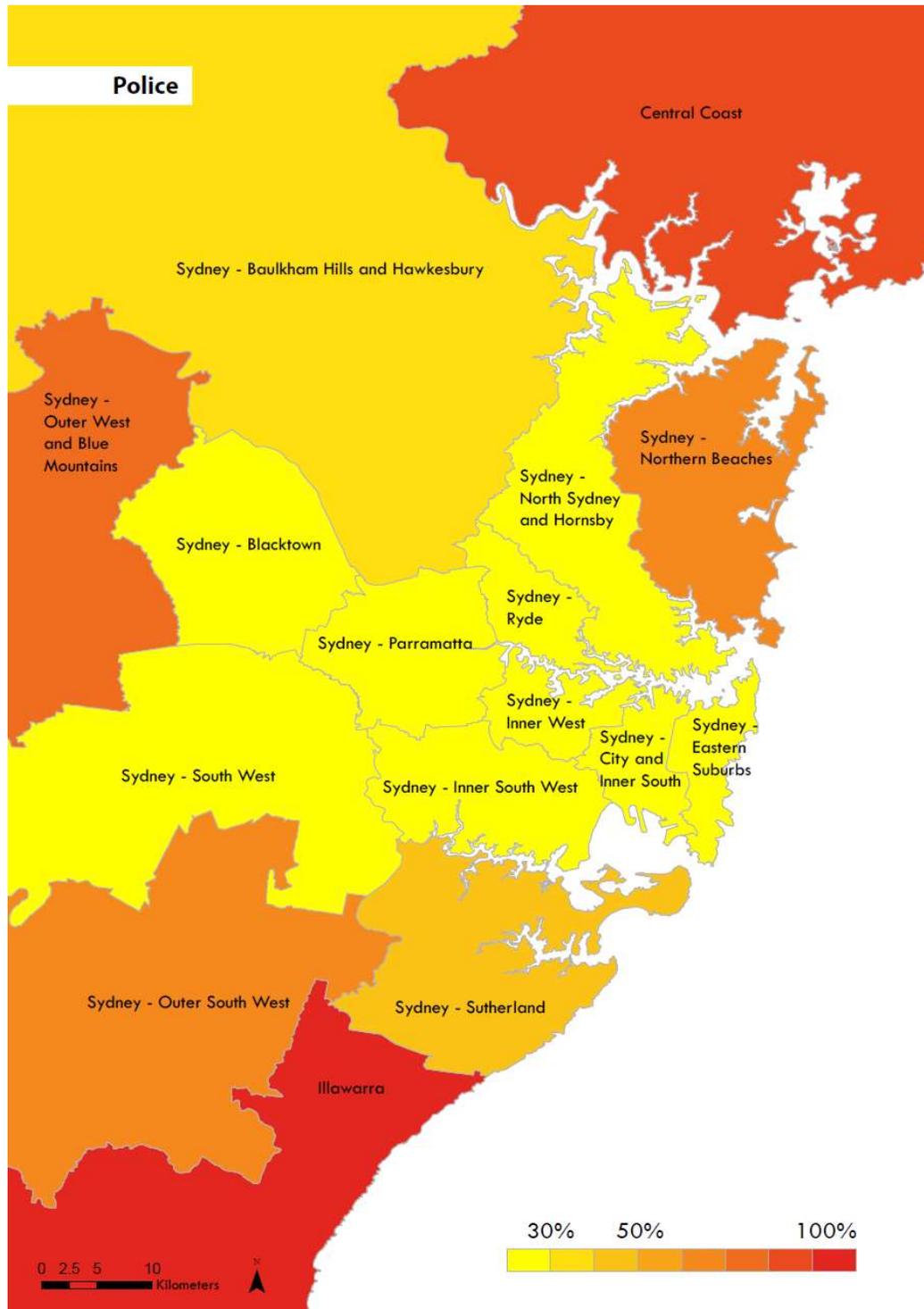
How many key workers live and work in the same subregion?

Employment self containment is a measure of the proportion of people who both live and work within a defined area. Our analysis shows that, for the key worker professions examined, outlying areas of the GMR (Illawarra, Newcastle and Hunter) have the highest level of employment self containment. By contrast, the proportion of key workers both living and working in more expensive inner urban areas is low. For example, while 21 per cent of police jobs are concentrated in inner Sydney and the CBD, only 11 per cent of police officers in the GMR both live and work in that subregion. Moreover, 12 per cent of police officers employed in the CBD and Inner South live in OGMR subregions (Central Coast, Illawarra, Newcastle and Hunter) and a further 34 per cent live in outer subregions, suggesting that many police officers commute over 50 kms, or even over 100km, to work.

Teachers are more evenly dispersed across the GMR, as are their jobs. However, the proportion of teachers both living and working in Inner Sydney and the CBD is just 25 per cent, compared to 50 per cent or more in most outer subregions and OGRM locations. The proportion of long distance commuters is lower amongst teachers working in the CBD and Inner South, but is still significant at 16 per cent.

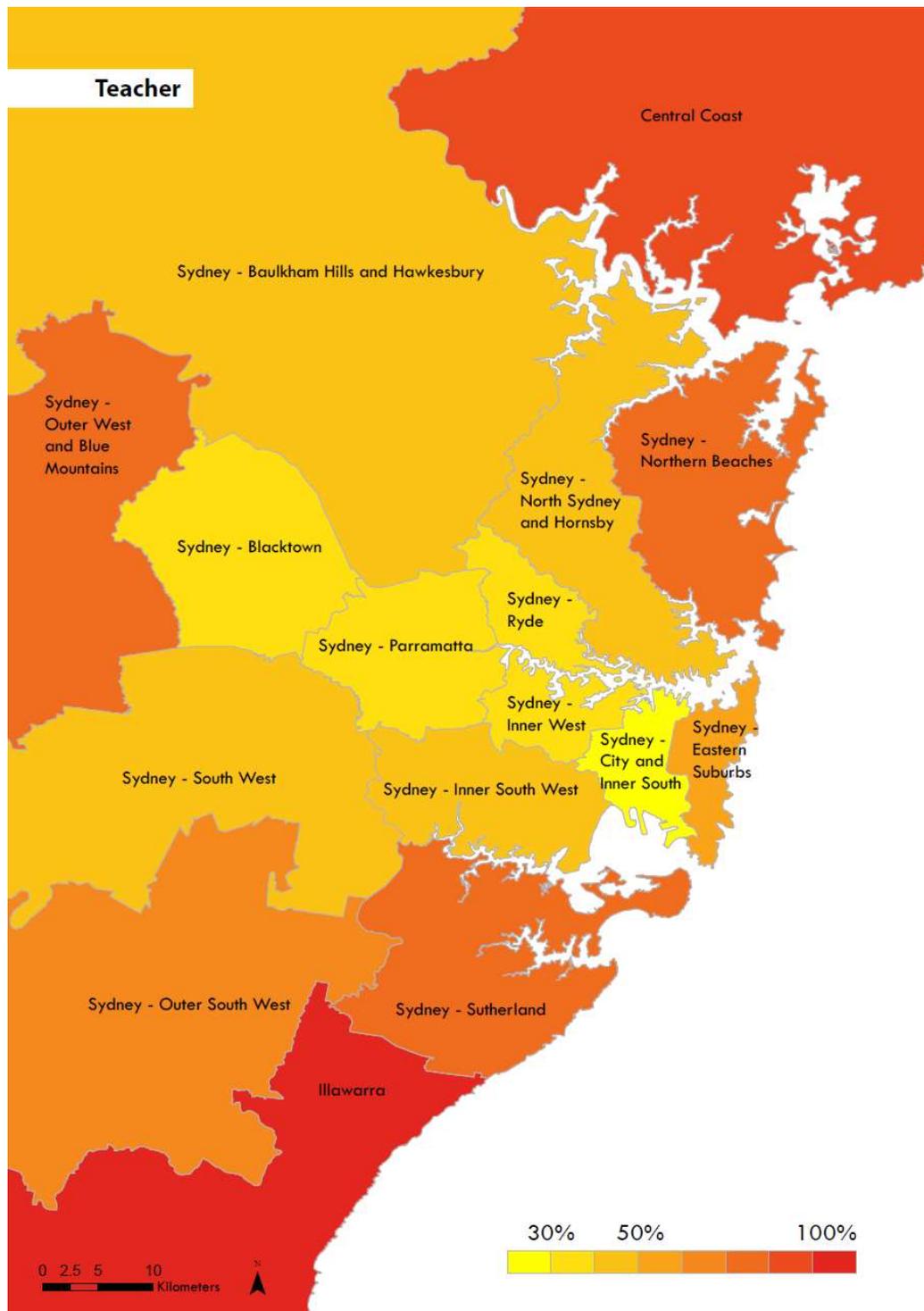
The figures below show the proportion of police and teachers living and working in the same subregion.

Figure 5: Proportion of police who live and work in the same subregion (2016)



Source: authors, data derived from Australian Bureau of Statistics 2017]

Figure 6: Proportion of teachers who live and work in the same subregion (2016)

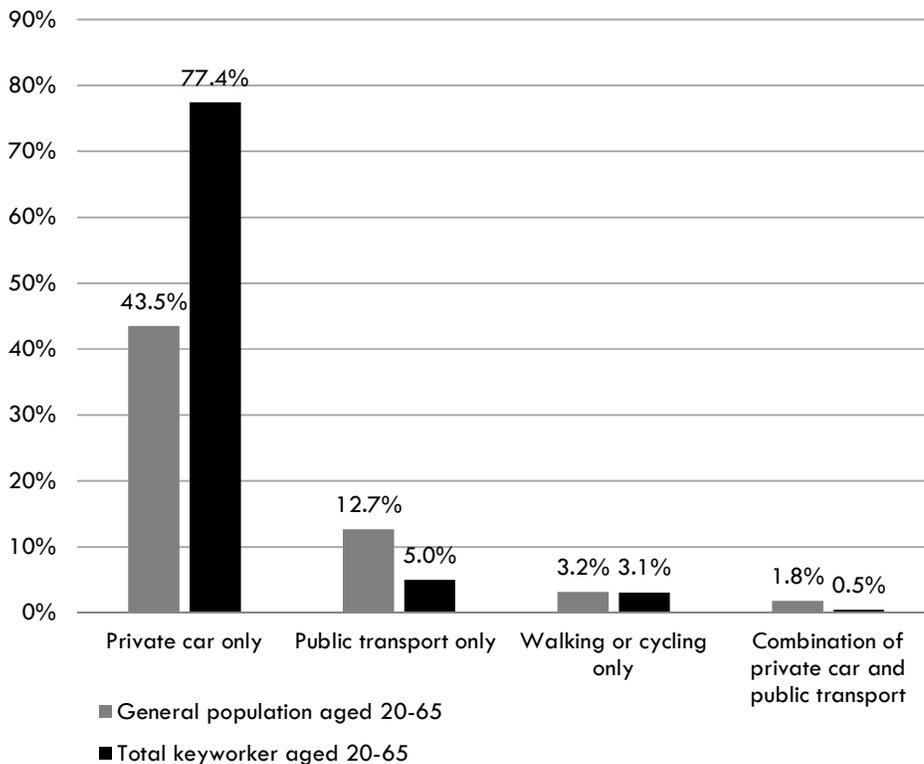


Source: authors, data derived from Australian Bureau of Statistics 2017j

Housing affordability, commuting, and residential mobility

Key workers are more likely than the general population to commute to work by private car, and less likely to use public and active transport modes. Figure 7 shows that on census day (2016) 77.4 per cent of key workers traveled to work by private car compared to only 43.5 per cent of Sydney's workforce. Only 5 per cent of key workers used public transport, which is less than half the rate of the general working population (12.7 per cent). While the proportion of GMR workers who commuted to work by private car remained relatively constant across the 2011 and 2016 censuses, the proportion of key workers commuting by private car increased slightly between 2011 and 2016.

Figure 7: Transport mode used by key workers for journey to work compared to the general workforce



Source: authors, data derived from Australian Bureau of Statistics 2017m

Car based commuting imposes higher costs on key workers, particularly given high or fluctuating petrol prices (Dodson and Sipe 2008). Lengthy commute times are also known to create social pressures for commuters and their families, and are associated with lower rates of workforce participation (Productivity Commission 2014).

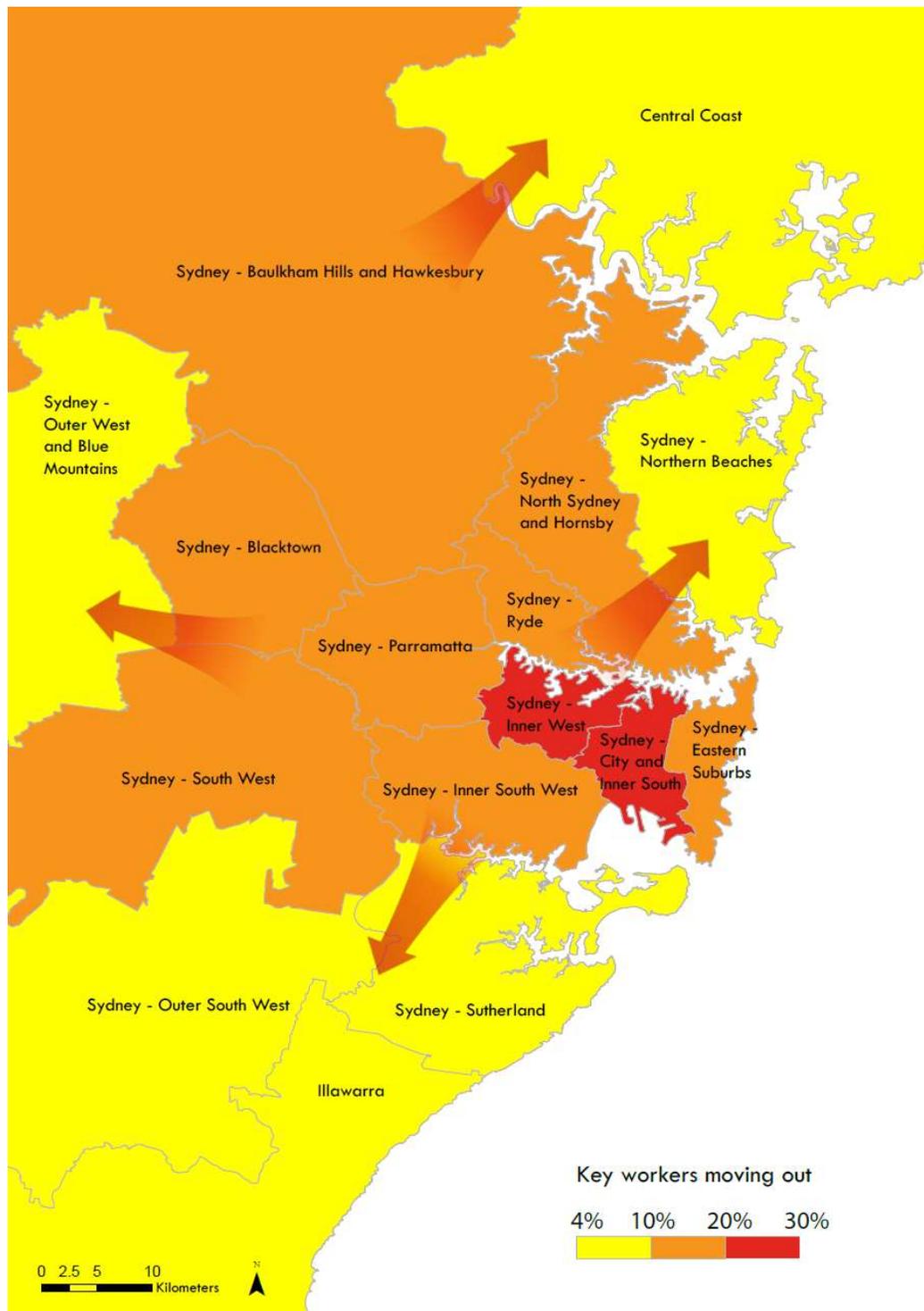
For the many key workers who work in shifts, such as nurses, police, and paramedics, often the car is the only means available to travel to work because of the poor availability of public transport in non-peak times. Many workers may also be 'called in' at short notice to cover shifts or respond to emergency situations. This is more difficult if they live far from their employment due to affordability pressures.

Residential mobility and Sydney's key workers

Housing affordability affects where people choose to live. High housing costs may encourage some households to move to a more affordable location, and people are less likely to relocate to take up new employment opportunities if housing costs appear prohibitive (Productivity Commission 2014).

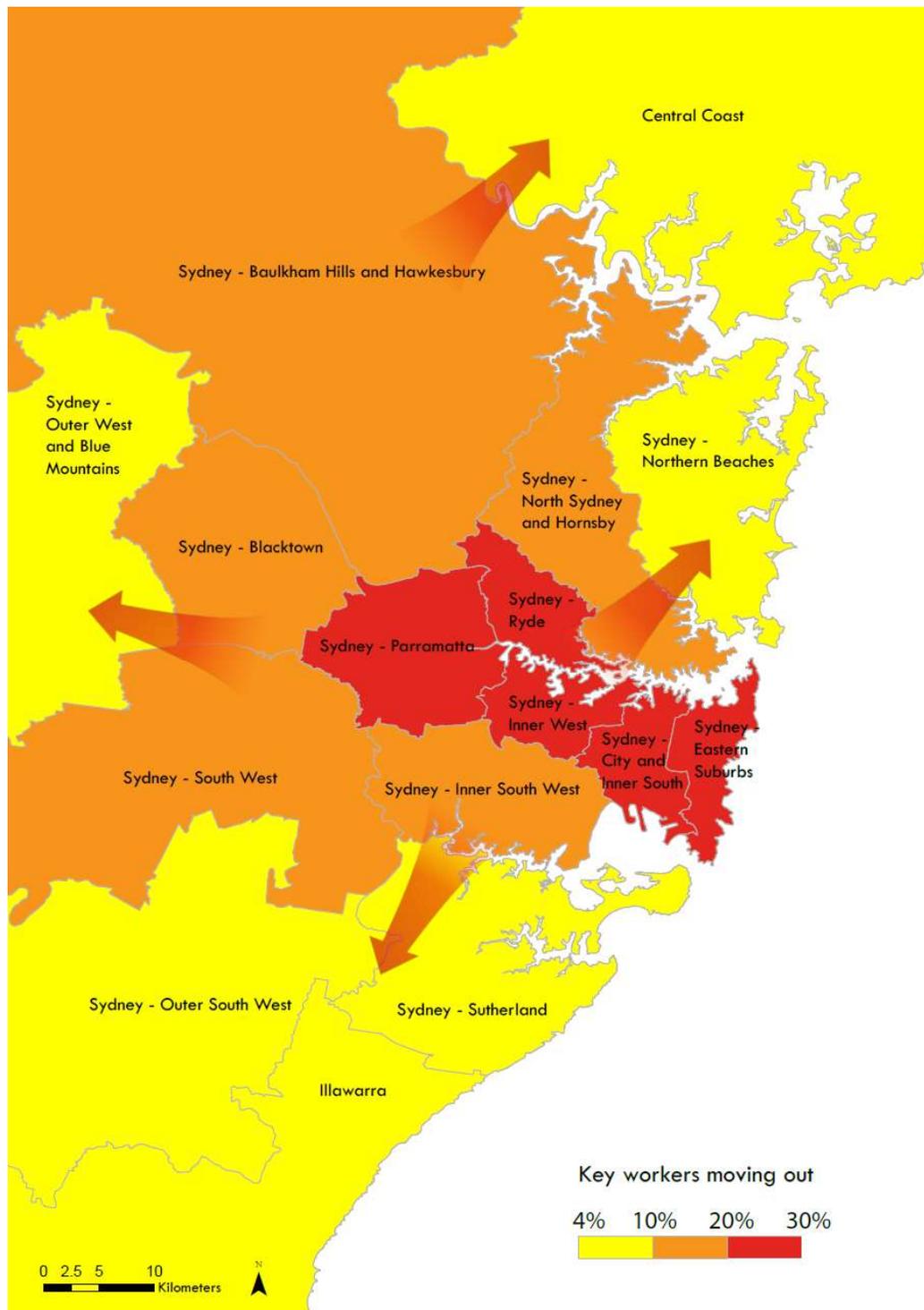
For this study, we examined residential mobility patterns of key workers, to determine whether key worker groups appear to be moving towards or away from employment areas. The analysis shows a trend of key workers moving away from some subregions and towards other parts of the GMR. Between both 2006 and 2011 and 2011 and 2016, the City and Inner South, Eastern Suburbs, Inner West, Parramatta and Ryde subregions saw the largest proportion of key worker residents leave. Key workers who left those inner subregions tended to migrate to neighbouring subregions, with a general trend towards migration further west, north and south (i.e. away from the central city) (Figures 8 and 9).

Figure 8: Percentage of key workers who left subregion between 2006 and 2011 and predominant direction of residential moves



Source: authors, data derived from Australian Bureau of Statistics 2012e

Figure 9: Percentage of key workers who left subregion between 2011 and 2016 and predominant direction of residential moves



Source: authors, data derived from Australian Bureau of Statistics 2017g

We also examined migration patterns in net terms (i.e. the balance of key workers who moved to each subregion relative to the number that left). Overall, between 2006 and 2011, seven subregions experienced a net loss of key workers (Table 6), ranging in scale from a 2 per cent net loss in the South West subregion to a 14 per cent net loss in Parramatta. The Inner South

West, the Inner West, the Eastern Suburbs and Ryde experienced net losses equating to between 7 and 9 per cent of the 2006 key worker population. By contrast, some outer suburban and OGMR locations (i.e. approximately 50 to 150km from Sydney CBD) experienced a net gain in key worker residents between 2006 and 2011. These included the Southern Highlands and Shoalhaven (13 per cent), Hunter Valley (10 per cent), Illawarra (8 per cent), Sydney-Blacktown (6 per cent) and Newcastle and Lake Macquarie (6 per cent). These trends generally continued in the period 2011 to 2016, with the Eastern Suburbs, Parramatta, Ryde, Inner South West and Inner West experiencing the largest net losses of key workers, ranging in scale from net losses of 4 to over 6 per cent of key workers. Likewise, the Outer South West, Outer West and Blue Mountains and the OGMR subregions experienced net gains.

In cumulative terms, over the 10 years from 2006 to 2016, the largest net loss of key workers was from Parramatta (21.4 per cent), Eastern Suburbs (15.2 per cent), Inner South West (14.6 per cent), Ryde (14.2 per cent) and Inner West (11.3 per cent), while the largest net gains (exceeding 10 percent of the 2006 population) were in the Shoalhaven and Southern Highlands, the Hunter Valley and the Illawarra (Table 6). In the 2006-2016 period, the City and Inner South subregion saw a significant proportion of key workers leave, but also a significant proportion move into the subregion, suggesting that while the subregion is relatively balanced in terms of net gains and losses, there is high turnover of key workers residing in the subregion.

Table 6: Key worker population change from 2006 to 2011 and 2006 to 2016, by subregion

Sub region	Key worker Population in 2006	Net gain or loss during 5 years to 2011	Net gain or loss during 10 years to 2016
Central Coast	8598	2.0%	5.6%
Hunter Valley exc Newcastle	5150	10.3%	13.6%
Illawarra	8720	8.2%	10.5%
Newcastle and Lake Macquarie	10301	5.5%	6.2%
Southern Highlands and Shoalhaven	3304	13.2%	17.0%
Sydney - Baulkham Hills and Hawkesbury	6537	0.6%	0.1%
Sydney – Blacktown	6309	6.2%	8.4%
Sydney - City and Inner South	4131	0.3%	-1.8%
Sydney - Eastern Suburbs	4774	-8.8%	-15.2%
Sydney - Inner South West	9578	-7.9%	-14.6%
Sydney - Inner West	5723	-7.4%	-11.3%
Sydney - North Sydney and Hornsby	8039	0.9%	-1.8%
Sydney - Northern Beaches	5655	4.5%	8.0%
Sydney - Outer South West	6420	3.0%	8.6%
Sydney - Outer West and Blue Mountains	9109	1.0%	4.8%
Sydney – Parramatta	7249	-14.3%	-21.4%
Sydney – Ryde	3899	-8.4%	-14.2%
Sydney - South West	5749	-2.2%	0.6%
Sydney – Sutherland	7677	-4.8%	-2.7%

Source: authors, data derived from Australian Bureau of Statistics 2012e and 2017g

Overall these trends suggest that housing affordability pressures are “pushing out” Sydney’s key workers from the city’s inner and middle ring subregions. The next section focuses on these pressures and the growing barriers to home ownership faced by younger teachers, nurses, ambulance officers and paramedics, firefighters and emergency workers and police.

3. Key worker housing affordability analysis

Snapshot

- Home ownership affordability declined significantly between 2006-2016 for key workers seeking to make their first purchase. In 2006 more than 20 LGAs in the GMR were affordable to a Senior Constable. By 2016, that number had diminished to four.
- A dual income key worker household would need to save for more than 5 years to accumulate a deposit for a median priced dwelling in the middle ring suburb of Canterbury, up from 3 years in 2006.
- Affordability barriers increase as key workers progress through their life stages. A key worker couple household would be able to purchase a property priced at up to \$822,760, but this falls to \$650,890 if the couple has two dependants (which reduces their mortgage servicing capacity).
- A shortage of affordable rental housing across the GMR exacerbates the “deposit gap” facing key worker households seeking to enter home ownership. An enrolled nurse seeking to rent a one bedroom apartment would need to move to Sydney’s outer suburbs to find an affordable rental property.

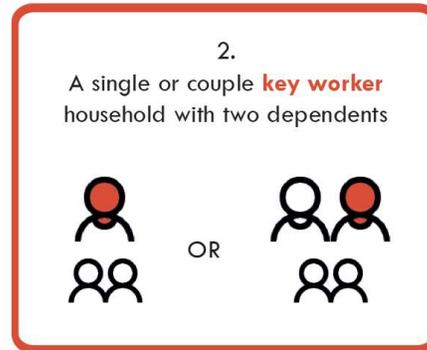
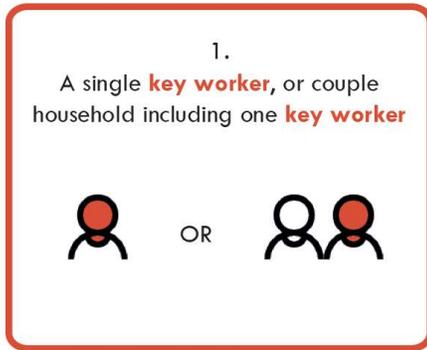
Measuring key worker housing affordability in Sydney

This section of the report examines home purchase affordability for key workers in LGAs across the GMR. It uses different household income and housing need scenarios linked to indicative key worker salary scales as a basis for assessing affordability, including borrowing capacity.

The household scenarios used for this analysis are shown in Figure 10. They include:

- A single income key worker household;
- A dual income/ couple household, where the key worker is the highest income earner
- A single income key worker household with two dependents
- A dual income/ couple key worker household, with two dependents.

Figure 10: Household scenarios used for affordability analysis



We use standard key worker income award data, focusing on mid level keyworkers (approximately five years post graduation). Affordable home purchase prices are calculated with reference to lending criteria (which includes a standard interest rate buffer) and assumes a 20 per cent deposit. Using this approach, Table 7 shows the affordable home purchase prices for single income key worker households across the professional groups in this study. It also includes an indicative key worker median income, and affordable rent and home purchase price.

As shown, a single teacher (mid level graduate) would be able to afford a home purchase price of \$554,560; while an enrolled nurse (five years' experience) can only afford to pay up to \$321,550 to purchase a home. Across our sample of key workers, the median affordable home purchase threshold is \$492,940.

Note that that the affordable purchase price (\$492,940) is less than 50 per cent of the median purchase price in inner ring suburbs (in Sept Q. 2016) and less than 60 per cent of the median purchase price in middle ring suburbs.

Rental affordability is also an important measure for this study because high rents make it difficult for key workers to save the deposit needed to qualify for a home loan. To determine rental affordability, annual income award data is converted to a weekly gross income. The 30 per cent benchmark is used as a threshold measure of rental affordability.

Table 7: Affordable home purchase and rental thresholds for single key workers

	Annual income (\$)	Weekly income (\$)	Affordable home purchase price (\$)	Affordable weekly rent (i.e. 30 per cent weekly income) (\$)
Teacher (mid level graduate)	86,570	1665	554,560	499
Senior Fire Fighter	83,654	1609	531,570	483
Constable (Level 5)	73,651	1416	452,710	425
Senior Constable (Level 6)	98,413	1893	641,750	568
Enrolled Nurse (Year 5)	57,013	1096	321,550	329
Registered Nurse (Year 5)	72,764	1399	445,720	420
Ambulance - Paramedic Specialist	79,997	1538	502,750	462
Key workers (median)	78,866	1517	492,940	455

Source: authors

Table 8 shows the affordable price points and rents for couple households where the primary income earner is a key worker, and the secondary income earner earns \$50,000 per year. As shown, the borrowing capacity of a household is significantly reduced if they have dependant children, meaning that key workers face additional affordability constraints as they move through their life stages. Affordability pressures are further exacerbated by the fact that key workers with children would generally require a larger home than couple only households.

Across the income groups, a median dual income key worker household with two children could afford to purchase a home priced at up to \$650,890, while a dual income couple only household would potentially be able to purchase a home priced at up to \$822,760.

Table 8: Affordable home purchase and rental thresholds for dual income households (with non-key worker earning \$50,000 per annum)

	Annual income (\$)	Weekly income (\$)	Affordable home purchase price (no dependants)	Affordable home purchase price (two dependants)	Affordable weekly rent (i.e. 30 per cent weekly income) (\$)
Teacher (mid level graduate)	136,570	2626	884,380	712,500	788
Senior Fire Fighter	133,654	2570	861,390	689,500	771
Constable (Level 5)	123,651	2378	782,530	610,660	713
Senior Constable (Level 6)	148,413	2854	971,570	799,690	856
Enrolled Nurse (Year 5)	107,013	2058	651,370	479,490	617
Registered Nurse (Year 5)	122,764	2361	775,540	603,670	708
Ambulance - Paramedic Specialist	129,997	2500	832,560	660,690	750
Key workers (median)	128,866	2478	822,760	650,890	743

Source: authors

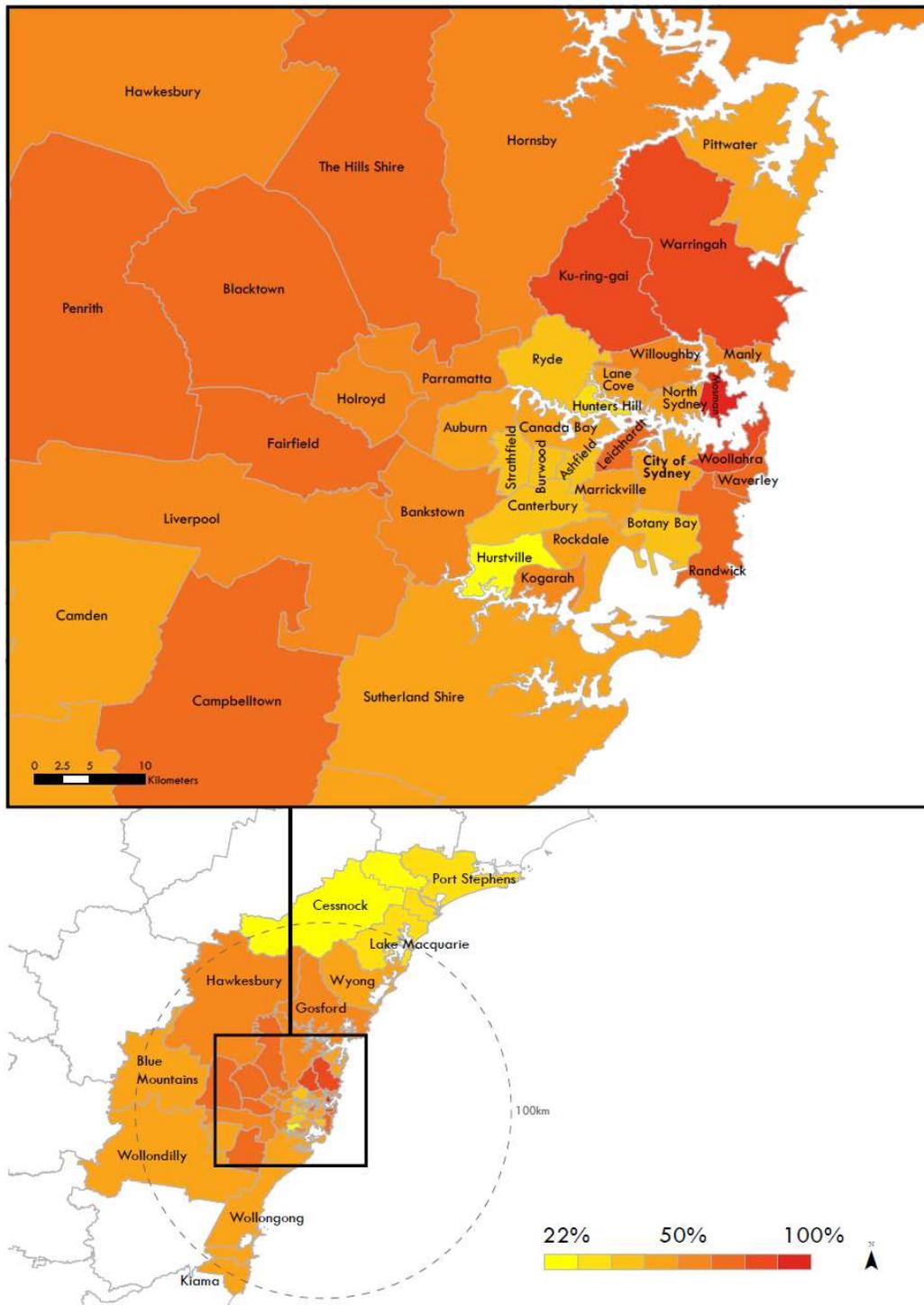
Home Purchase Affordability

In this section of the report, we consider home purchase affordability for key workers in a number of different ways. First, we examine the general housing market trends in Sydney to understand how home purchase affordability for aspiring first home buyers has declined over the past decade. We then examine house prices across the GMR and the number of years that it would take for key worker households to save for a deposit, assuming they are able to save 20 per cent of their income per year. We also consider home purchase price affordability in relation to maximum borrowing amounts, based on standard lending criteria and a 20 per cent deposit.

Changing home purchase affordability in Sydney

Sydney's housing market has recorded significant price inflation over the past decade. Median sale prices have nearly doubled in some areas of the GMR in the past five years alone (e.g. Mosman, Warringah, Woollahra and Ku-ring-gai) (Figure 11). Importantly, some of the steepest price rises have been recorded in middle and outer ring areas of the city, which were once considered to be more affordable locations. These include Blacktown, Campbelltown and Penrith, all of which recorded a 75 to 77 per cent increase in median dwelling prices between 2011 and 2016, and have sustained high prices since this time.

Figure 11: Change in median sale price (all dwellings) 2011-2016, by LGA



Source: authors; median house price data derived from NSW Rent and Sales Report No. 94 and No.118 (NSW Government 2011 and 2016)

Existing home owners have been insulated from these price rises. However, for younger households and those trying to enter home ownership for the first time, home purchase options have become increasingly constrained. The affordability ratio is the number of years of median household income needed to afford a median priced dwelling. In international terms, a ratio of five or below is usually considered an indicator of affordability. Nationwide, Australia's affordability ratio is between 6-8 (Gurran, Gallent et al. 2016).

Table 9 outlines the changing affordability ratio of locations across the GMR over the past decade. Historic median house prices were derived from the NSW Rent and Sales Report. Historic key worker incomes were estimated using an assumption that they have increased 2.5 per cent per annum since 2006.

As the table shows, the median house price to income ratio for key workers exceeded five in most of the GMR even in 2006. However, the situation has become considerably worse in recent years. By 2016, the median key worker affordability ratio had risen to beyond 6 in all areas of the GMR, and even Sydney's outer ring exceeded 8 by this time.

Particularly apparent is the decline in affordability of some middle and many outer ring suburbs between 2006 and 2016. In 2006, the median price to key worker median income was close to 5 in suburbs such as Canterbury, Parramatta, Blacktown, Liverpool and Penrith, but in 2016 had risen to above 8 in all of those suburbs.

Table 9: Housing affordability ratio (based on median house price and median key worker income)

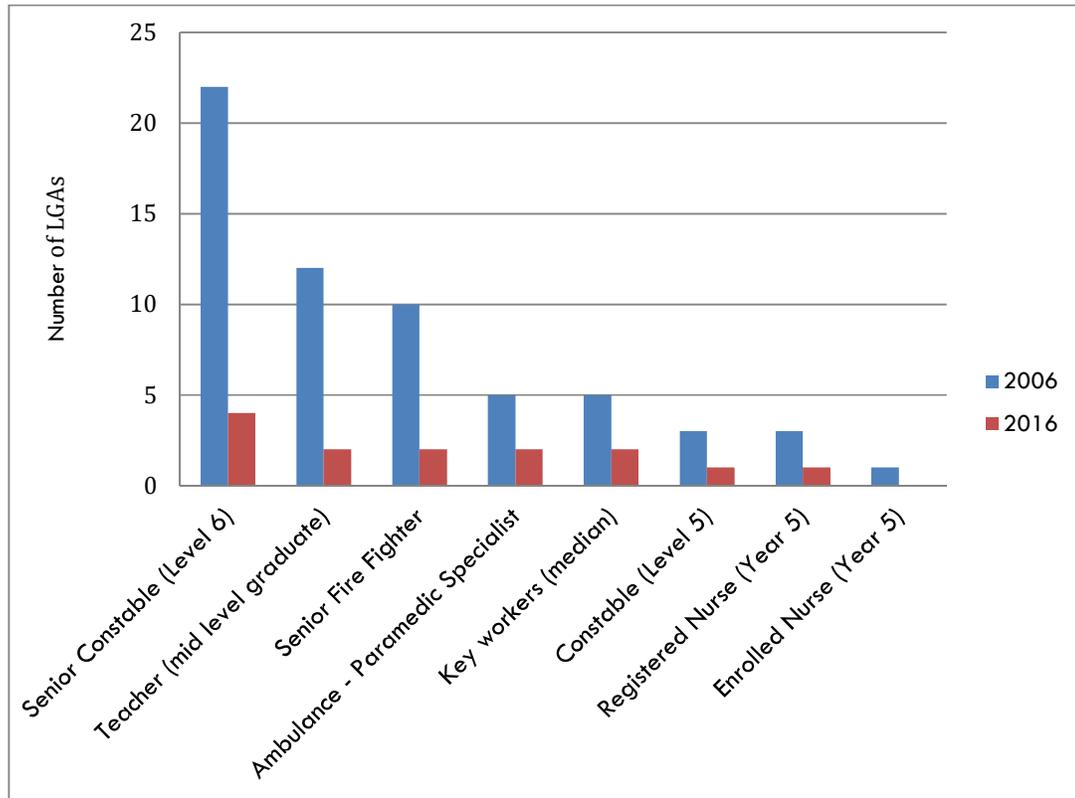
Locality	Median purchase price, all dwellings (Sept. Quarter 2016) (\$)	Affordability ratio 2016 (:1)	Median purchase price, all dwellings (Sept. Quarter 2011) (\$)	Affordability ratio 2011 (:1)	Median purchase price, all dwellings, (Sept. Quarter 2006) (\$)	Affordability ratio 2006 (:1)
Inner ring suburbs	1,042,000	13.2	665,000	9.5	520,000	8.4
Middle ring suburbs	840,000	10.7	530,000	7.6	430,000	7.0
Outer ring suburbs	685,000	8.7	422,000	6.1	369,000	6.0
OGMR	500,000	6.3	365,000	5.2	312,000	5.1

Source: authors; median house price data derived from NSW Rent and Sales Report No.78, No. 94 and No.118 (NSW Government 2006, 2011 and 2016)

Income variations between key worker professions in our study means that higher earning key workers have greater purchasing power. Figure 12 examines this variability, using the international affordability ratio benchmark of 5:1 as a basis for examining declining affordability by key worker professional group over the decade 2006-2016.

This analysis shows that between 2006 and 2016 affordability declined most significantly for the higher income earning police and teachers. In 2006, a senior constable could find relatively affordable home purchase options in over 20 LGAs across Sydney, but by 2016, the number had declined to four.

Figure 12: Number of LGAs with median house price to median key worker income ratio of 5:1 or less, 2006 -2016



Source: authors; house price median derived from Rent and Sales Report No. 78 and No.118 (NSW Government 2006 and 2016)

Deposit Gap

A more precise analysis of home purchase affordability estimates the number of years needed to save a 20 per cent deposit for a median priced home. This measure reflects the fact that for many aspiring first home buyers, saving for a deposit is the key barrier to home ownership.

For this analysis we assume that the household is able to save 20 per cent of their income per annum towards a deposit. Of course this is an optimistic scenario if the household is also paying high rent in the private rental market. The estimates are intended to be indicative for single years, and are based on the key worker's income and the median dwelling price for that year. We have not made any assumptions about change in income (through career progression) or median dwelling prices over the period it would take to save for the deposit, or about potential interest accrued on savings over the same period. In reality, house price growth in recent years has generally exceeded income growth, meaning that real saving periods may be longer or that a 20 per cent deposit is unattainable.

The analysis shows that the notional number of years required to save for a 20 per cent deposit on a median priced home increased significantly across LGAs between 2006 and 2016 (even when assuming per annum growth in key worker and partner incomes). As shown in Table 10, single income key worker households have long faced barriers to home ownership, needing over five years to save for a deposit on a median priced dwelling in Sydney's outer ring in 2006. By 2016, this had risen to more than eight and a half years (Table 10).

Table 10: Number of years to save for a 20 per cent deposit on a median priced dwelling, single key worker on median income, 2006 and 2016

	2006		2016	
	Median sale price (all dwellings)	Years to save for 20% deposit	Median sale price (all dwellings)	Years to save for 20% deposit
Inner	520,000	8.4	1,042,000	13.2
Middle	430,000	7.0	840,000	10.7
Outer	369,000	6.0	685,000	8.7
OGMR	312,000	5.1	500,000	6.3

Source: authors; median sale prices derived from NSW Rent and Sales Report No. 78 and No. 118 (NSW Government 2006 and 2016)

Dual income key worker households would also need to save for an extended period of time in order to accumulate a 20 per cent deposit for a median priced dwelling across most of Sydney (Table 11). Note that this analysis does not account for other variations which affect householder capacity to save, such as travel costs or dependant children.

Table 11: Number of years to save for a 20 per cent deposit on a median priced dwelling, dual income household with one key worker on median key worker income and other earning \$50,000 per annum, 2006 and 2016

	2006		2016	
	Median sale price (all dwellings)	Years to save for 20% deposit	Median sale price (all dwellings)	Years to save for 20% deposit *
Inner	520,000	5.2	1,042,000	8.1
Middle	430,000	4.3	840,000	6.5
Outer	369,000	3.7	685,000	5.3
OGMR	312,000	3.1	500,000	3.9

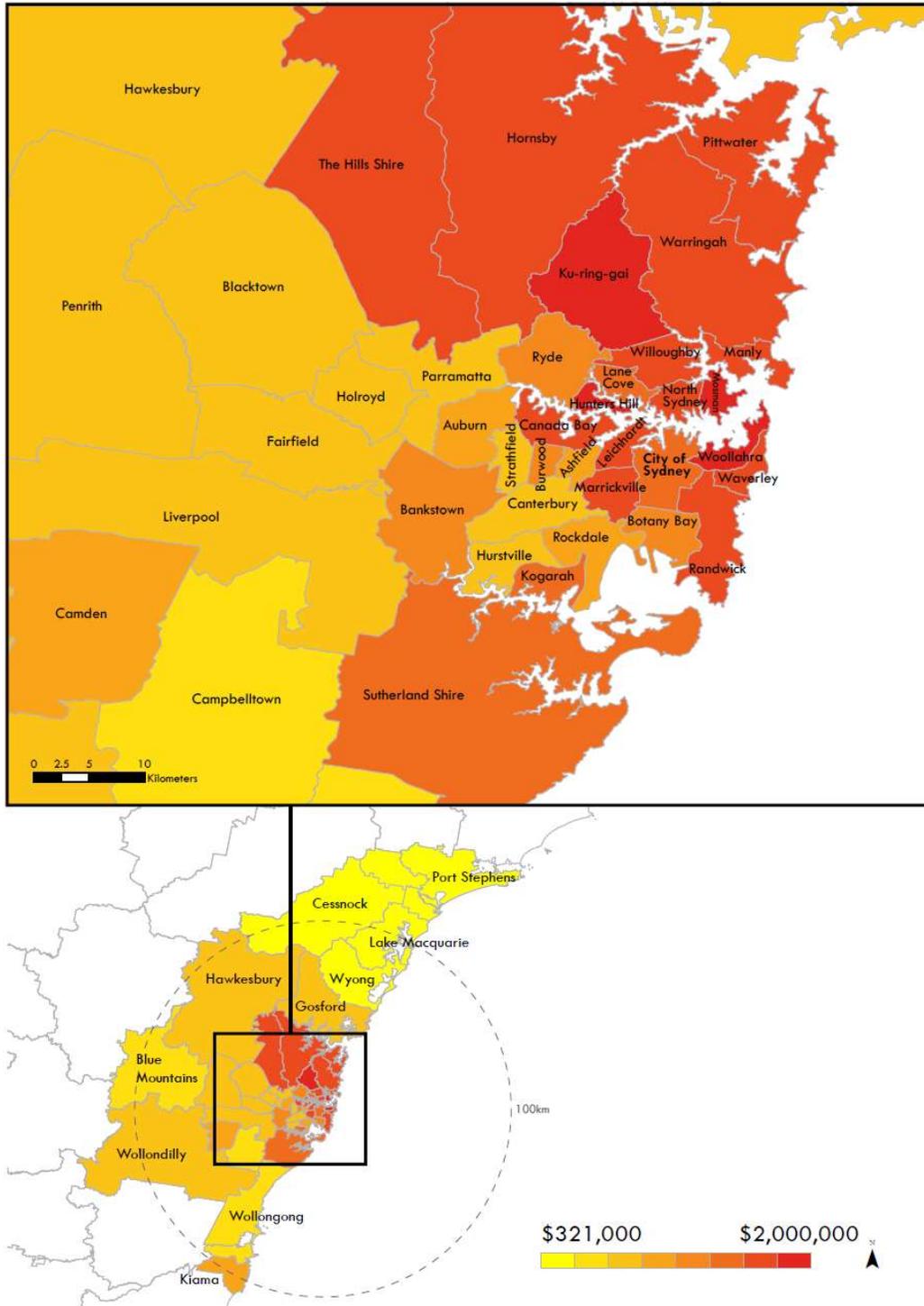
Source: authors; median sale prices derived from NSW Rent and Sales Report No. 78 and No. 118 (NSW Government 2006 and 2016)

* notional partner income was also adjusted backwards from the 2016 assumption of \$50,000 per annum. Consistent with our estimate of historic key worker incomes, we assume that the second income earner's income has increased at 2.5 per cent per annum.

Where key workers can afford to purchase

Figure 13 shows the spatial distribution of median house prices in Sydney (across all dwelling types). In the following analyses, we examine which locations different key workers could afford to purchase in, according to the household income scenarios.

Figure 13: Median sale price, by LGA (all dwellings) 2016



Source: authors; median price data derived from NSW Rent and Sales Report No.118 (NSW Government 2016)

To examine where key workers can afford to purchase, we use the affordable price thresholds for mortgage eligibility outlined in Table 8, and assume that the household has saved 20 per cent of the purchase price.

As shown in Table 12, a single key worker would struggle to purchase a median priced home in most Sydney suburbs, with only one suburb in the outer ring (Wyong) having an affordable median purchase price and only four suburbs in the OGMR having an affordable median purchase price (Port Stephens, Lake Macquarie, Maitland and Cessnock).

An enrolled nurse (the lowest income earning key worker in our sample, earning approximately \$57,000 p.a.) would only be able to purchase a median priced home in Cessnock. As shown in the diagram below, a mid level graduate teacher (earning approximately \$86,500 p.a.) would be unable to purchase a median priced property across most of metropolitan Sydney. Our analysis shows that no inner or middle ring LGAs have a median affordable purchase price, while only one outer ring LGA (Wyong) is affordable.

Table 12: Number of affordable LGAs by ring - single key worker, median priced dwelling

	Number of LGAs	Number of LGAs affordable to:						
		Teacher (mid level graduate)	Senior Firefighter	Constable (Level 5)	Senior Constable (Level 6)	Enrolled Nurse (Year 5)	Registered Nurse (Year 5)	Ambulance - Paramedic Specialist
Inner	11	0	0	0	0	0	0	0
Middle	15	0	0	0	0	0	0	0
Outer	17	1	1	0	5	0	0	1
OGMR	8	6	5	2	7	1	2	6

Source: authors; median price data derived from NSW Rent and Sales Report No.118 (NSW Government 2016)

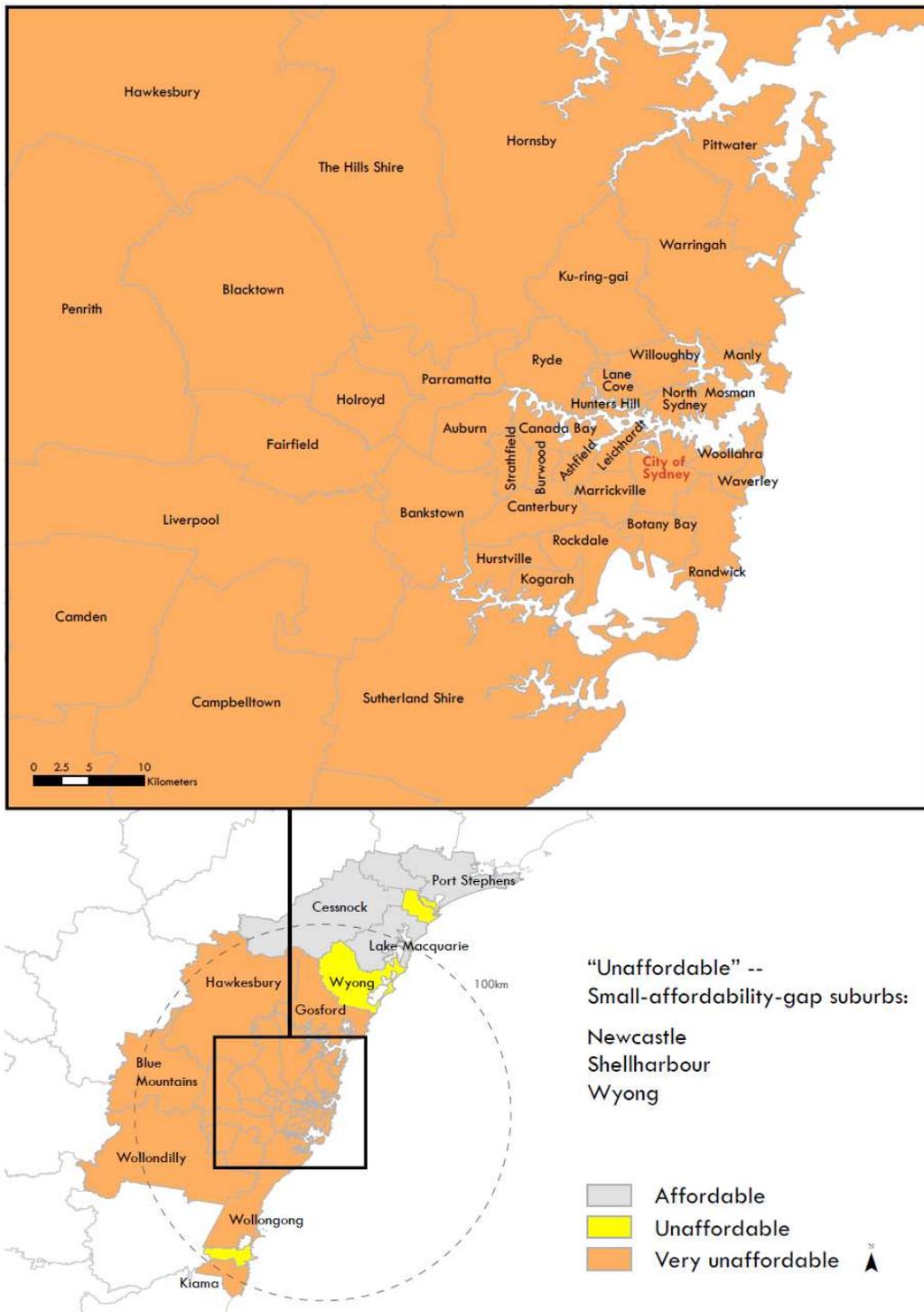
Figure 14: Affordable locations for a single teacher looking for a median priced home



In Figure 15 we extend our analysis to distinguish areas as “affordable” if they fall within or below the price threshold; “unaffordable” if the median house prices exceeds the affordable price by up to \$50,000, and “very unaffordable” if it exceeds the affordability threshold by more than \$50,000.

Using this approach, the spatial distribution of “affordable” and “unaffordable” locations for single key workers overall is shown in Figure 15. Note that for this analysis we do not consider dwelling size. A household requiring a smaller property might be able to access more areas where a property could be attained at below the median price. Conversely, a larger household requiring a larger family home could have trouble purchasing in some LGAs even the median price is affordable.

Figure 15: Affordability of median priced dwelling, single key worker



Source: authors; median price data derived from NSW Rent and Sales Report No.118 (NSW Government 2016)

Affordability is improved for dual income key worker households. However, inner urban and some middle ring suburbs remain out of reach, and the situation is worse for couples with dependents.

As shown in the diagram below, a couple including one senior constable (Level 6) (with a household income of over \$140,000) with two dependants, would be able to afford a median priced property in only one inner ring LGA (Ashfield), 40 per cent of middle ring LGAs and 71 per cent of outer ring LGAs.

Figure 16: Affordable locations for a dual income household including one senior constable with two dependants, looking for a median priced home

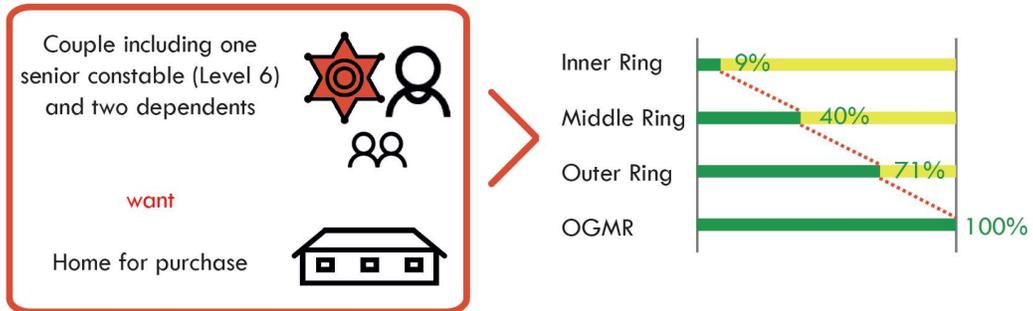
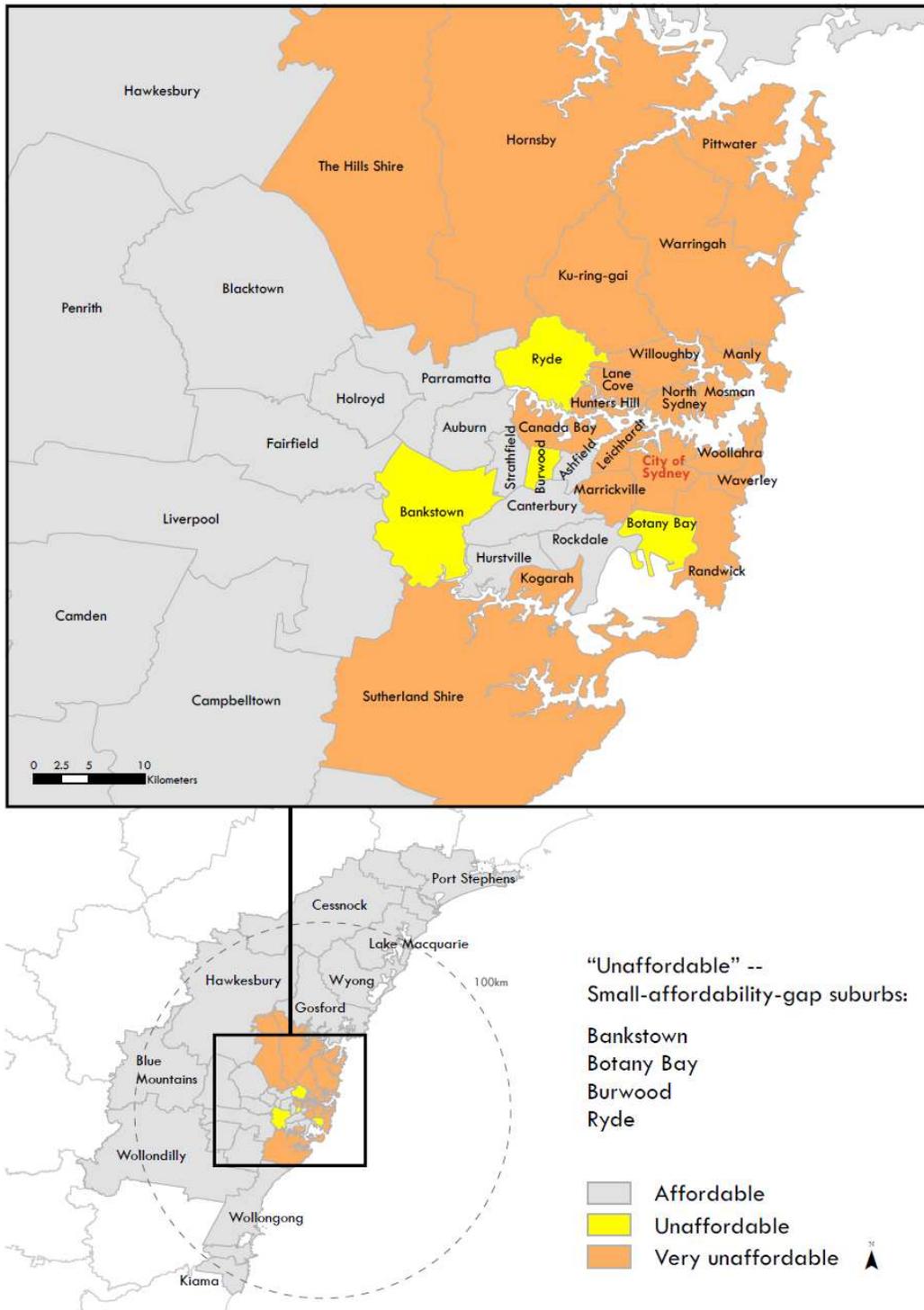
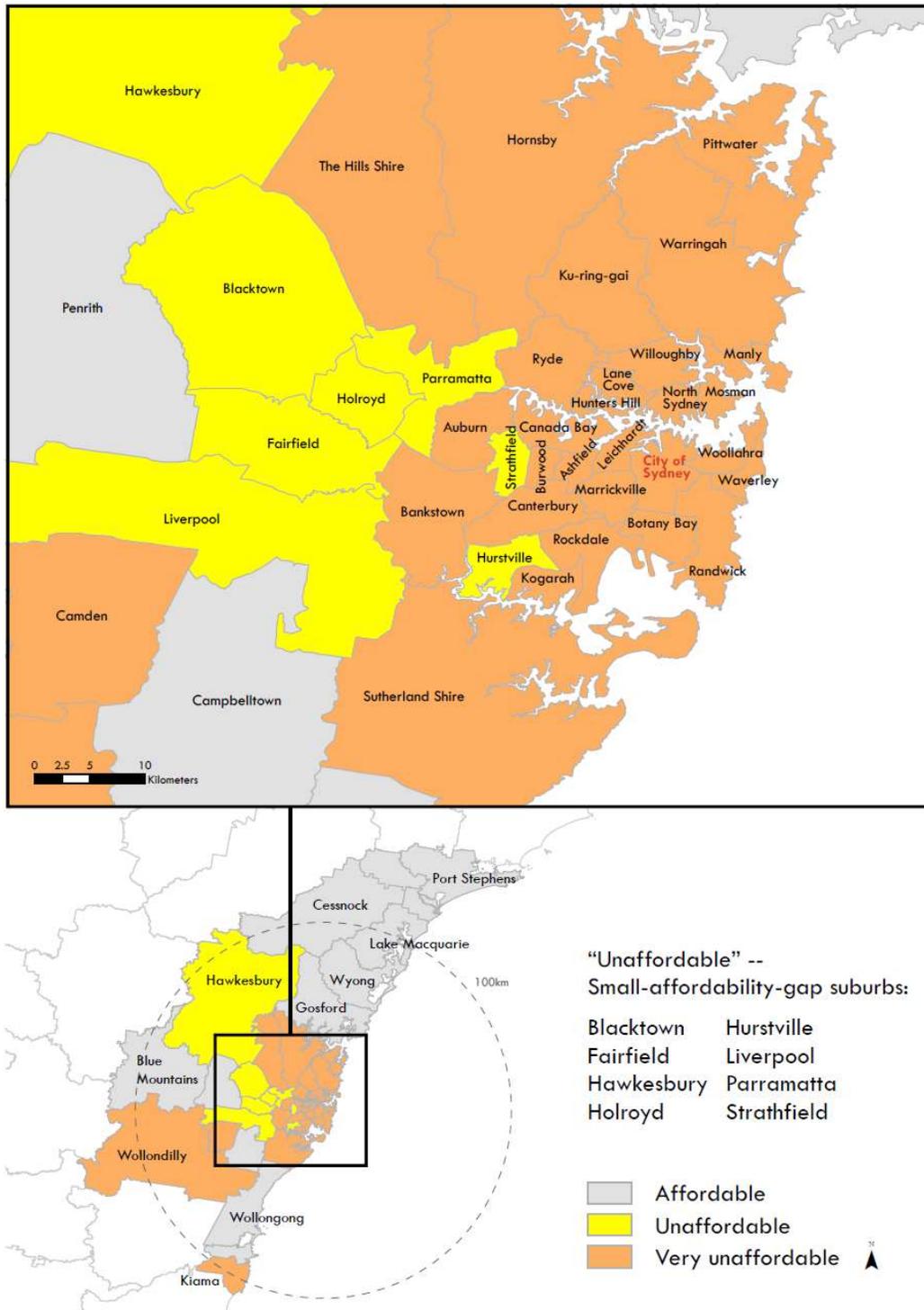


Figure 17: Affordability of median priced dwelling, couple household with no dependants



Source: authors; median price data derived from NSW Rent and Sales Report No.118 (NSW Government 2016)

Figure 18: Affordability of median priced dwelling, couple household with two dependants



Source: authors; median price data derived from NSW Rent and Sales Report No.118 (NSW Government 2016)

Rental affordability and home purchase

There is an important relationship between rental and home purchase affordability. When households are paying 30 per cent or more of their income on rent, their capacity to save for a deposit and enter home ownership is very limited. Further, when moderate income households are unable to afford home purchase, they increase demand for rental housing, putting further pressure on the availability of affordable rental properties across the market.

Rental affordability varies for different key worker household groups and across the GMR. For most key worker groups, median priced rental housing is affordable in outer and in some middle ring suburbs, but there is low affordability for single income key worker households. Both single and dual income key worker households with dependant children also experience affordability constraints in the rental market.

To examine rental affordability, we assume that a single income and dual income key worker household without children is seeking a one bedroom rental property. For key worker households with dependent children (both single and dual income), our scenario assumes that a three bedroom property is required.

Single key workers

Single income key worker households have limited choices within 10 kilometers of the CBD but this improves in middle and outer ring areas. As shown in Figure 19, an enrolled nurse with five years of experience (income of approximately \$57,000), requiring a one bedroom rental property, would be able to afford a median priced property in only 9 per cent of middle ring suburbs and in no inner ring suburbs.

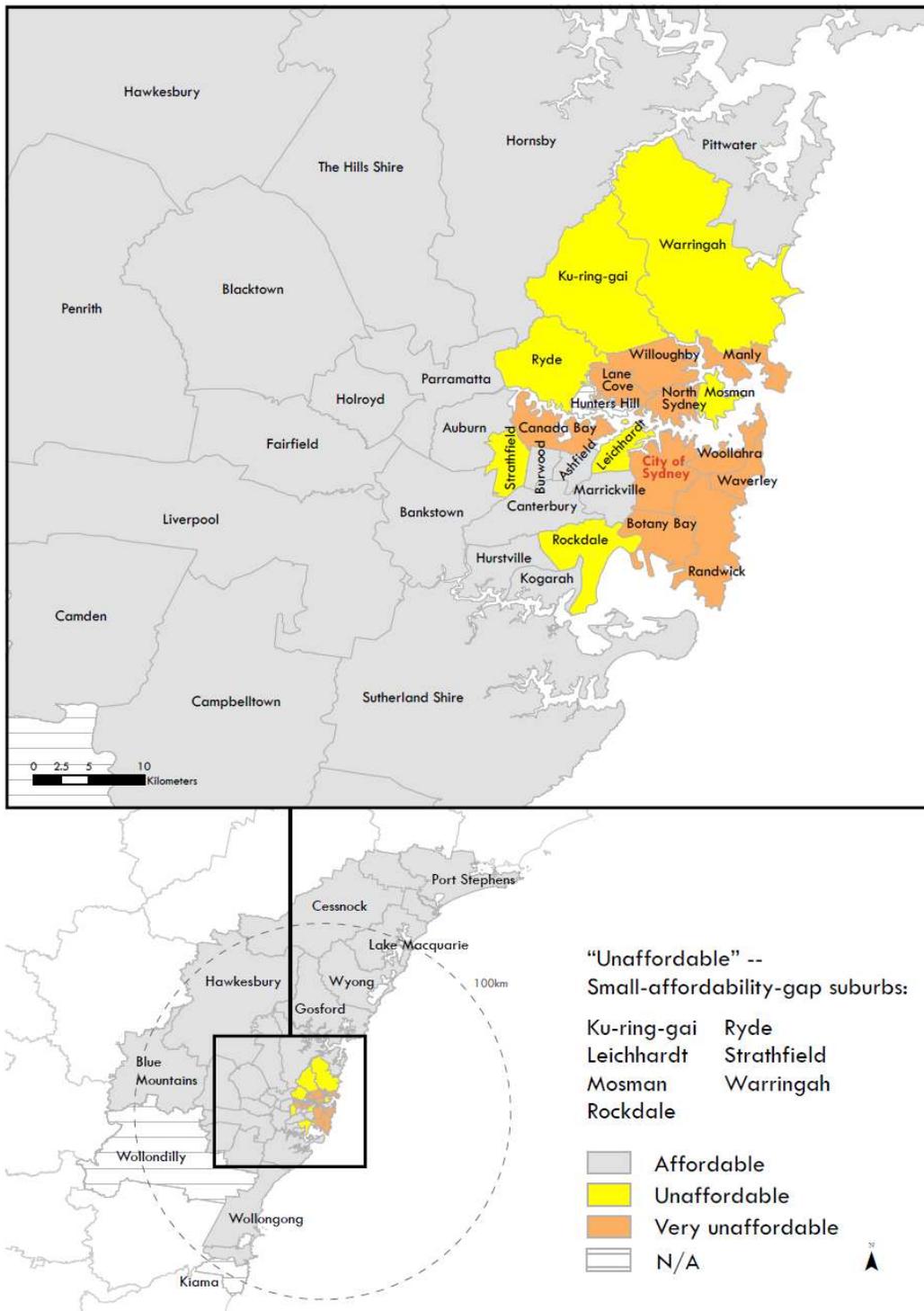
Figure 19: Affordable locations for a single enrolled nurse looking for a one bedroom rental



However, even where a key worker household could theoretically afford a one bedroom rental property, it is also important to note that the supply of one bedroom rental properties is extremely limited across the GMR, particularly in the more affordable outer urban areas. In the LGAs that are affordable to all seven of the key workers in our sample, **the stock of one bedroom private rental homes makes up between 0.3 and 3 per cent of the total housing stock**, with the average being less than one per cent (Australian Bureau of Statistics 2017b).

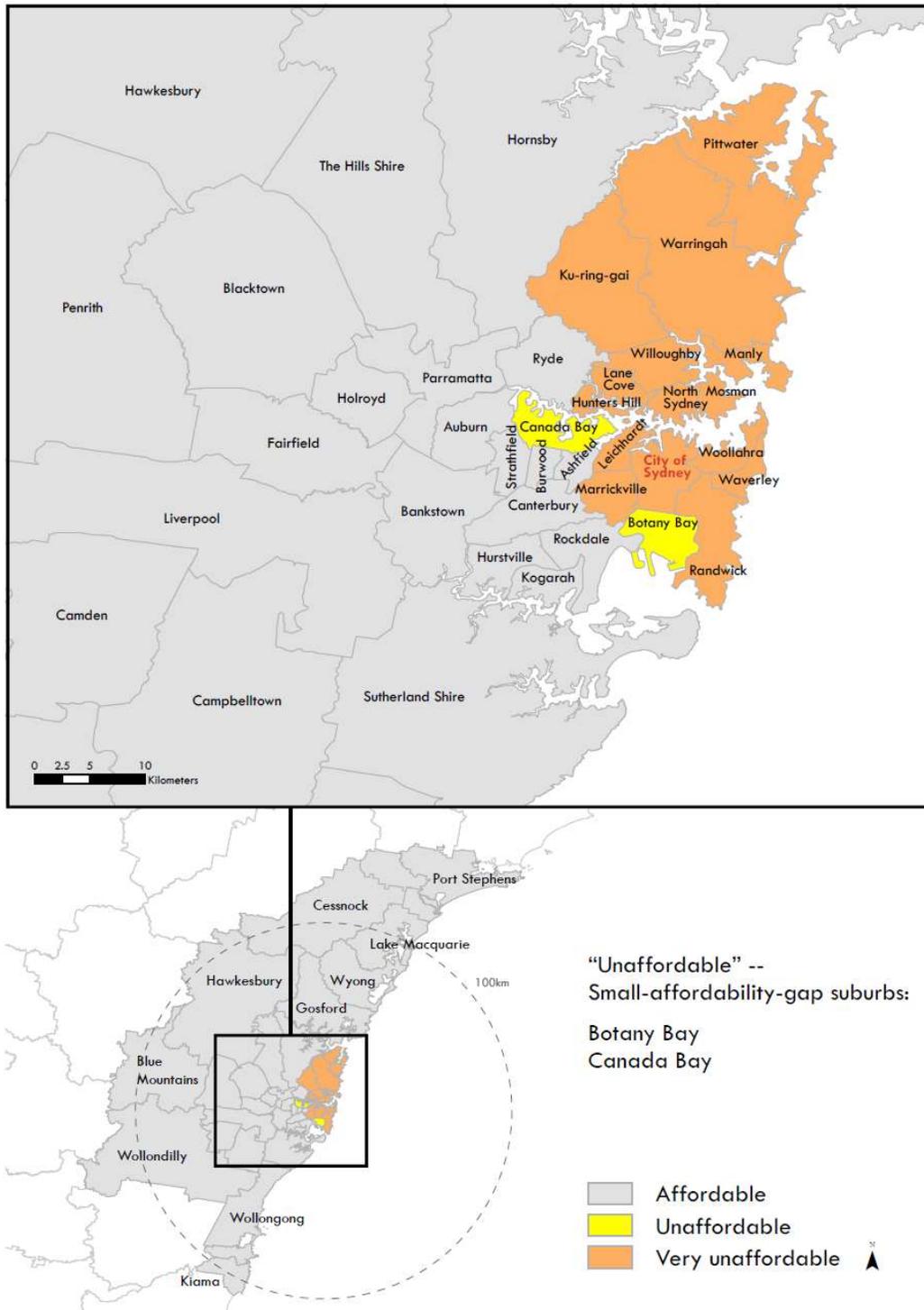
Figures 20 and 21 show affordable, unaffordable, and very unaffordable localities across the GMR. 'Unaffordable' areas are LGAs where the gap between the median weekly rent and affordable rent is \$50 or less per week. For single key workers (Figure 20), unaffordable locations include the inner ring LGAs of Leichhardt and Mosman and middle ring LGAs including Ku-ring-gai, Rockdale, Ryde, Strathfield and Warringah. In those locations, a minor intervention to reduce housing costs could enable single key workers to rent in those locations. LGAs are labeled 'very unaffordable' where the median weekly rent is \$50 per week more than the affordable rent for a single key worker household. Those LGAs include most of Sydney city and the eastern suburbs and the inner and middle north.

Figure 20: Affordability of median priced one bedroom rental property, single income key worker



Source: authors; median price data derived from NSW Rent and Sales Report No.118

Figure 21: Affordability of median priced three bedroom rental property, dual income key worker household with two dependants



Source: authors; data derived from NSW Rent and Sales Report No.118 (NSW Government 2016)

4. Summary and conclusions

This report has examined housing affordability for key worker professionals who live and work in the Greater Metropolitan Region of Sydney. Historically, home ownership has been an achievable aspiration for key workers, and Sydney's key workers are more likely to live in a home they own than the general population.

However, the analysis presented in this report shows that this is changing. Despite their stable employment and generally moderate incomes, younger cohorts of key workers are struggling to achieve home ownership in Sydney. Some key worker households may also find very limited options in the private rental market.

These findings reflect an ongoing trend in which Sydney's key workers are living further from inner and even middle ring areas. More accessible areas of Sydney have tended to lose key worker residents over the decade between 2006 and 2016, while some outer subregions and parts of the OGMR (Illawarra, Newcastle and the Hunter) have experienced a net gain.

Economic and social implications of declining key worker housing affordability

As highlighted in this report and in numerous other studies, significant social and economic problems arise when key workers are unable to find affordable homes near their employment. These include difficulties in attracting, retaining, and replacing essential teachers, police, nurses and emergency workers in population centers where home ownership is unaffordable and affordable rental properties in short supply. Further, traffic congestion increases in regions where workers are forced to travel longer distances by private car. For Sydney's key workers and their families, the combination of high housing costs and lengthy car based commutes impose a heavy burden.

This report also highlighted a growing gap between established key worker households who have already attained home ownership, and younger key workers seeking to save the deposit needed to purchase a home. The barriers to home ownership faced by these younger key workers are projected to increase if present trends continue.

Potential for policy or market innovation

Despite this overall picture of declining housing affordability, it is important to note that Sydney's key worker households are typically in stable employment and receive moderate (not low) incomes. Single income key worker households can generally afford to spend more than \$450 per week on rent and dual income households can afford a dwelling of up to \$650,890, just under Australia's median house price (\$669,700 in March 2017) (Australian Bureau of Statistics 2017a).

A number of localities across Sydney were identified in this analysis as "small affordability gap" markets, whereby median rents are unaffordable by \$50 or less; or median purchase prices exceed affordability thresholds by up to \$50,000. In these locations, small innovations to improve the affordability of properties could increase access to these locations for some key workers, particularly those on higher incomes and dual income households.

Concluding remarks

Sydney's teachers, nurses, ambulance officers, fire/emergency workers, and police are integral to the city's ongoing economic growth and community wellbeing. However, these essential professionals are facing increasing barriers to home ownership, and limited choices in the private rental market. These affordability barriers affect younger cohorts of key workers and were not encountered by previous key worker cohorts for whom home ownership has largely been achieved.

Longer commuting times to work and a failure to achieve the economic security of home ownership, will have serious consequences for key workers and their family. For Sydney overall, the trend towards key worker groups moving further from inner and middle ring areas is likely to continue unless action is taken to secure affordable rental and or home purchase opportunities for key workers across the entire metropolitan region. Such action to improve key worker access to home ownership through market innovation and or policy intervention would relieve pressure elsewhere in Sydney's housing market and support a socially diverse and sustainable city.

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