

TRANSPORT & TRAVEL TO WORK

IN GREATER
WESTERN SYDNEY

2021 CENSUS TOPIC PAPER

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Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
ANZSIC	Australian and New Zealand Standards Industrial Classification
CBD	Central Business District
CTP	Contactless payments
DCJ	Department of Communities and Justice
GWS	Greater Western Sydney
LGA	Local Government Area
NCOSS	NSW Council of Social Service
NSW	New South Wales
SA	Statistical Area ^a
WESTIR	Western Sydney Regional Information and Research Service

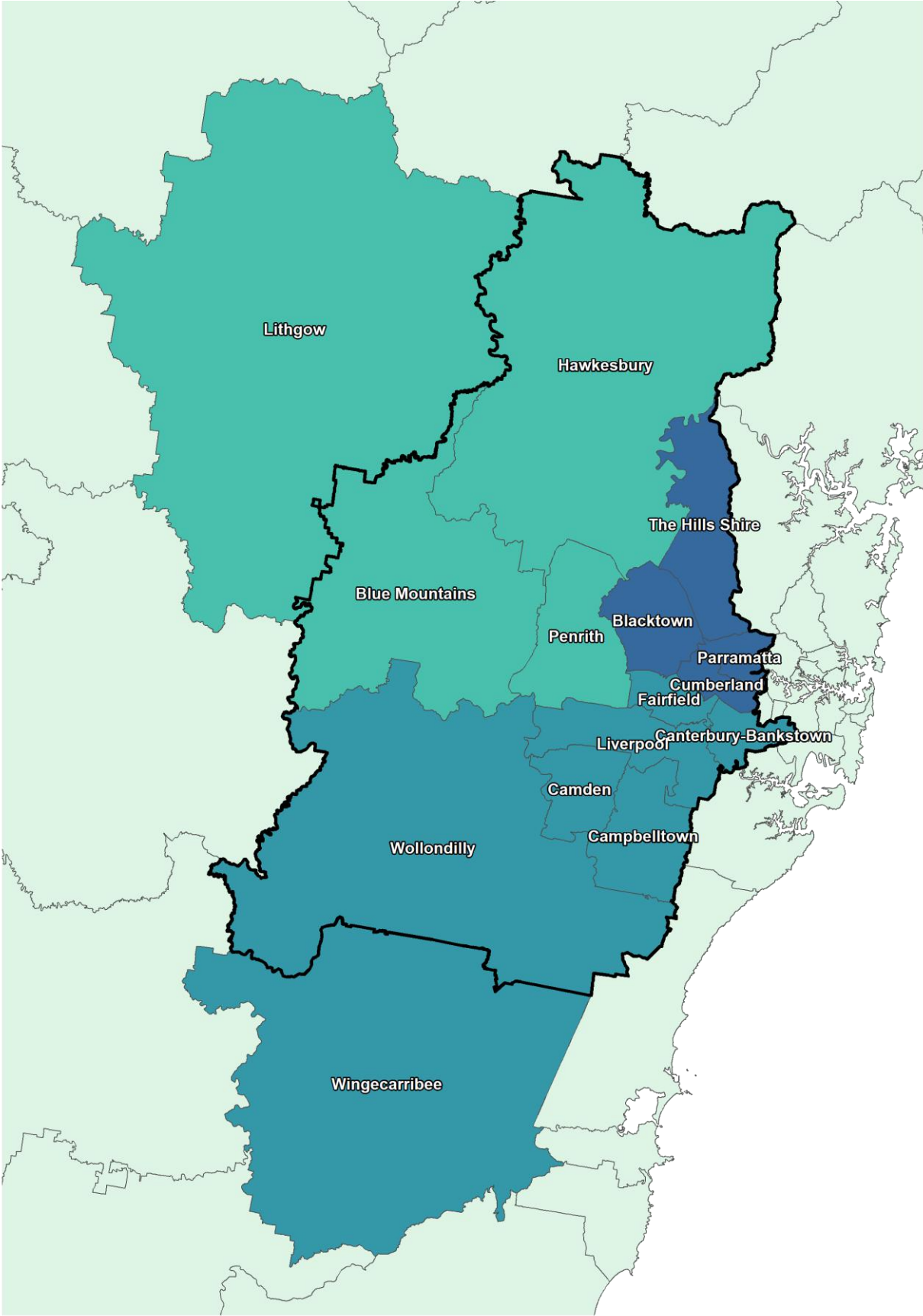
ABS Census variable abbreviations

AGE10P	Age in ten year groups
ASSNP	Core activity need for assistance
CLTHP	Count of selected long-term health conditions
INCP	Total personal income (weekly)
INDP	Industry of employment
LFSP	Labour force status
LTHP	Type of long-term health condition
MTWP	Method of travel to work
MTW06P	Method of travel to work (6 travel modes)
POWP	Place of work
PURP	Place of usual residence
VEHRD	Number of motor vehicles (ranges)

^a According to the ABS, 'Statistical Areas are geographic units defined in the ASGS as a part of the Main Structure classification (for example Statistical Area Level 1 (SA1), Statistical Area Level 2 (SA2) etc).'

<https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/methodology>

MAP 1. REGIONS



Greater Western Sydney Regions Local Government Area Boundaries South Western Sydney
 Nepean Blue Mountains Western Sydney

Produced by WESTIR Limited
 Source: ABS Census of Population and Housing 2021
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Executive Summary

Greater Western Sydney (GWS) is at the forefront of the changing demographic and policy landscape of the Greater Sydney region. It is therefore essential to examine the transportation-related behaviours and commuting methods of travel to work of the GWS' working population in 2021. Informed by the 2021 Australian Bureau of Statistics (ABS) Census of Population and Housing, this paper investigates transport and different methods of travel to work used by GWS' residents and the changes that have occurred from between the past Censuses.

Table 1 shows the key findings of this report.

TABLE 1. KEY FINDINGS

Section	Findings
1. Origin and destination of travel to work	<ul style="list-style-type: none"> In the 2021 Census, a total of 1,098,405 workers were recorded to be residing in GWS, an 8.2% increase from 1,015,034 in the 2016 Census. Of all employed persons with information on their places of usual residence and places of work, 66.8% (729,543 of 1,092,304) usually residing in GWS also work within the region. For each GWS LGA of origin, the same LGA was the most commonly reported destination for work.
2. Distance to work	<ul style="list-style-type: none"> Employed persons from GWS (62.3%) were more likely to travel at least 10 kilometres compared to Greater Sydney (53.5%), the Rest of NSW (46.3%), and NSW (51.0%). In the 2021 Census, 4 out of 10 employed persons (40.5% or 428,874 of 1,057,888) from GWS travelled to work for 10 to less than 30 kilometres.
3. Method of travel to work^b	<ul style="list-style-type: none"> Almost half of employed persons in GWS (47.6% or 522,294 of 1,098,393) worked at home or did not go to work, as recorded in the 2021 Census. The vehicle was a common method of travel to work in the 2021 Census, accounting for 44.8% (492,553 of 1,098,393) of all employed persons in the GWS region.^c Of all employed persons in GWS, only 5.2% (57,297 of 1,098,393) used public transport to travel to work in 2021.
4. Worked at home or did not go to work	<ul style="list-style-type: none"> In the 2021 Census, 356,284 employed persons from GWS worked at home. This is a percentage increase of 945.9% or a ten-fold increase from 34,065 in the 2016 Census. Those who worked from home also accounted for 32.4% of all employed persons from GWS in 2021. This proportion is a huge increase from 3.4% in 2016. These may be due to COVID-19 restrictions. In GWS, 166,014 employed persons indicated that they did not go to work on 10 August 2021. This is more than double (120.5%) the figure from 2016 at 75,300. Of all GWS workers, 15.1% did not go to work in 2021, which is a 7.7%-point increase from 7.4% in 2016.

^b The 2021 Census question asked, 'How did the person get to work on Tuesday 10 August 2021?'. For more information, visit <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>.

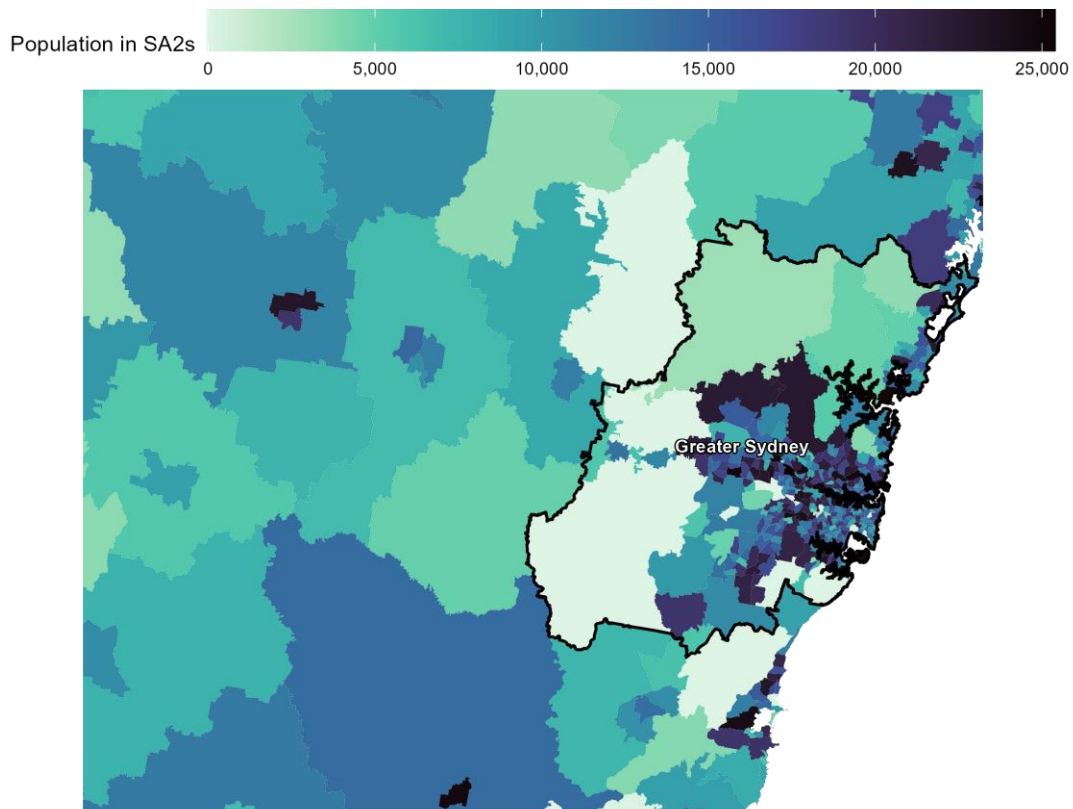
^c 'Car, as driver', 'Car, as passenger', truck and motorbike/scooter are the subcategories under vehicle within the 2021 Census.

<p>5. Vehicle</p>	<ul style="list-style-type: none"> • ‘Car, as driver’ was the most common method of travel to work for GWS workers. Of the 1,098,393 workers usually residing in GWS, 445,630 or 40.6% drove a car to get work in 2021. • ‘Car, as passenger’ ranked the second most common among the vehicle-related categories, despite having only 3.2% of GWS workers falling into this category.
<p>6. Public transport</p>	<ul style="list-style-type: none"> • In 2021, 4.2% of all GWS workers indicated the ‘train’ as their method of travel to work. Despite the decreased uptake due to the COVID-19 pandemic, it remains the most common mode of public transport for GWS workers. • Buses were the second most common mode of public transport for GWS workers, accounting for 0.9% or 9,548 of GWS workers in the 2021 Census. • Taxis and ride-share services were the third most common mode of public transport, accounting for 1,719 or 0.16% of GWS workers in 2021. • Ferries and trams/light rails were the least common modes of public transport for GWS workers. Only 200 or 0.02% of employed persons from GWS used a ferry to get to work. Similarly, 188 or 0.02% of GWS workers used a tram/light rail to get to work.
<p>7. Active transport</p>	<ul style="list-style-type: none"> • In GWS, only 1.4% (15,553 of 1,098,393) of employed persons used active transport in the 2021 Census. This percentage is a slight decrease from 2.0% in 2016. • Among all GWS workers, 1,721 or 0.2% used a bicycle as their method of travel to work in the 2021 Census. Meanwhile, 13,843 or 1.3% ‘walked only’ as a method of travel to work. This indicates that walking was more common than using a bicycle to get to work.
<p>8. Industry of employment</p>	<ul style="list-style-type: none"> • The top five industries of employment for workers usually residing in GWS were ‘Health Care and Social Assistance’, ‘Retail Trade’, Construction, ‘Education and Training’, and ‘Professional, Scientific and Technical Services’. • Across the ten most common industries of employment, GWS residents in the ‘Accommodation and Food Services’ industry are most likely to use public transport to get to work (9.8% or 5,511). • Vehicles are most likely to be used by GWS residents in ‘Transport, Postal and Warehousing’ (68.0% or 49,601) out of the top ten industries of employment. • While there was a relatively low uptake of active transport in the 2021 Census, those working in the ‘Accommodation and Food Services’ (4.0% or 2,239) are most likely to use active transport. • Those working in the ‘Financial and Insurance Services’ (86.3% or 52,348) industry were most likely to work at home or not go to work.

Introduction

In recent years, Greater Sydney’s urban sprawl has accelerated. Its increasing population density raises not only environmental, economic, and human concerns but also concerns around transport and mobility. To address this, the New South Wales (NSW) Government is working towards decentralising the region, with its vision of ‘A Metropolis of Three Cities’ released in 2018 under the leadership of former Premier Gladys Berejiklian.^[1] The ‘Three Cities’ are the Western Parkland City, the Central River City, and the Eastern Harbour City.^[1] This includes the development of city-shaping transport and regional transport corridors in Greater Sydney to increase regional connectivity. Recent transport projects include the Sydney Metro and the Parramatta Light Rail Line.^[2,3]

MAP 2. POPULATION OF SA2S IN GREATER SYDNEY, 2021



Produced by WESTIR Limited
 Source: ABS Census of Population and Housing 2021
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Greater Western Sydney (GWS) is at the forefront of the changing demographic and policy landscape of the Greater Sydney region. GWS experienced significant demographic changes partly due to the city’s urban sprawl extending to Oran Park, 60 kilometres from the Sydney Central Business District (CBD). The GWS population increased from 2,080,757 to 2,606,544 from the 2011 Census to the 2021 Census, indicating there were more than half a million additional residents in the region.^[4] By 2031, researchers estimate that Western Sydney will account for more than half of Greater Sydney’s population.^[5]

New investments and infrastructure projects are underway, but transport inequity remains an issue for GWS residents, particularly for those living in the region’s fringes. As seen in Table 2, a number of major projects will be directly impacting GWS LGAs, potentially increasing GWS’ connectivity with other regions. However, the current state of NSW transport already places residents from peripheral areas, with underprivileged groups even more so, at a

disadvantage.^[6] The second hearing of a state parliamentary inquiry on public transport needs in Western Sydney, held on 5 February 2024, underscores these issues even further. Sharath Mahendran, a young Western Sydney-based content creator with the YouTube channel 'Building Beautifully', spoke at the enquiry and captured these challenges, saying 'The burden of housing new residents to Sydney largely rests upon areas west of Blacktown (...) Western Sydney dwellings are expected to grow in number of 41% by the year 2041 without the public transport investments to show for it'.^[7]

TABLE 2. MAJOR NSW PROJECTS IN GWS

Project	Key Dates and Information
Parramatta Light Rail	Expected opening - Mid-2024
Sydney Metro North West	Opening - 27 May 2019
Sydney Metro City & South West	Chatswood to Sydenham project approval - 9 January 2017 Sydenham to Bankstown planning approval - 19 December 2018
Sydney Metro West	Approval by Department of Planning and Environment - 25 January 2023
Mariyung Fleet	Expected opening - Mid-2024
Sydney Growth Trains	Announcement of procurement - February 2019
Easing Sydney's Congestion	Key initiatives include the delivery of the M4 Smart Motorway, the Parramatta Congestion Improvement Program and accelerated Pinch Point and Clearways Programs.
Western Harbour Tunnel	Stage 1 commencement - June 2022
Sydney Metro – Western Sydney Airport	Opening - 2026

Source: Transport for NSW, <https://www.transport.nsw.gov.au/projects/major-projects-hub> (accessed 13 February 2024)^d

Against this backdrop, it is essential to examine behaviours related to transportation and travel of the GWS' more than a million-strong working population. Informed by the 2021 Australian Bureau of Statistics (ABS) Census of Population and Housing, this paper looks into transport and method of travel to work in the context of GWS and the changes that have occurred since the past Censuses. ABS' data on methods of travel to work and places of work can help with 'assessing public transport needs, measuring commuting distance and investigating local opportunities for work'.^[8] This paper focuses on employed persons and excludes persons in the 'Not Applicable' categories of variables related to methods of travel to work.^e

^d Key information and dates were sourced from the following pages:

- <https://www.parramattalightrail.nsw.gov.au/>
- <https://www.sydneymetro.info/about#:~:text=Sydney%27s%20first%20metro%2C%20the%20Metro,CBD%20to%20open%20in%202024.>
- <https://www.sydneymetro.info/citysouthwest/project-overview>
- <https://www.planningportal.nsw.gov.au/major-projects/projects/sydney-metro-west-rail-infrastructure-stations-precincts-and-operations>
- <https://www.transport.nsw.gov.au/projects/current-projects/mariyung-fleet>
- <https://www.transport.nsw.gov.au/projects/current-projects/sydney-growth-trains>
- <https://www.transport.nsw.gov.au/projects/current-projects/easing-sydneys-congestion-program-office>
- <https://caportal.com.au/rms/wht/about>
- <https://caportal.com.au/rms/wht/stage-1-tunnelling>
- <https://www.westernsydneyairport.gov.au/transport-infrastructure/rail>

^e For method of travel to work variables (MTWP, MTW06P, and MTW15P), the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' 'Persons aged under 15 year.' The 'Not Applicable' category under MTW06P also excludes 'Overseas visitors.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp> <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-6-travel-modes-mtw06p> <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-15-travel-modes-mtw15p>

It also sources data from the 2021 Census through DataPacks and TableBuilder Pro. Tables from DataPacks and TableBuilder Pro are based on the place of usual residence unless stated otherwise.^f This report also makes use of data from the Transport for NSW's Open Data Hub and Developer Portal.^g

Please note that the ABS employs techniques to ensure the confidentiality of data. This randomisation process, called perturbation, is 'considered to be the best technique for avoiding the release of identifiable data while maximising the range of information that can be released.'^[9] This technique involves introducing small random errors that may result in small increases or decreases in the numbers. This seeks to reduce the risk of identifying individuals in Census statistics, particularly for smaller counts. Overall, these adjustments may cause totals for each characteristic and geographic area to differ from table to table and the values from one WESTIR Census report to another. Total values may also vary slightly across tables and sections due to the availability of data.

Greater Western Sydney (GWS) consists of the following 13 LGAs (see Map 1):

- Blacktown
- Blue Mountains
- Camden
- Campbelltown
- Canterbury-Bankstown
- Cumberland
- Fairfield
- Hawkesbury
- Liverpool
- Parramatta
- Penrith
- The Hills Shire
- Wollondilly

This paper also covers two additional LGAs, Lithgow and Wingecarribee, which are not included in GWS totals.

GWS is compared with data for Greater Sydney, districts under the Department of Communities and Justice (DCJ), the Rest of New South Wales (NSW) and NSW:

- Greater Sydney, the Rest of NSW, and NSW are compiled from ABS boundaries.
- **DCJ Nepean Blue Mountains District** is made up of the Blue Mountains, Hawkesbury, Lithgow, and Penrith.
- **DCJ South Western Sydney District** is made up of Camden, Campbelltown, Canterbury-Bankstown, Fairfield, Liverpool, Wingecarribee and Wollondilly LGAs.
- **DCJ Western Sydney District** is made up of Blacktown, Cumberland, Parramatta, and The Hills Shire LGAs.

Historically, WESTIR examined the GWS area using only two government-defined districts, DCJ South Western Sydney District and DCJ Western Sydney District. After consultation with DCJ, from the 2021 Census, WESTIR will be partitioning GWS into three separate districts. As mentioned above, these districts are DCJ Nepean Blue Mountains District, DCJ South Western Sydney District, and DCJ Western Sydney District.

The report also looks at the changes from the 2016 Census to the 2021 Census. The Researcher has decided to limit the scope by looking at the 2016 Census and 2021 Census

^f The variable Place of Usual Residence or PURP 'records the geographic area in which a person usually lives.' Australian Bureau of Statistics, 2021, October 15, 'Place of usual residence (PURP) | Australian Bureau of Statistics', Australian Bureau of Statistics, viewed 21 September 2022, <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/location/place-usual-residence-purp>.

^g The Transport for NSW Open Data Hub and Developer Portal is available at <https://opendata.transport.nsw.gov.au/>.

only due to the changes in LGA boundaries from the 2011 and 2016 Censuses.^h This is to ensure the ease of comparability between figures from 2016 and 2021 within LGAs.

In conducting year-on-year analyses, it is important to highlight the impact of COVID-19 on the 2021 Census, particularly on data related to travel and employment. Before the 2021 Census Night on 10 August 2021, Greater Sydney residents were advised to remain in their LGA and stay within a 10-kilometre radius of their homes.^[10] By 14 August 2021, mobility restrictions became more stringent, with the NSW Government further limiting travel of Greater Sydney residents to a 5-kilometre radius.^[11] As the ABS states, 'The 2021 Census was conducted during the COVID-19 pandemic. The data collected provides an interesting glimpse into how Australia's working population adapted to stay-at-home restrictions and which modes of transport they utilised when travelling to work'.^[12]

This report has been prepared with utmost caution and consciousness; however, WESTIR Limited explicitly states that it cannot guarantee the accuracy or adequacy of the information quoted in the report. Furthermore, the company cannot be held responsible for any errors or omissions and shall not be liable for any disputes arising from the information contained in this report.

The report begins with a discussion on the origins and destinations of travel to work related to the GWS working population (Section 1) and the distance to work (Section 2). It is followed by the methods of travel to work, with an analysis of this variable in relation to other demographic variables (Section 3). The subsequent sections tackle each of the methods of travel to work in more detail namely, Worked at home or did not get to work (Section 4), Vehicle (Section 5), Public transport (Section 6), and Active transport (Section 7). These sections are followed by the industry of employment (Section 8). Finally, the report concludes with a summary of findings and opportunities for future research.

^h Cumberland was only introduced in the 2016 Census after a merger of parts of the Auburn, Parramatta, and Holroyd LGAs. Similarly, Canterbury-Bankstown was included in the 2016 Census out of a merger of the Canterbury and Bankstown LGAs.

1. Origin and destination of travel to work

In the 2021 Census, a total of 1,098,405 workers or employed persons were recorded to be residing in GWS, an 8.2% increase from 1,015,034 in the 2016 Census. Map 3 shows the geographic distribution of employed persons in the region based on their place of usual residence. SA2s with a darker shade of blue indicate larger numbers while lighter shades of blue denote smaller numbers. Several SA2s with a larger employed population can be observed in The Hills Shire, Blacktown, Parramatta, and Liverpool.

Taking this into account, it is important to investigate the places of work of employed persons usually residing in GWS. Of the 1,098,405 GWS workers, 1,092,304 workers had information on their places of work. For the purposes of this paper, the term 'origin' refers to the place of usual residence (PURP) and the term 'destination' refers to the place of work (POWP). The POWP variable indicates the 'geographic area in which a person worked in the week before Census Night.' Computations for this section exclude persons falling under the 'Not Applicable' category and counts in this section denote the number of employed persons with information on their places of work.¹ Totals in this section were directly obtained from TableBuilder, except for GWS. Values for GWS were obtained by summing the 13 GWS LGAs.

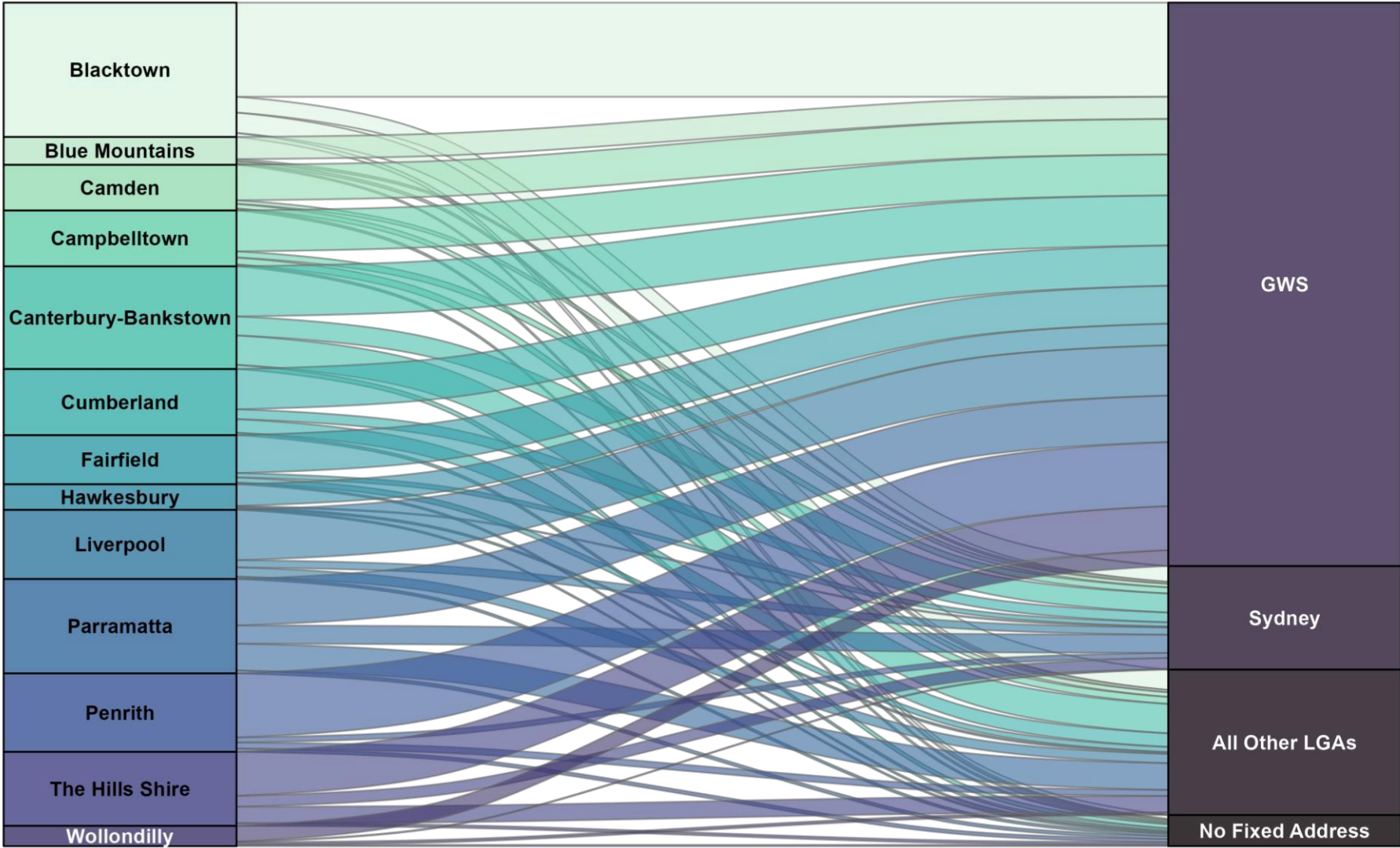
In the 2021 Census, 66.8% of all persons (729,543 of 1,092,304) usually residing in GWS work within the region. Of the total employed persons within their respective LGAs, Hawkesbury (84.3%), Penrith (81.7%), and the Blue Mountains (79.7%) had the highest percentages of persons working in GWS (see Appendix). Figure 1 above illustrates the flow of employed persons from their LGAs of origin to their destinations. It shows that a major chunk in each of the LGA populations works within the GWS region.

Interestingly, almost one-third of the employed population of GWS (32.7% or 356,889 of 1,092,304) usually reside and work within the same LGA. For each GWS LGA of origin, the same LGA was the most commonly reported destination. This may imply that GWS residents tend to seek employment within their LGAs of usual residence, especially in more peripheral LGAs in the region. This somewhat contrasts with the assumption that GWS residents work or seek to work in central hubs or the Sydney CBD. Figure 2 shows the percentages of workers usually residing in GWS LGAs, including Lithgow and Wingecarribee, who work in the same LGA. For example, almost half of employed persons residing in Hawkesbury (46.3%) worked in Hawkesbury and 44.1% of employed persons usually living in the Blue Mountains worked in within the same LGA. Likewise, 34.8% of all employed persons usually residing in Campbelltown, also worked in Campbelltown (see Figure 2).

Compared to LGAs in GWS, Lithgow and Wingecarribee residents were more likely to work within their own LGA. Of all employed persons within Lithgow and Wingecarribee, 74.3% and 70.7% were employed locally, respectively. A proportion of Lithgow and Wingecarribee residents also travelled to neighbouring LGAs in GWS for work, with 6.3% of Lithgow residents working in the Blue Mountains and 2.4% of Wingecarribee residents travelling to Wollondilly for work.

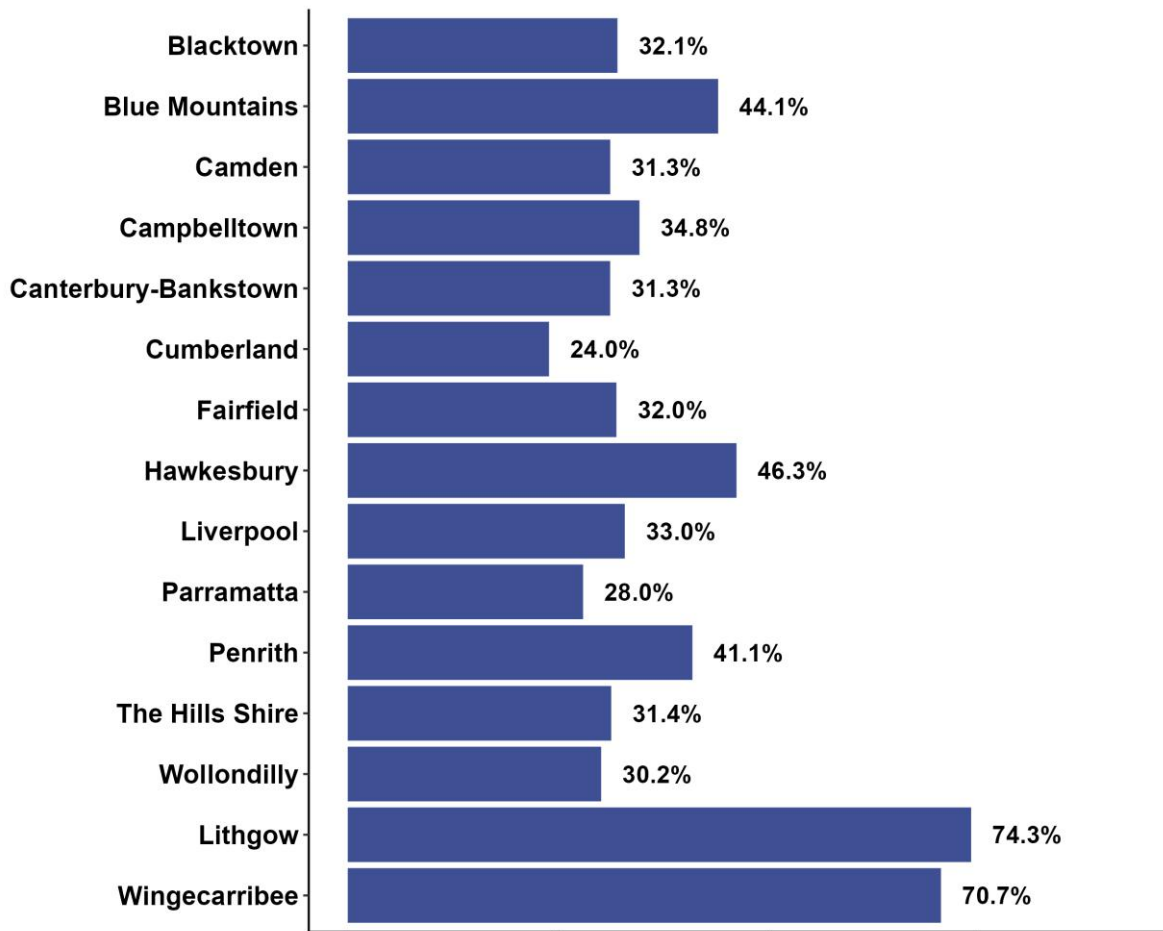
¹ For the POWP variable, the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' 'Persons aged under 15 years.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/location/place-work-powp>

FIGURE 1. FLOW OF PEOPLE FROM GWS LGAS OF ORIGIN AND DESTINATIONS (COUNTS), 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | POWP and PURP Variables

FIGURE 2. PERCENTAGES OF EMPLOYED PERSONS LIVING AND WORKING IN THE SAME LGA AMONG EMPLOYED PERSONS IN GWS LGAS, 2021

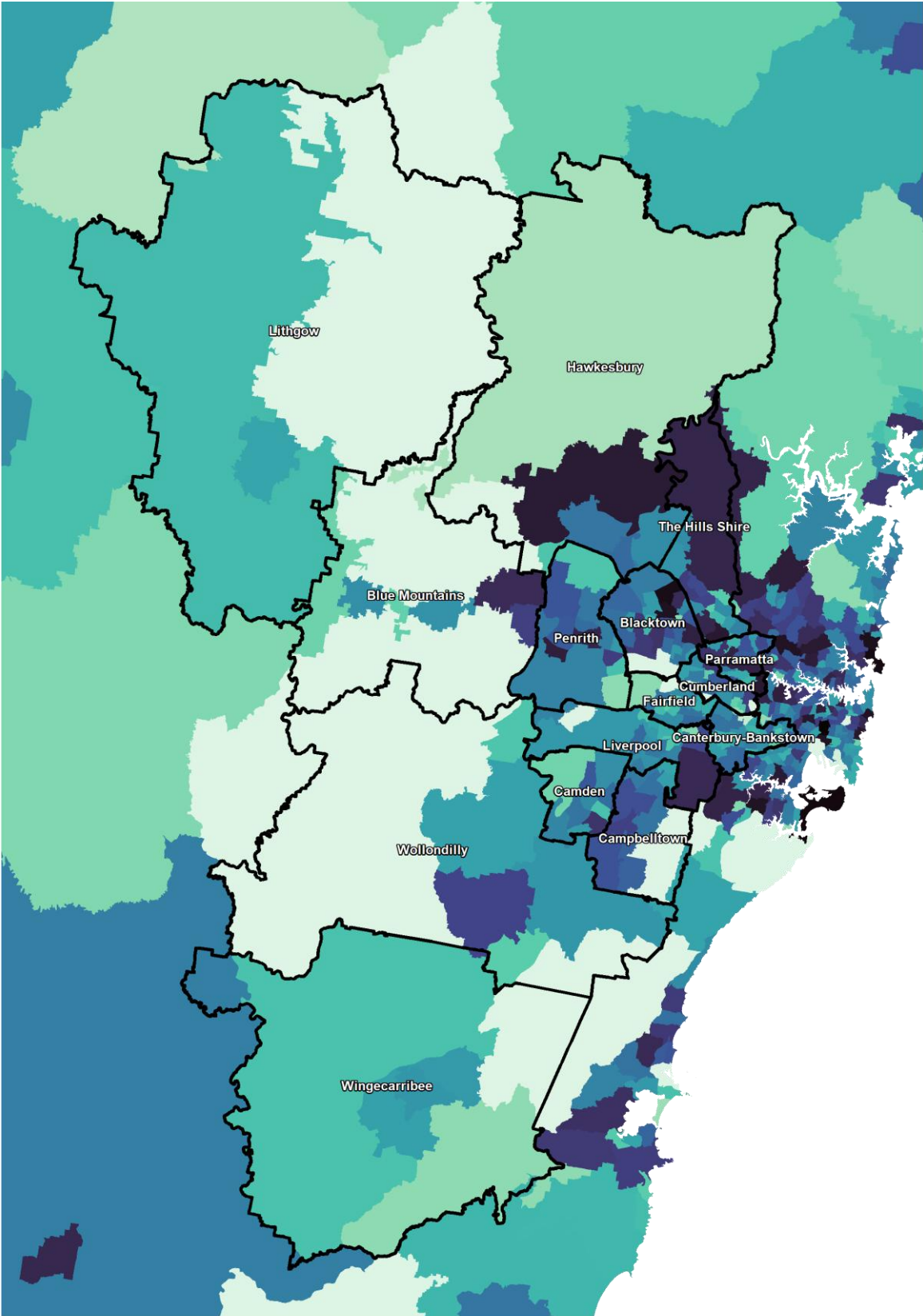


Data Source: 2021 Census - counting persons, 15 years and over | POWP and PURP Variables

Aside from living and working within the same LGA, it was common for employed GWS residents to work in a major CBD within the GWS region. This trend was also observed in the 2016 Census.^[13] Of the GWS employed population, 10.0% had Blacktown as their place of work. This was followed by Parramatta (9.6%) and Penrith (6.8%).

On the other hand, more than one of ten employed persons in GWS (12.3% or 134,048 of 1,092,304) work in the Sydney LGA. Of the total employed persons within their respective LGAs, Parramatta (19.3%), Canterbury-Bankstown (18.5%), and Cumberland (14.9%) had the highest percentages of persons working in the Sydney LGA. This is not unusual, given that these three LGAs are the easternmost LGAs of GWS.

MAP 3. NUMBER OF EMPLOYED PERSONS IN GWS AND GREATER SYDNEY SA2S, 2021



GWS LGAs (inc. Lithgow and Wingecarribee)

Count of Employed Persons in SA2s



Produced by WESTIR Limited
Source: ABS Census of Population and Housing 2021
© Commonwealth of Australia

Data Source: DataPacks, 2021 Census General Community Profile, Table G21, Labour_force_status_Employed_Total variable

Across all LGAs as destinations for work, the Sydney LGA remains the most common place of work for employed GWS residents (see Table 3). The percentage of employed persons in GWS who working in the Sydney LGA increased from 11.6% in the 2016 Census to 12.3% in the 2021 Census. In 2016, Parramatta, Blacktown, Canterbury-Bankstown, Penrith, and Cumberland were the top places of work following the Sydney LGA among the employed population of GWS. By 2021, Blacktown overtook Parramatta, ranking second. Parramatta, Penrith, Canterbury-Bankstown were the third, fourth, and fifth most common destinations for work, respectively. Liverpool became the sixth, overtaking Cumberland.

TABLE 3. TOP 20 DESTINATIONS FOR WORK (LGAS) OF THE GWS EMPLOYED POPULATION, 2016 AND 2021

2016 Census			2021 Census		
LGA (Place of Work)	Count	% of Total	LGA (Place of Work)	Count	% of Total
Sydney	117,462	11.6%	Sydney	134,048	12.3%
Parramatta	101,666	10.1%	Blacktown	108,707	10.0%
Blacktown	94,930	9.4%	Parramatta	104,558	9.6%
Canterbury-Bankstown	69,266	6.9%	Penrith	73,861	6.8%
Penrith	64,860	6.4%	Canterbury-Bankstown	72,352	6.6%
Cumberland	58,606	5.8%	Liverpool	65,481	6.0%
Liverpool	58,166	5.8%	Cumberland	61,111	5.6%
The Hills Shire	51,981	5.1%	The Hills Shire	58,747	5.4%
Fairfield	51,240	5.1%	Fairfield	51,647	4.7%
No Fixed Address	45,531	4.5%	Campbelltown	46,733	4.3%
Campbelltown	42,360	4.2%	No Fixed Address	40,292	3.7%
Ryde	30,474	3.0%	Ryde	32,527	3.0%
Hawkesbury	22,714	2.2%	Camden	31,938	2.9%
Camden	22,637	2.2%	Hawkesbury	25,028	2.3%
Blue Mountains	17,452	1.7%	North Sydney	18,925	1.7%
Inner West	17,329	1.7%	Blue Mountains	18,654	1.7%
North Sydney	14,715	1.5%	Bayside	16,440	1.5%
Canada Bay	12,391	1.2%	Inner West	16,220	1.5%
Strathfield	12,165	1.2%	Willoughby	13,088	1.2%
Botany Bay	11,894	1.2%	Strathfield	11,412	1.0%
Grand Total GWS Workers		1,011,126	Grand Total GWS Workers		1,092,304

Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | POWP and PURP Variables

GWS also has an employed population with no fixed address of work within NSW. Of all employed persons usually residing in GWS, 3.7% or 40,292 did not have a fixed worked address. This is a slight decrease from 4.5% in the 2016 Census.^[13] In GWS, persons without a fixed work address were most commonly in the Construction (36.5%) industry, but also in the 'Health Care and Social Assistance' (9.6%) and 'Transport, Postal and Warehousing' (8.8%) industries. Across all GWS LGAs, Wollondilly (6.2%), Hawkesbury (5.6%), and the Blue Mountains (4.7%) had the highest percentages of employed persons without a fixed address. Outside of GWS, Wingecarribee had a higher percentage of persons in this category at 7.0%. The proportion of workers with no fixed address in GWS is similar to Greater Sydney (3.7%) but lesser than that of the Rest of NSW (5.1%) and NSW (4.2%).

2. Distance to work

The distance to work or DTWP variable, measures the distance between a person's place of work and place of origin in kilometres, and presents this in ranges.^[14] The ABS calculates this distance in two ways using existing statistical and geospatial data. According to the ABS, 'It is calculated using the shortest path of a road network, from the respondent's place of usual residence mesh block (PURP), to that of their workplace (POWP), using geospatial software.'^[14] Upon calculating this distance, the ABS assumes that the person has taken 'the shortest path with no stops when commuting to work.'^[14] In cases where obtaining the shortest path between the PURP and POWP is not possible, ABS computes for the straight-line distance instead.^j Computations for this section exclude persons falling under the 'Not Applicable' category and counts in this section denote the number of employed persons.^k Totals in this section were obtained by summing the number of persons across all categories.

Employed persons from GWS (62.3%) were more likely to travel at least 10 kilometres compared to Greater Sydney (53.5%), the Rest of NSW (46.3%), and NSW (51.0%). Therefore, it follows, that workers from Greater Sydney (38.8%), the Rest of NSW (47.0%), and NSW (41.6%) were more likely to travel less than 10 kilometres compared to workers from GWS (31.2%) (see Appendix).

In the 2021 Census, 4 out of 10 employed persons (40.5% or 428,874 of 1,057,888) from GWS travelled to work for **10 to less than 30 kilometres** (see Figure 3). The percentage of persons with a travel distance of 10 to less than 30 kilometres decreased slightly from 42.2% in 2016 to 40.5% in 2021. GWS' easternmost LGAs, Parramatta (54.2%), Canterbury-Bankstown (50.7%), and Cumberland (48.8%), had the highest proportions of employed persons within their respective LGAs who travelled for 10 to less than 30 kilometres. Across all GWS LGAs, these three LGAs also had the highest proportion of employed persons working in the Sydney LGA (see Section 1). Compared to Greater Sydney (38.5%), the Rest of NSW (25.4%), and NSW (34.1%), GWS (40.5%) had a higher percentage of persons travelling within this range.

Meanwhile, less than a quarter (23.9% or 252,526 of 1,057,888) of employed persons in GWS travel to work for **2.5 to less than 10 kilometres** in the 2021 Census. This percentage decreased by 2.0 percentage-points from 25.9% in the 2016 Census. Fairfield (32.0%), Cumberland (29.3%), and Canterbury-Bankstown (28.1%) had the highest percentages of employed persons within their respective LGA populations who travelled for 2.5 to less than 10 kilometres. Greater Sydney (29.0%), the Rest of NSW (30.8%), and NSW (29.6%) had a higher proportion of employed persons travelling to work within this range compared to GWS (23.9%).

^j According to the ABS, 'A straight-line distance is likely to underrepresent the true distance of a commuting route, so a correction factor is incorporated by multiplying the straight-line distance by 1.3. This value was selected based on ABS analysis on the difference between road network and straight-line distance, and the value also aligned closely with similar studies.'

<https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/distance-work-ranges-dtwp>
The imputed distance to work or IFDTWP variable indicates whether a person's distance to work was calculated using a straight-line or road network distance. <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/imputed-distance-work-ifdtwp>

^k For the DTWP variable, the 'Not Applicable' category includes: 'Persons who were unemployed, not in the labour force, or whose labour force status was not stated,' 'Persons under 15 years of age,' 'Overseas visitors,' 'o Persons who were coded to [Special purpose codes.](https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/distance-work-ranges-dtwp)' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/distance-work-ranges-dtwp>

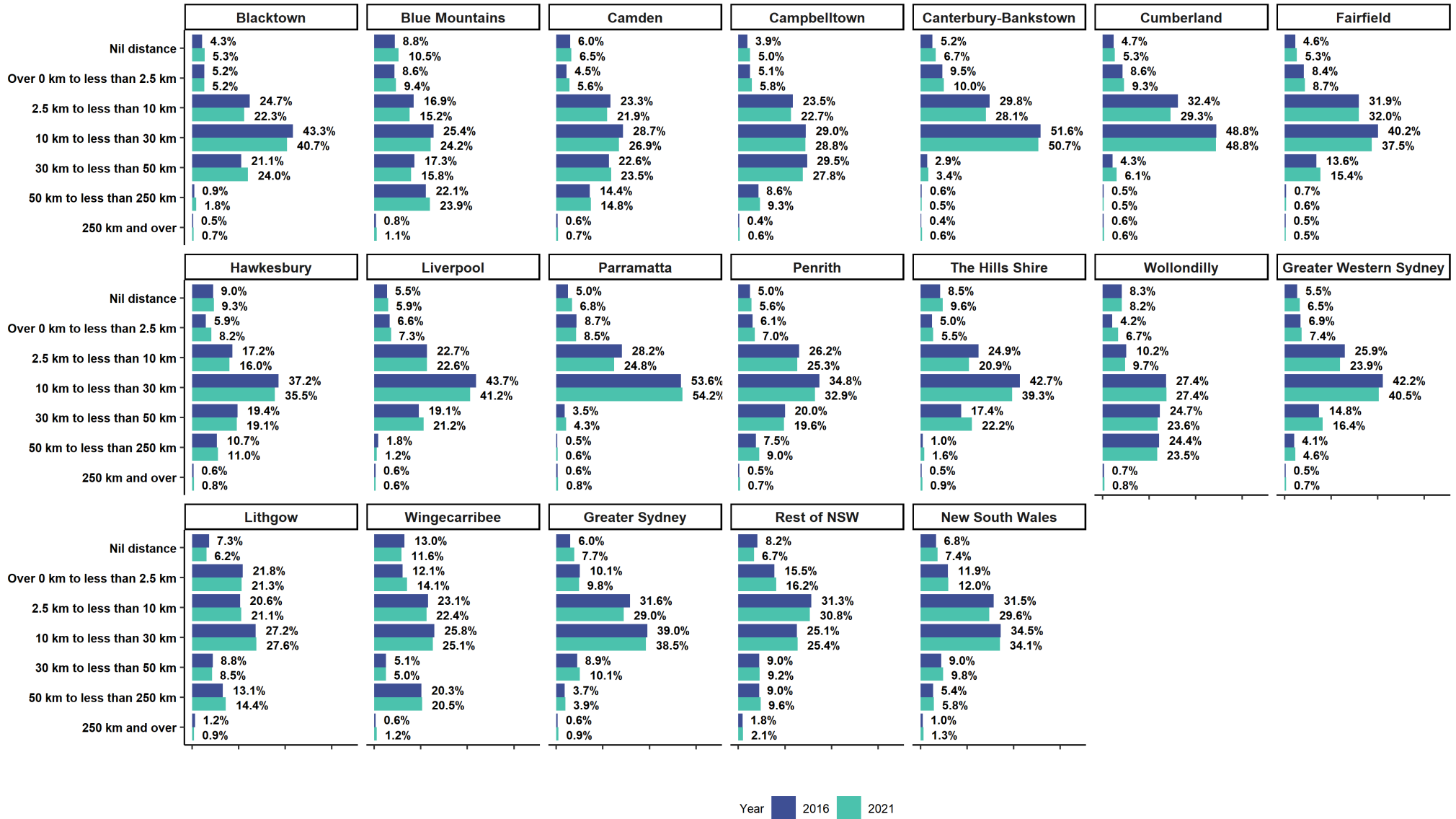
The **30 to less than 50 kilometre**-range was the third most common travel distance range in GWS during the 2021 Census, accounting for 16.4% (173,241 of 1,057,888) of the entire GWS employed population. Interestingly, there was a slight increase of 1.6 percentage-points from 14.8% in 2016. The percentages of employed persons within GWS LGAs travelling for 30 to less than 50 kilometres had a wide range, from 3.4% in Canterbury-Bankstown to 27.8% in Campbelltown. Out of all GWS LGAs, Campbelltown (27.8%), Blacktown (24.0%), and Wollondilly (23.6%) had the highest proportions. GWS (16.4%) had a higher percentage of persons travelling for 30 to less than 50 kilometres compared to Greater Sydney (10.1%), the Rest of NSW (9.2%), and NSW (9.8%).

Those who usually travel **0 to less than 2.5 kilometres for work** accounted for 7.4% of all employed persons from GWS in 2021, a 0.5 percentage-point increase from 6.9% in 2016. Canterbury-Bankstown (10.0%), the Blue Mountains (9.4%), and Cumberland (9.3%) had the highest proportions of employed persons whose distance to work was within this range. Compared to other regions, it was less common for the employed population of GWS (7.4%) to travel short distances, or 0 to less than 2.5 kilometres, than the employed populations of Greater Sydney (9.8%), the Rest of NSW (16.2%), and NSW (12.0%).

Of all employed persons in GWS, 4.6% (49,036 of 1,057,888) travelled for **50 to less than 250 kilometres** to get to work in 2021. This is a marginal decrease from 4.1% recorded by the 2016 Census. Similar to the 30 to less than 50 kilometre-range, the percentages of employed persons travelling for 50 to less than 250 kilometres had a wide range, from 0.5% in Canterbury-Bankstown and Cumberland to 23.9% in the Blue Mountains. The Blue Mountains (23.9%), Wollondilly (23.5%), and Camden (14.8%) had the highest percentages of persons falling under this category. It is worth noting that the Blue Mountains and Wollondilly are the westernmost LGAs in GWS. GWS' proportion of employed persons travelling within this distance range is higher compared to Greater Sydney (3.9%) but less than that of the Rest of NSW (9.6%) and NSW (5.8%).

Only 6.5% (68,716 of 1,057,888) of the employed population of GWS had **nil distance** as their distance to work. This category includes persons who worked from home, did not go to work, or did not state their mode of travel and had the same mesh block of PURP and POWP.^[14] On the other hand, only 0.7% of all employed persons in GWS travelled **more than 250 kilometres** for work.

FIGURE 3. DISTANCE TO WORK OF EMPLOYED PERSONS IN GWS AND COMPARATIVE REGIONS (PERCENTAGES), 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census – Counting Employed Persons, Place of Work (POW) and 2021 Census – counting persons, 15 years and over | PURP and DTWP Variables

3. Method of travel to work

3.1 Overview of method of travel to work

The Census asks questions about methods of travel to work and records up to three methods through the method of travel to work or MTWP variable, allowing for multiple responses from respondents.^[15] From the MTWP variable, the method of travel to work (6 travel modes) or MTW06P variable is derived. The MTW06P variable records 'the method of travel to work in six modes on Census day 10 August 2021'.^[16] These six modes of travel are:

- 'Public transport',
- 'Vehicle',
- 'Active transport',
- 'Other mode',
- 'Worked at home or did not go to work', and
- 'Not stated'.

Computations for the entire Section 3 exclude persons falling under the 'Not Applicable' category and counts in this section denote the number of employed persons.¹ Totals in this section were obtained by summing the number of persons across all categories (see Appendix).

Almost half of employed persons in GWS (47.6% or 522,294 of 1,098,393) '**worked at home or did not go to work**' in 2021 (see Figure 4). 47.6% is a huge increase of 36.8 percentage-points, from 10.8% in the 2016 Census. The number of persons working at home or not going to work increased by a staggering 377.7% from 109,340 to 522,294. The COVID-19 pandemic is the most obvious and significant factor to have caused this increase. LGAs in GWS felt the brunt of the pandemic, with the high number of cases and severe lockdowns.^[17,18] Employers who were able to provide flexible or work-from-home arrangements were mandated by the NSW Government to offer these options.^[19] On 14 December 2021, the ABS estimated that more than 40% of Australians worked from home.^[20] Of all GWS LGAs, The Hills Shire (57.7%), Parramatta (57.1%), and Canterbury-Bankstown (50.1%) had the highest proportions of employed persons working from home, all above 50%. Greater Sydney (52.5%) had a higher percentage compared to GWS (47.6%), but GWS had a higher proportion compared to the Rest of NSW (28.2%) and NSW (44.2%).

The **vehicle** was another common method of travel to work in the 2021 Census, accounting for 44.8% (492,553 of 1,098,393) of all employed persons in the GWS region. There was a 22.8 percentage-point decrease, from 67.6% in 2016 to 44.8% in 2021. The number of employed persons using vehicles to get to work decreased by 28.3% from 686,582 in 2016 to 492,553 in 2021. This decrease is expected, considering the work-from-home mandates and mobility restrictions due to COVID-19. Before the 2021 Census Night on 10 August 2021, Greater Sydney residents were advised to remain in their LGA and stay within a 10-kilometre radius of their homes.^[10] By 14 August 2021, mobility restrictions became more stringent, with the NSW Government further limiting travel of Greater Sydney residents to a 5-kilometre radius.^[11] Despite these restrictions, Wollondilly (58.6%), Hawkesbury (56.6%), and Fairfield (53.6%) still had high percentages of vehicle use among their respective employed

¹ For the MTW06P variable, the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' 'Persons aged under 15 years', 'Overseas visitors.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-6-travel-modes-mtw06p>

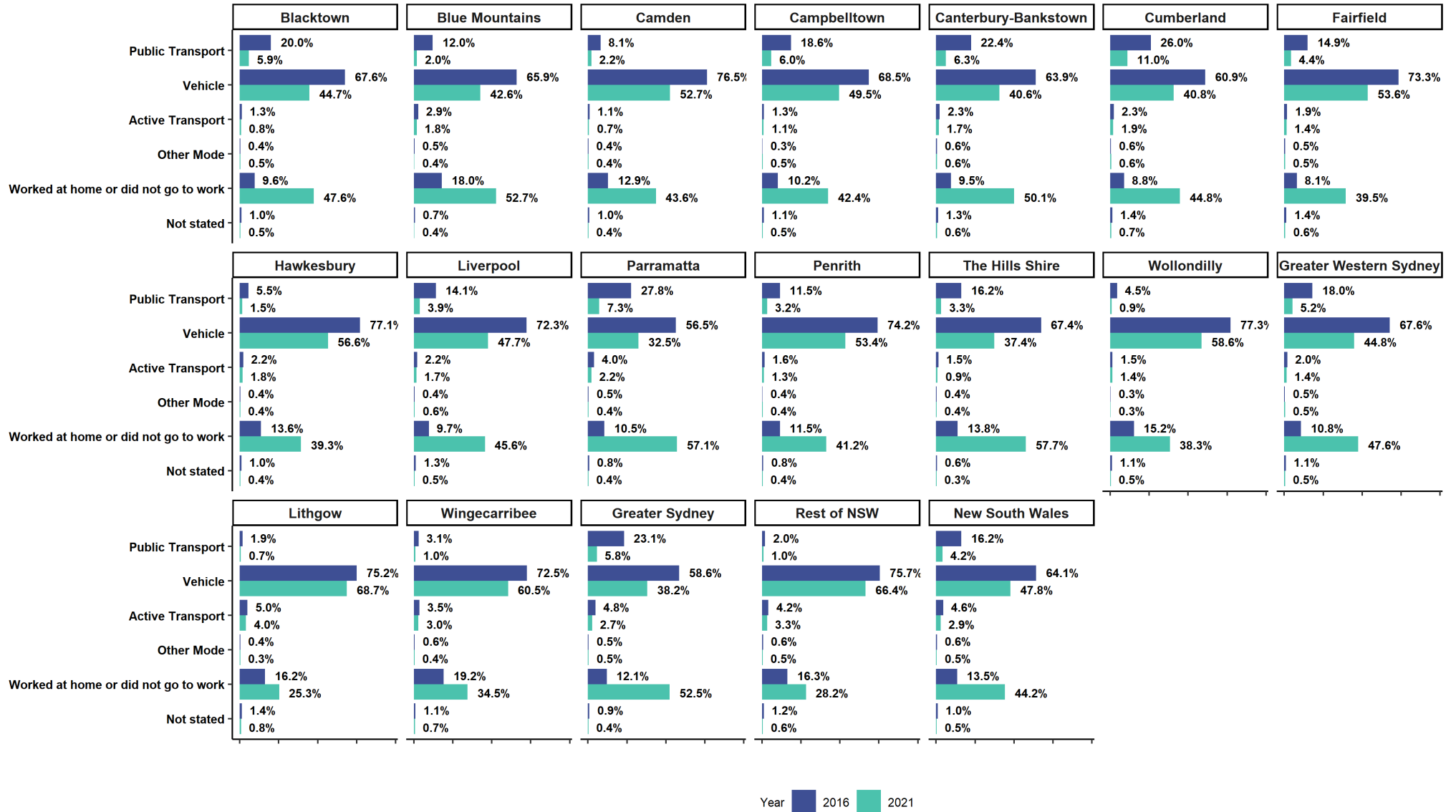
populations. This makes vehicle use a more common method of travel to work than working from home or not going to work within these LGAs. GWS' (44.8%) percentage of employed persons who use a vehicle was higher compared to Greater Sydney (38.2%) but lower compared to the Rest of NSW (66.4%) and NSW (47.8%).

In the 2021 Census, **public transport** was the third most common mode of travel to work but lagging far behind vehicle use and working from home or not going to work. Of all employed persons in GWS, only 5.2% (57,297 of 1,098,393) used public transport to travel to work in 2021. This figure is a 12.8 percentage-point decrease from 18.0% recorded in the 2016 Census. Compared to the number of vehicle users from GWS' employed population, the number of public transport users had a larger decrease at 68.7%, from 183,137 in 2016 to 57,297 in 2021. This shift in public transport is, again, an effect of the pandemic and pandemic policies. Cumberland (11.0%), Parramatta (7.3%), and Canterbury-Bankstown (6.3%) had the highest proportions of public transport use among their respective employed populations in the 2021 Census. GWS (5.2%) has a slightly lower proportion of public transport users compared to Greater Sydney (5.8%) but had a higher proportion compared to the Rest of NSW (1.0%) and NSW (4.2%).

A 2020 study by Beck and Hensher found negative perceptions of public transportation in Australia, with 33% and 42% of their respondents indicating that trains and buses were 'least comfortable.'^[21] Meanwhile, 84% of respondents reported private car use as the most comfortable mode of travel during the pandemic.^[21, p. 83] These perceptions are somewhat reflected in the decline in the number of public transport users in GWS. However, even though Australians generally found private car use to be more comfortable and safer, the volume of vehicle users still declined from 2016 to 2021. This is, again, due to the shift to remote working arrangements.

Active transport, which includes bicycling or walking, remained uncommon in GWS and its comparative regions. It accounted for only 1.4% (15,553 of 1,098,393) of employed persons in GWS during the 2021 Census, a slight decrease from 2.0% in 2016. The number of employed persons using active transport also decreased by 24.8% from 20,684 in 2016 to 15,553 in 2021. Across all the GWS LGAs, Parramatta (2.2%), Cumberland (1.9%), and the Blue Mountains (1.8%) had relatively higher proportions of active transport use. Compared to Greater Sydney (2.7%), the Rest of NSW (3.3%), and NSW (2.9%), GWS had a smaller percentage of active transport users among employed persons within their respective populations.

FIGURE 4. METHOD OF TRAVEL TO WORK OF EMPLOYED PERSONS IN GWS AND COMPARATIVE REGIONS (PERCENTAGES), 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | PURP and MTW06P Variables

3.2 Method of travel to work and distance to work

Remarkable trends can be observed from the methods of travel to work and distances to work among GWS' employed population. As with the 2016 Census, public transport (77.2%) and vehicle users (59.5%) were more likely to travel distances of above 10 kilometres compared to active transport users.

In both the 2016 and 2021 Censuses, public transport users from GWS were likely to travel longer distances, between 10 to 50 kilometres (see Figure 6). Almost half of public transport users (47.7%) travelled for 10 to less than 30 kilometres and almost one of four public transport users (23.2%) travelled for 30 to less than 50 kilometres.

On the other hand, employed persons from GWS using vehicles to get to work were most likely to travel between 2.5 to 30 kilometres. Of all vehicle users, 42.9% travelled for 10 to less than 30 kilometres and 31.3% travelled for 2.5 to less than 10 kilometres to work.

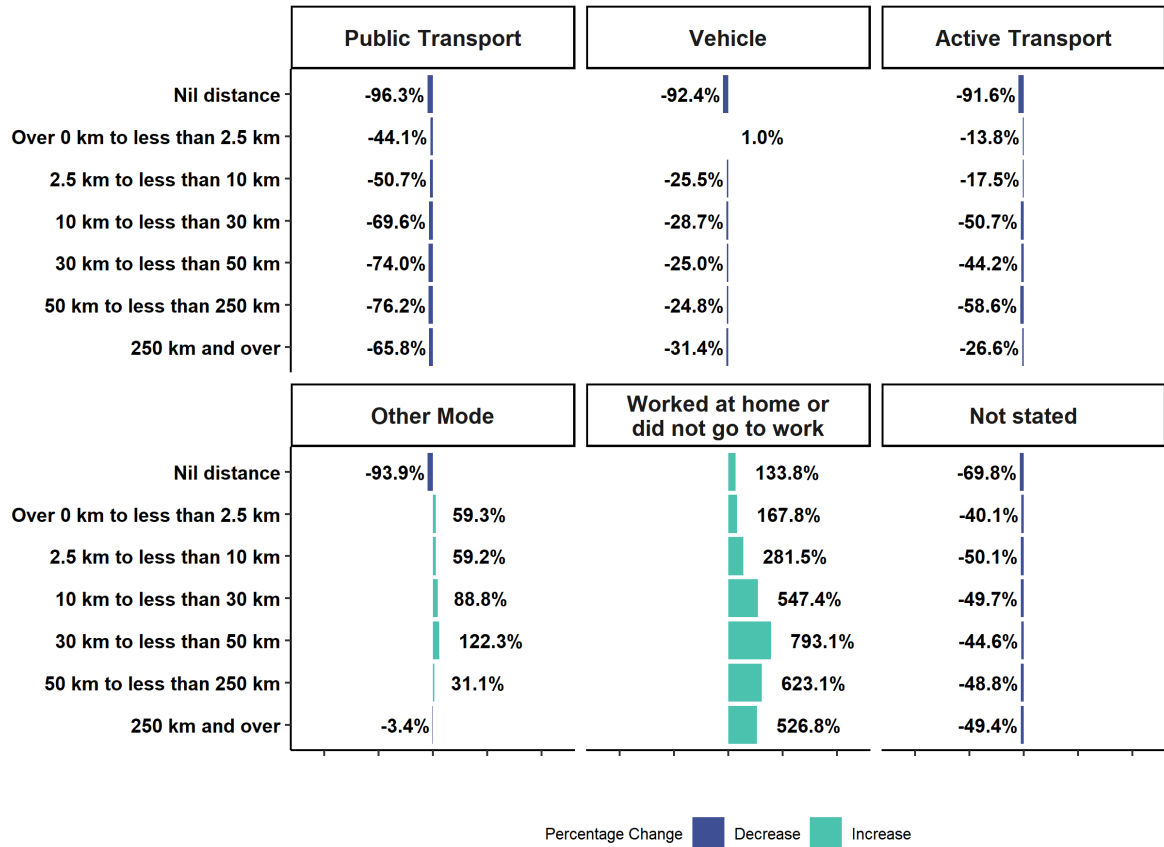
Beard, discussing trends from the 2016 Census in WESTIR's 2018 Journey to Work report, stated, 'This may indicate a preference for public transport for longer commutes when available as it allows people to read, sleep, work or study rather than concentrate solely on driving or it may just be more cost effective for many commuters'.^[13] These inferences still apply to the 2021 Census, given that public transport users from GWS were more likely than vehicle users to travel for 10 to less than 50 kilometres.

Active transport users travelled shorter distances. Of all employed persons cycling or walking to work, 71.9% travelled for more than 0 to less than 2.5 kilometres to get to work. 19.3% of active transport users also had a travel distance of 2.5 to less than 10 kilometres.

GWS residents who worked at home or did not go to work had a distance of 10 to less than 30 kilometres between their usual residence and place of work (38.7%), followed by 30 to less than 50 kilometres (19.6%).

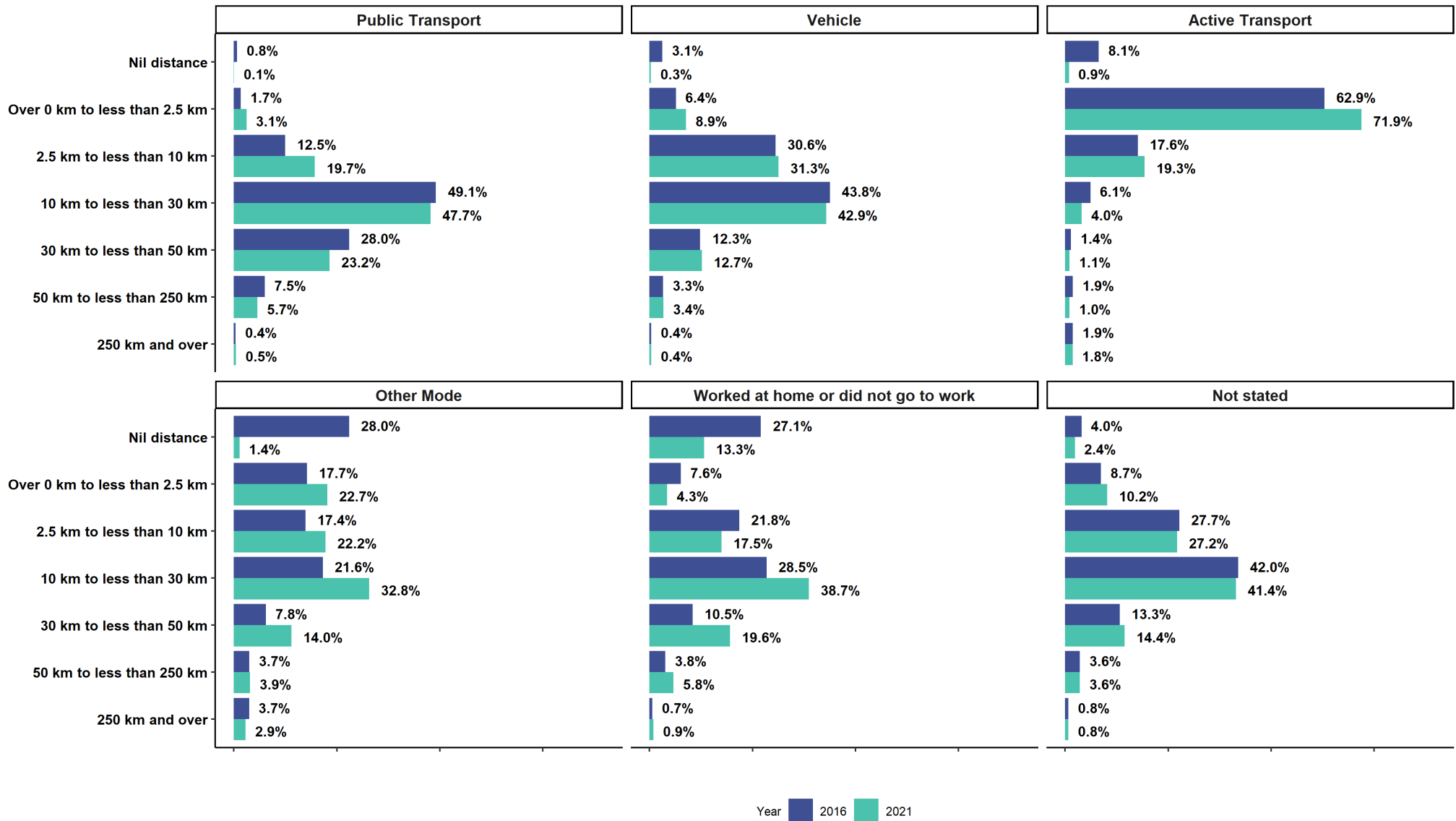
Interestingly, 2021 Census trends in the percentages of distances travelled of public transport, vehicle, and active transport users in GWS did not change drastically, despite the COVID-19 pandemic. However, as mentioned in Section 3.1, the volume of public transport, vehicle, and active transport users decreased considerably between the 2016 and 2021 Censuses (see Figure 5). This means that, even though the volume of public transport, vehicle, and active transport users lessened, the distribution of persons across the travel distances to work remained. In other words, persons using public transport, vehicles, and active transport travelled similar distances during the pandemic.

FIGURE 5. METHOD OF TRAVEL TO WORK AND DISTANCE TO WORK OF EMPLOYED PERSONS IN GWS (PERCENTAGE CHANGES), 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | DTWP and MTW06P Variables

FIGURE 6. METHOD OF TRAVEL TO WORK AND DISTANCE TO WORK OF EMPLOYED PERSONS IN GWS (PERCENTAGES), 2016 AND 2021



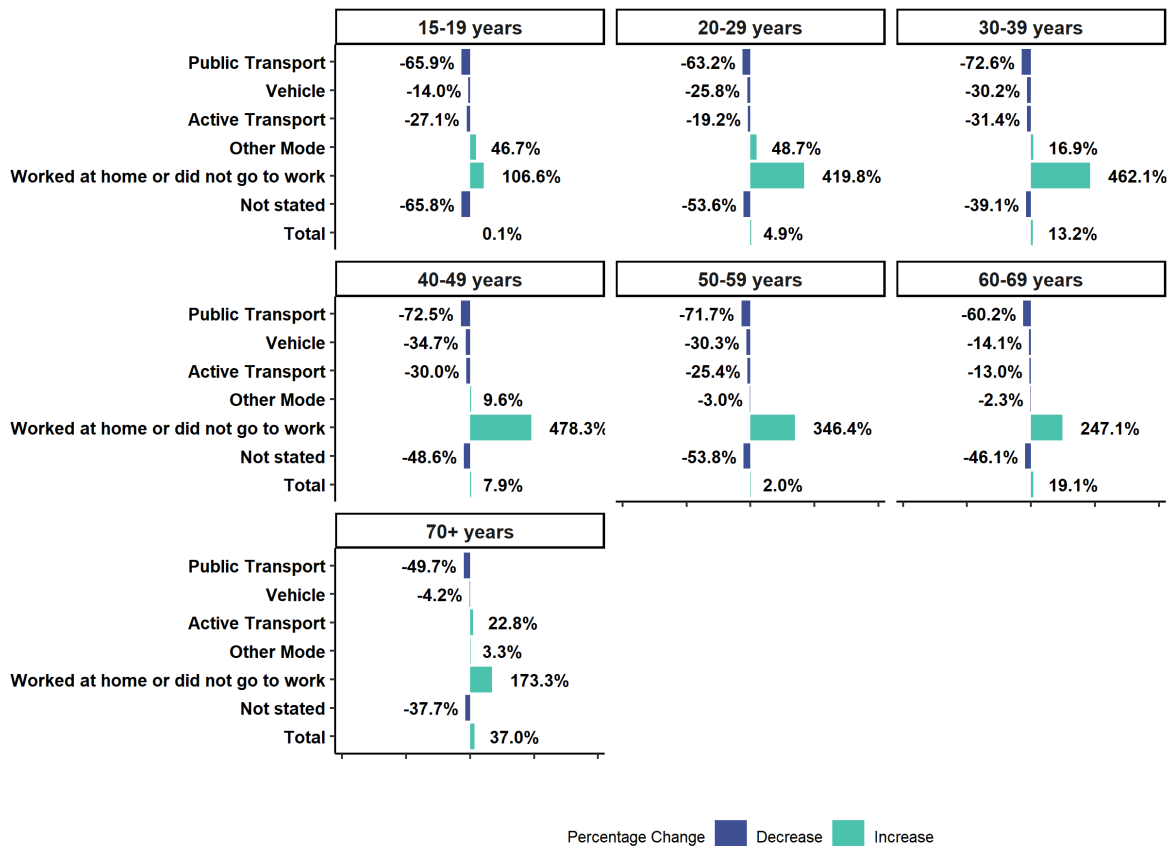
Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | DTWP and MTW06P Variables

3.3 Method of travel to work and age ranges

As in the 2016 Census, there were no extreme differences in how people from GWS travelled to work based on their age ranges in the 2021 Census. However, the youngest (15-19 years) and oldest (70 years and over) age ranges were exceptions.^[13] Across all age groups, workers aged 15-19 years were most likely to use active transport (3.0%) and least likely to work at home or not go to work (40.7%) in 2021 (see Figure 8). This can be linked to the nature of work for those aged 15-19 in GWS. In the 2021 Census, workers aged 15-19 in GWS commonly worked in the 'Accommodation and Food Services', 'Retail Trade', and Construction. These sectors are less likely to offer work-from-home arrangements, which entail either customer-facing or highly physical activities.

Meanwhile, workers aged 70 years and over from GWS were least likely to use public transport (2.9%) to get to work in 2021. This age group also has a high proportion of persons who worked at home or did not go to work (51.0%). As with the 15-19 age group, this can be linked to their industries of employment. In the 2021 Census, employed persons aged 70 and over from GWS were likely to work in 'Health Care and Social Assistance', 'Education and Training', and 'Professional, Scientific and Technical Services'. Compared to the industries where 15-19-year-olds usually participate in these industries were more likely to offer work-from-home arrangements. The relationship between industries of employment and methods of travel to work will be discussed further in Section 8.

FIGURE 7. AGE RANGES AND METHOD OF TRAVEL TO WORK OF EMPLOYED PERSONS IN GWS (PERCENTAGE CHANGES), 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | AGE10P and MTW06P Variables

Employed persons aged 20-29 (8.6%) were still the most likely to use public transport to get to work despite the decrease in the volume of public transport users for this age group at 63.2% (see Figure 7) from 54,215 in 2016 to 19,938 in 2021. In 2016, the proportion of workers within this age range who use public transport was 24.4%. This figure decreased to 8.6% in the 2021 Census due to the COVID-19 pandemic and mobility restrictions. It is also worth noting that workers aged 20-29 from GWS commonly worked in 'Health Care and Social Assistance', 'Retail Trade', and Construction in the 2021 Census.

Similar to the 2016 Census, GWS workers aged 50-59 years were most likely to use vehicles to get to work, even if the number of vehicle users within this age group decreased by 30.3%, from 137,034 in 2016 to 95,576 in 2021. Of all employed persons within this age range, 50.3% used a vehicle to travel to their destination in 2021. In 2016, this proportion was 73.6%. As for their industries of employment, persons aged 50-59 from GWS were usually part of the 'Health Care and Social Assistance', Manufacturing, and 'Education and Training' industries.

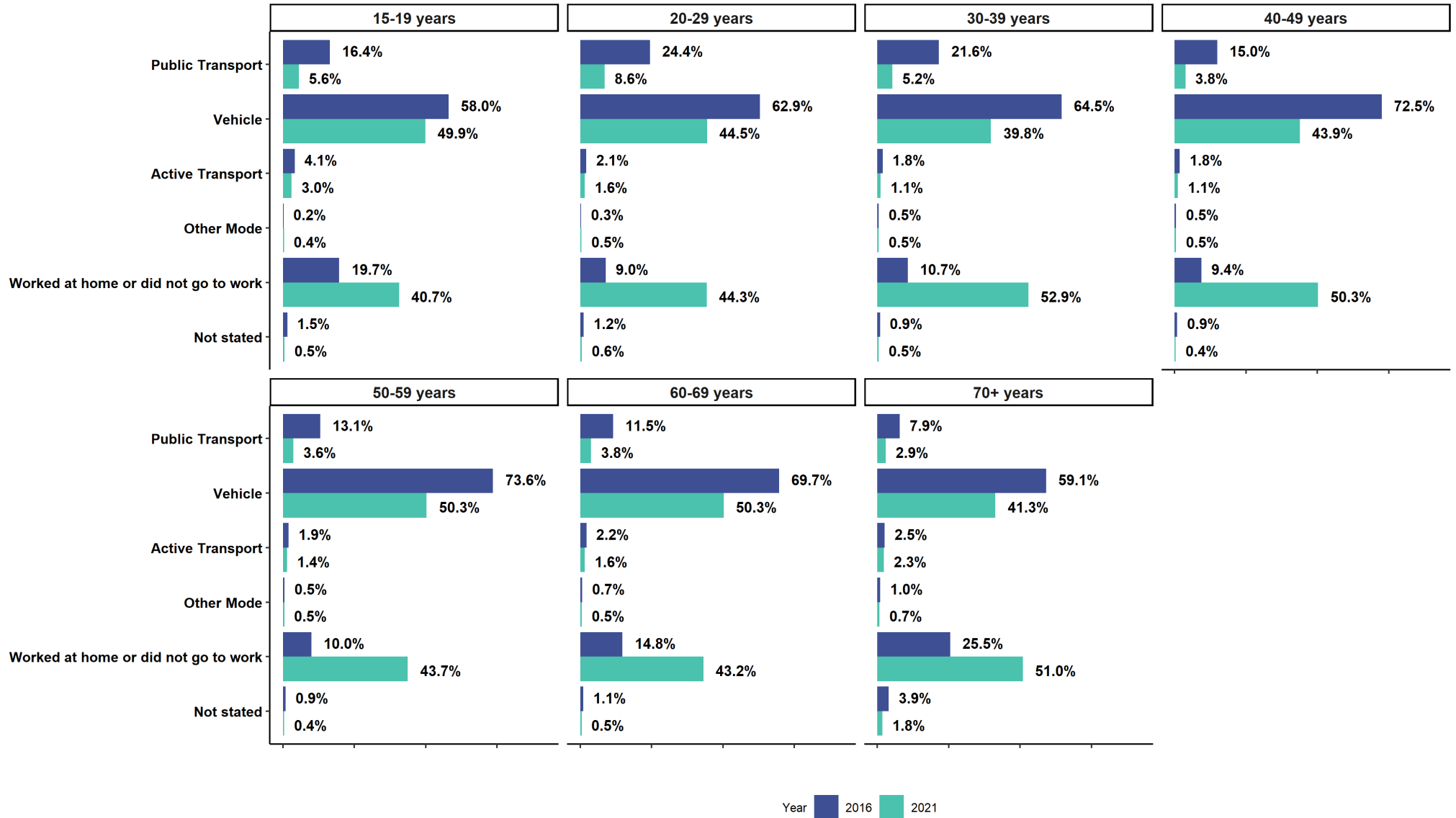
As mentioned, employed persons aged 15-19 were still the most likely to use active transport. In 2016, the percentage of workers aged 15-19 who used active transport was 4.1%, which reduced to 3.0% in 2021. It is worth mentioning that the number of active transport users for this age group fell by 27.1%, from 2,004 in 2016 to 1,461 in 2021.

There were, however, interesting shifts brought by the COVID-19 pandemic. In 2016, workers aged 15-19 were least likely to use a vehicle to get to work (58.0%). By 2021, workers aged 30-39 were least likely to use a vehicle (39.8%) compared to all age groups.

In 2016, it was the 70+ age group from GWS was most likely to work at home or not go to work (25.5%). By 2021, it was the 30-39 age group that was most likely to work at home or not go to work (52.9%).

Of all workers aged 30-39 in GWS, more than half (52.9%) worked at home or did not go to work in 2021. This is a 42.2 percentage-point increase from only 10.7% in 2016. The number of persons aged 30-39 who worked at home and did not go to work also grew significantly by 462.1%, from 26,391 in 2016 to 148,341 in 2021. Again, the likelihood of GWS workers aged 30-39 to work from home can be attributed to their top industries of employment, which were 'Health Care and Social Assistance', 'Professional, Scientific and Technical Services', and Construction.

FIGURE 8. AGE RANGES AND METHOD OF TRAVEL TO WORK OF EMPLOYED PERSONS IN GWS (PERCENTAGES), 2016 AND 2021

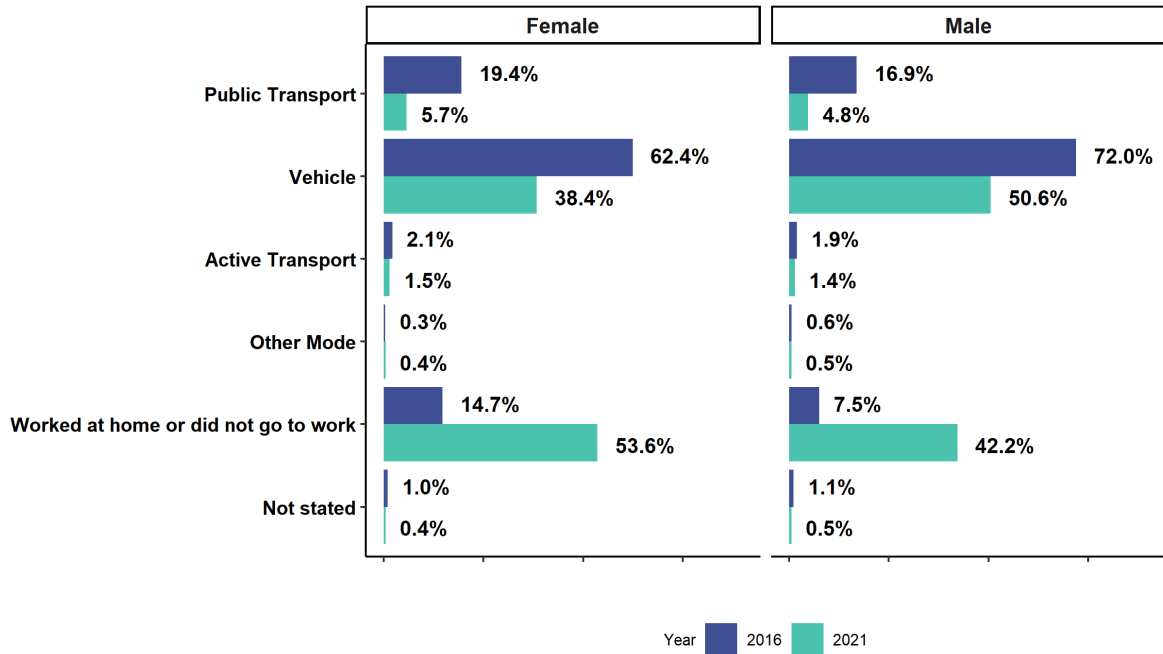


Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | AGE10P and MTW06P Variables

3.4 Method of travel to work and sex

In the 2021 Census, female workers from GWS were more likely to use public transport than males. Of all female workers in GWS, 5.7% used public transport (see Figure 9). Meanwhile, out of all male workers in GWS, 4.8% used public transport to get to work. For both sexes, there was a drop in the proportion of public transport users from the 2016 Census. The proportion of female workers from GWS using public transport decreased by 13.7 percentage-points from 19.4% in 2016, and the proportion of male workers from GWS using public transport lessened by 12.1 percentage-points from 16.9% in 2016.

FIGURE 9. SEX AND METHOD OF TRAVEL TO WORK OF EMPLOYED PERSONS IN GWS (PERCENTAGES), 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | SEXP and MTW06P Variables

Vehicles, on the other hand, were more likely to be used by male workers than female workers usually residing in GWS in the 2021 Census. Of all male workers from GWS, half (50.6%) used vehicles in 2021. Out of all female workers from GWS, 38.4% indicated vehicles as their method of travel to work in 2021. The proportion of persons using vehicles to get to work decreased from the 2016 to 2021 Censuses for both females (24.0 percentage-points) and males (21.4 percentage-points).

Although the proportions were small, active transport was more likely to be used by females than males in both the 2016 and 2021 Censuses. In 2021, only 1.5% of female workers from GWS used active transport, while 1.4% of male workers from GWS used active transport. There was also a marginal decrease in the proportions of both female (0.6 percentage-points) and male (0.5 percentage-points) workers who used active transport from the 2016 to 2021 Censuses.

Lastly, females were more likely to work at home or not to work than males. Working from home is also the most common method of travel to work for female workers from GWS in the 2021 Census. Of all female workers from GWS, more than half (53.6%) worked at home or did not go to work in 2021. Meanwhile, 42.2% of male workers from GWS worked at home or

did not go to work. It is expected that for both sexes, there was a huge increase in the percentages of persons working from home. The proportion of female workers from GWS who worked from home increased from 14.7% in 2016 to 53.6% in 2021, and the proportion of male workers from GWS who worked from home increased from 7.5% in 2016 to 42.2% in 2021.

3.5 Method of travel to work and long-term health conditions

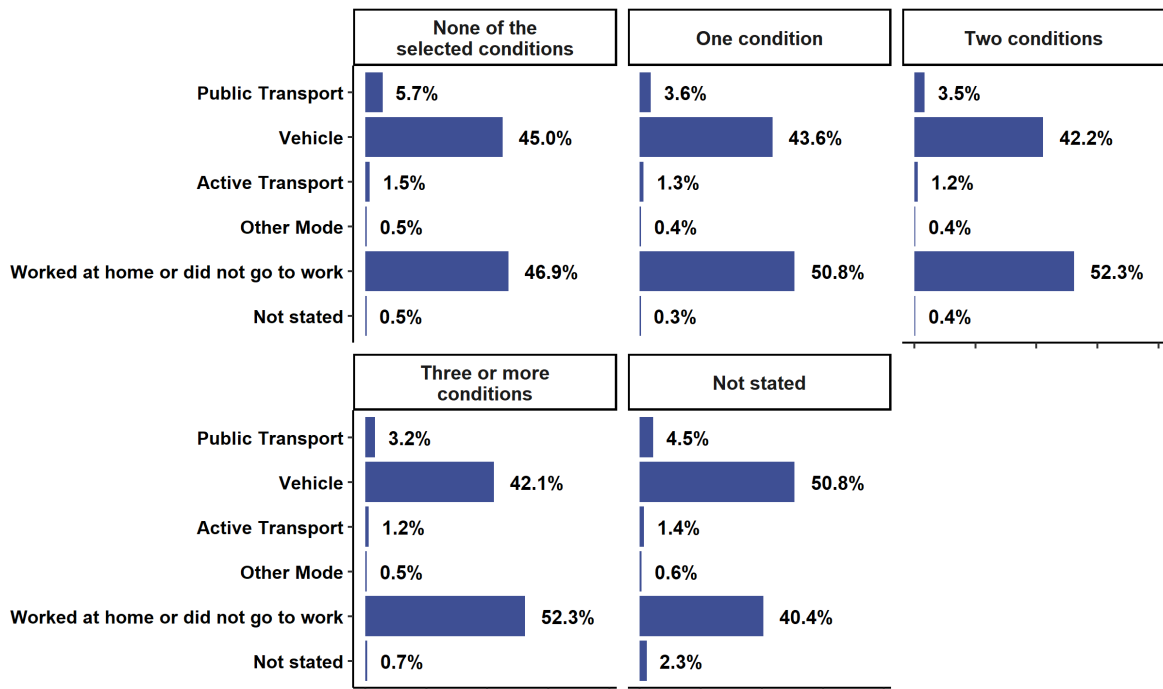
First introduced in the 2021 Census, variables related to long-term health conditions offer insight into the overall health and well-being of the GWS population. The count of selected long-term health conditions or CLTHP variable indicates the number of selected long-term health conditions a person has reported in the Census.^[22] These selected long-term health conditions are:

- 'arthritis',
- 'asthma',
- 'cancer (including remission)',
- 'dementia (including Alzheimer's)',
- 'diabetes (excluding gestational diabetes)',
- 'heart disease (including heart attack or angina)',
- 'kidney disease',
- 'lung condition (including COPD or emphysema)',
- 'mental health condition (including depression or anxiety)', and
- 'stroke'.

While the long-term health conditions variable includes all persons, computations for Section 3.5 exclude persons falling under the Not category of the MTW06P variable and counts in this section denote the number of employed persons.^m Totals in this section were obtained by summing the number of persons across all categories.

^m For the MTW06P variable, the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' 'Persons aged under 15 years', 'Overseas visitors.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-6-travel-modes-mtw06p>

FIGURE 10. COUNT OF LONG-TERM HEALTH CONDITIONS AND METHOD OF TRAVEL TO WORK OF EMPLOYED PERSONS IN GWS (PERCENTAGES), 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | CLTHP and MTW06P Variables

There appears to be slight differences with how persons from GWS travel to work based on the number of their long-term health conditions. Of all workers from GWS who had none of the selected conditions, close to half or 46.9% worked at home or did not go work in 2021 (see Figure 10). Employed persons with at least one condition were slightly more likely to work at home or not go to work. Of all GWS workers who had one condition, 50.8% worked at home or did not go to work. 52.3% of persons with two long-term health conditions from GWS worked at home or did not go to work. Lastly, out of all GWS workers who had at least three long-term health conditions, 52.3% worked at home or did not go to work.

Inversely, persons with long-term health conditions from GWS were less likely to use public transport and vehicles to get work compared to persons without any of the selected conditions. Of all persons from GWS who had none of the conditions, 5.7% used public transport in 2021. Meanwhile, the proportions of GWS workers with one condition, two conditions, and three or more conditions who used public transport were 3.6%, 3.5%, and 3.2%, respectively.

Vehicle use for employed persons from GWS without the selected conditions was at 45.0% in 2021. Meanwhile, the percentages of GWS workers with one condition, two conditions, and three or more conditions who used vehicles to get to work were 43.6%, 42.2%, and 42.1%.

Active transport use was largely comparable across groups of persons depending on the number of their selected long-term health conditions.

It is also helpful to examine the types of long-term health conditions alongside methods of travel to work. Across all categories of long-term health conditions, workers with dementia (including Alzheimer’s) from GWS were most likely to use public transport (9.8%), followed by workers with diabetes (excluding gestational diabetes) (4.4%) and kidney disease (4.3%) (see Figure 11).

Meanwhile, employed persons from GWS who had diabetes were most likely to use vehicles to get to work (48.8%). GWS workers with a heart disease (including heart attack or angina) (47.1%) and a lung condition (including COPDⁿ or emphysema) (46.5%) were the second and third most likely to use a vehicle as their method of travel to work.

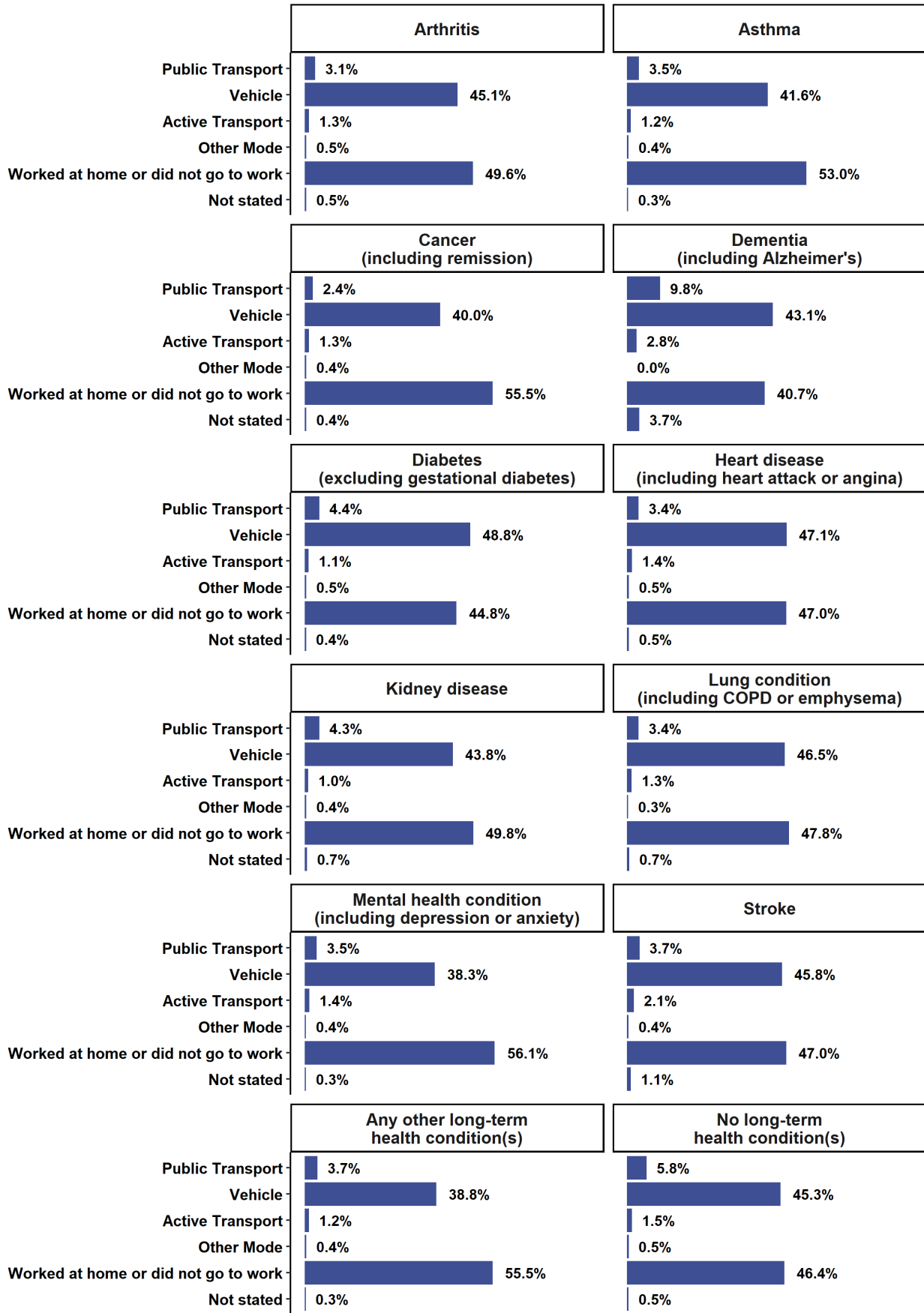
Although active transport in GWS remains relatively uncommon, workers who had dementia were most likely to use active transport to get to work (2.8%). This is followed by employed persons from GWS with stroke (2.1%) and mental health conditions (including depression or anxiety) (1.4%).

As stated earlier, working at home or not going to work was more common for persons with selected long-term health conditions than persons with none of the selected conditions. GWS workers who had mental health conditions were most likely to work at home or not go to work (56.1%), followed by those with cancer (55.5%) and asthma (53.0%).

In 2021, GWS workers with other long-term health conditions worked at home (55.5%) and used vehicles to get to work (38.8%). Only 3.7% of employed persons from GWS with other long-term health conditions used public transport.

ⁿ COPD is Chronic obstructive pulmonary disease.

FIGURE 11. TYPES OF LONG-TERM HEALTH CONDITIONS AND METHOD OF TRAVEL TO WORK OF EMPLOYED PERSONS IN GWS (PERCENTAGES), 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | LTHP and MTW06P Variables | Note: The Not stated category for the LTHP variable was excluded in this figure.

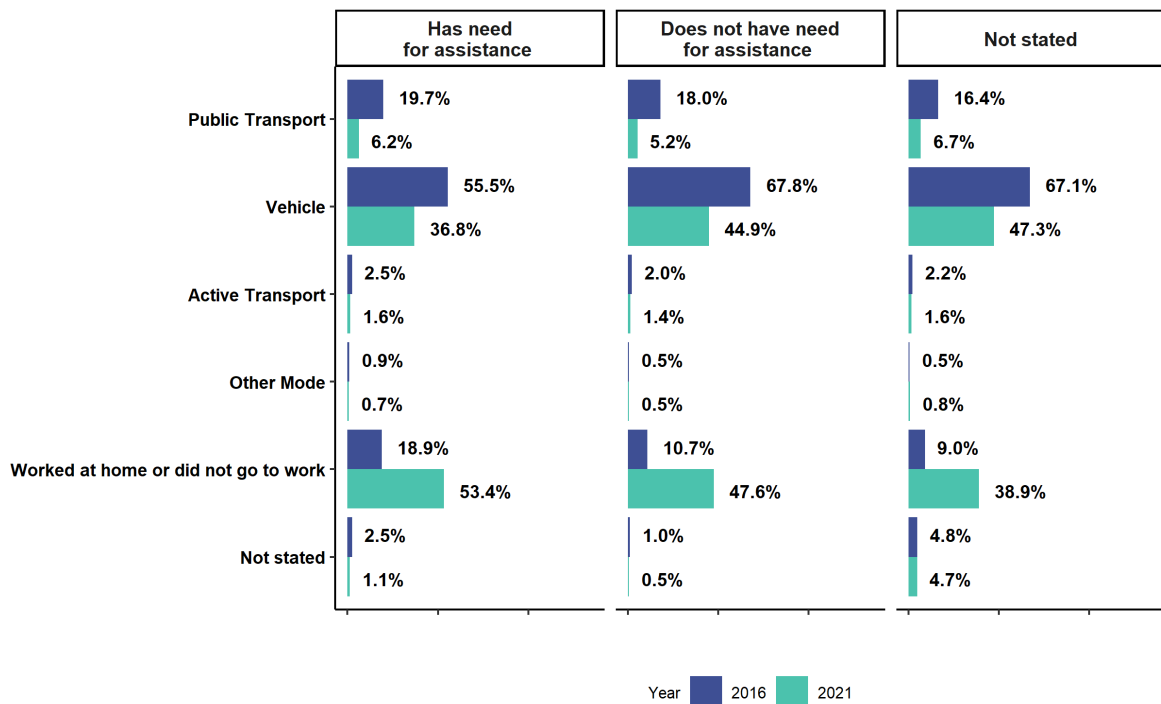
3.6 Method of travel to work and disability

The ABS Census captures disability through the core activity need for assistance or ASSNP variable. According to the ABS, '[t]his variable records the number of people with a profound or severe core activity limitation. People with a profound or severe core activity limitation are those needing assistance in their day to day lives in one or more of the three core activity areas of self-care, mobility and communication because of:

- a long-term health condition (lasting six months or more)
- a disability (lasting six months or more)
- old age.^{1[23]}

This section looks at how workers from GWS travel to work based on their need for assistance with core activities. While the long-term health conditions variable includes all persons, computations for Section 3.6 exclude persons falling under the 'Not Applicable' category of the MTW06P variable, and counts in this section denote the number of employed persons.^o Totals in this section were obtained by summing the number of persons across all categories.

FIGURE 12. NEED FOR ASSISTANCE AND METHOD OF TRAVEL TO WORK OF EMPLOYED PERSONS IN GWS (PERCENTAGES), 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | ASSNP and MTW06P Variables

In the 2021 Census, employed persons who had a need for assistance with core activities usually residing in GWS had a higher probability of taking public transport, using active transport, and working at home or not going to work compared to employed persons who did not have a need for assistance.

^o For the MTW06P variable, the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' 'Persons aged under 15 years', 'Overseas visitors.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-6-travel-modes-mtw06p>

GWS workers who had a need for assistance with core activities (6.2%) were more likely to use public transport than GWS workers who did not have a need for assistance (5.2%). The proportion of GWS workers with a need for assistance who used public transport decreased from 19.7% in 2016 to 6.2% in 2021. Meanwhile the proportion of GWS workers without a need for assistance who used public transport decreased from 18.0% to 5.2%.

In both the 2016 and 2021 Censuses, employed persons from GWS who had a need for assistance (36.8%) were less likely to use vehicles for their travel to work than those who did not have a need for assistance (44.9%). It is worth noting that in 2016, the vehicle was the most common mode of travel to work for employed persons needing assistance (55.5%) and employed persons without a need for assistance (67.8%) from GWS. In 2021, the proportion of vehicle use for both groups declined. The percentage of GWS employed workers with a need for assistance who used a vehicle to travel to work decreased from 55.5% in 2016 to 36.8% in 2021. Meanwhile, of all GWS employed workers without a need for assistance, the percentage who used a vehicle to get to work declined from 67.8% in 2016 to 44.9% in 2021.

As with previous findings, the use of active transport was minimal for both groups. However, GWS workers with a need for assistance had a marginally higher likelihood of taking active transport than those without a need for assistance in both the 2016 and 2021 Censuses. Of all employed persons from GWS with a need for assistance, 1.6% used active transport in 2021. This is a slight decrease from 2.5% in 2016. Among all employed persons from GWS who did not have a need for assistance, 1.4% used active transport in 2021. This is also a slight decrease from 2.0% in 2016.

Due to the COVID-19 pandemic, working at home or not going to work became the most common method of travel to work for both groups. However, in the 2021 Census, GWS workers with a need for assistance (53.4%) were more likely to work at home or not go to work than GWS workers without a need for assistance (47.6%). The same can be said for the 2016 Census. It is worth noting that there was a huge percentage-point increase in the percentages of employed persons working at home or not going to work for both groups. The percentage of GWS workers requiring assistance who worked at home or did not go to work increased from 18.9% in 2016 to 53.4% in 2021. Meanwhile, the percentage of GWS workers without a need for assistance who worked at home or did not go to work increased from 10.7% in 2016 to 47.6% in 2021.

Findings on long-term health conditions (Section 3.5) and disability from the 2021 Census demonstrates how these conditions impact one's choice of mode of travel, and in turn, one's mobility. These sections, therefore, underscore the importance of inclusion in transportation. In 2018, the Australian Institute of Health and Welfare (AIHW) recorded that 16.0% of people aged 15-64 with a disability who leave home experienced difficulties using public transport and 11.0% were unable to use public transport.^[24] In 2023, Harada and Waitt found four factors that can enable or constrain the access to public spaces by persons with disabilities who use wheelchairs and mobility scooters, namely 'the desire for social connections and independence, normative assumptions of standing design, the built form when going places (steps, gutters and stairs) alongside the interdependencies of various care and transport networks.'^[25, pp. 5-6] The last factor emphasises the importance of transport networks so persons with disabilities, including persons with long-term health conditions, can travel independently. Support for persons with health conditions is critical, especially in the post-COVID-19 era where long COVID has become more concerning and rates of anxiety and depression increasing.^[26,27]

3.7 Method of travel to work and weekly personal income

This section looks at how workers from GWS travel to work based on their weekly personal income. The total personal income (weekly) or INCP variable 'indicates the total income (in ranges) that a person usually receives each week.'^[28] The ABS includes sixteen categories under this variable.^p To make the analysis more succinct, this research report combines multiple categories, creating six categories with equal intervals of \$499 (\$25,999 annually):

- Nil and negative income,
- \$1-\$499 (\$1-\$25,999),
- \$500-\$999 (\$26,000-\$51,999),
- \$1,000-\$1,499 (\$52,000-\$77,999),
- \$1,500-1,999 (\$78,000-\$103,999),
- \$2,000 or more (\$104,000 or more), and
- Not stated.

Computations for Section 3.7 exclude persons falling under the 'Not Applicable' category of the MTW06P and INCP variables, and counts in this section denote the number of employed persons.^q Figure 17 shows the percentages of employed persons from GWS across various weekly income ranges and their methods of travel to work.

Public transport use varies across income groups in GWS. Trends have also shifted between the 2016 and 2021 Censuses. In 2016, GWS workers earning \$2,000 or more weekly were most likely to use public transport, with 25.5% of persons in this income range using public transport (see Figure 13). In 2021, GWS workers who earned \$500-\$999 (7.9%) and \$1-\$499 (7.1%) weekly were most likely to use public transport. As with the findings on age ranges and methods of travel to work (Section 3.3), these trends can be attributed to their industries in employment. In 2016, GWS workers earning \$2,000 or more weekly usually worked in the 'Professional, Scientific and Technical Services', 'Financial and Insurance Services', and Construction industries. In 2021, employed persons from GWS who earned \$500-\$999 commonly worked in 'Health Care and Social Assistance', 'Retail Trade', and Construction. Meanwhile, 'Retail Trade', 'Accommodation and Food Services', and 'Health Care and Social Assistance' were the most common industries of employment of GWS workers earning \$1-

^p The sixteen categories (excluding the Not stated, 'Not Applicable' and Overseas visitor categories) are:

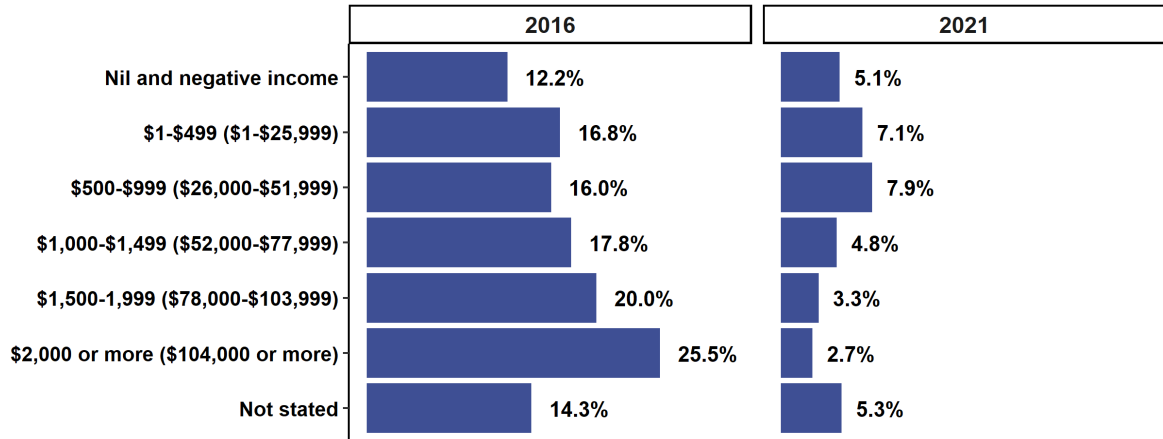
- 'Negative income,'
- 'Nil income,'
- '\$1-\$149 (\$1-\$7,799),'
- '\$150-\$299 (\$7,800-\$15,599),'
- '\$300-\$399 (\$15,600-\$20,799),'
- '\$400-\$499 (\$20,800-\$25,999),'
- '\$500-\$649 (\$26,000-\$33,799),'
- '\$650-\$799 (\$33,800-\$41,599),'
- '\$800-\$999 (\$41,600-\$51,999),'
- '\$1,000-\$1,249 (\$52,000-\$64,999),'
- '\$1,250-\$1,499 (\$65,000-\$77,999),'
- '\$1,500-\$1,749 (\$78,000-\$90,999),'
- '\$1,750-\$1,999 (\$91,000-\$103,999),'
- '\$2,000-\$2,999 (\$104,000-\$155,999),'
- '\$3,000-\$3,499 (\$156,000-\$181,999),' and
- '\$3,500 or more (\$182,000 or more)'

^q For the MTW06P variable, the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' 'Persons aged under 15 years', 'Overseas visitors.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-6-travel-modes-mtw06p>

For the INCP variable, the 'Not Applicable' category includes 'Persons aged under 15 years.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/income-and-work/total-personal-income-weekly-incp>

\$499 weekly in 2021. These shifts are notable given that, during the pandemic, frontline workers were commonly from these industries.

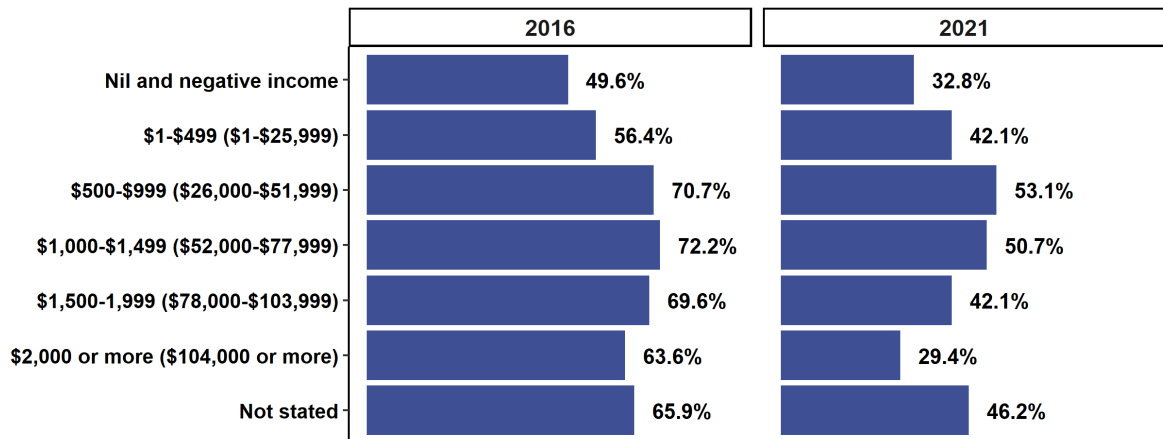
FIGURE 13. PERCENTAGES OF EMPLOYED PERSONS IN GWS WHO USED PUBLIC TRANSPORT ACROSS WEEKLY PERSONAL INCOME RANGES, 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | INCP and MTW06P Variables

Aside from the decrease in vehicle uptake due to COVID-19, trends in the usage of vehicles in relation to weekly personal income did not vary significantly across Census years unlike public transport. In both the 2016 and 2021 Censuses, GWS workers earning \$500-\$999 and \$1000-\$1,499 weekly were most likely to use vehicles to get to work. In 2016, the percentages of GWS workers earning \$1,000-\$1,499 and GWS workers earning \$500-\$999 who used vehicles to get to work were 72.2% and 70.7%, respectively (see Figure 14). In 2021, out of all employed persons from GWS earning \$500-\$999 weekly, 53.1% used vehicles to travel to work. Meanwhile, of GWS workers earning \$1,000-\$1,499 weekly, 50.7% used vehicles as a mode of transport. As mentioned previously, employed persons from GWS who earned \$500-\$999 commonly worked ‘Health Care and Social Assistance’, ‘Retail Trade’, and Construction in 2021. On the other hand, ‘Health Care and Social Assistance’, Construction, and Manufacturing were the top industries of GWS workers who earned \$1,000-\$1,499 weekly.

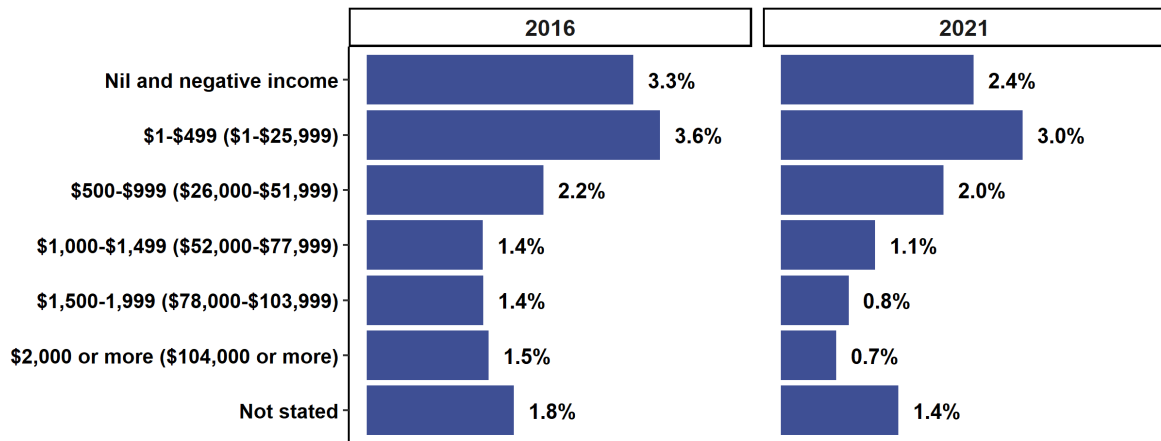
FIGURE 14. PERCENTAGES OF EMPLOYED PERSONS IN GWS WHO USED VEHICLES ACROSS WEEKLY PERSONAL INCOME RANGES, 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | INCP and MTW06P Variables

As with vehicle use, active transport use between the 2016 and 2021 Censuses in GWS did not vary significantly. In both Censuses, the \$1-\$499 and nil and negative weekly income groups were most likely to use active transport. The percentage of GWS workers earning \$1-\$499 weekly who used active transport was 3.6% in 2016 and 3.0% in 2021 (see Figure 15). Meanwhile, those who used active transport accounted for 3.3% in 2016 and 2.4% in 2021 of all GWS workers with nil and negative income. In the 2016 and 2021 Censuses, GWS workers earning \$1-\$499 weekly usually worked in the ‘Retail Trade’, ‘Accommodation and Food Services’, and ‘Health Care and Social Assistance’.

FIGURE 15. PERCENTAGES OF EMPLOYED PERSONS IN GWS WHO USED ACTIVE TRANSPORT ACROSS WEEKLY PERSONAL INCOME RANGES, 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | INCP and MTW06P Variables

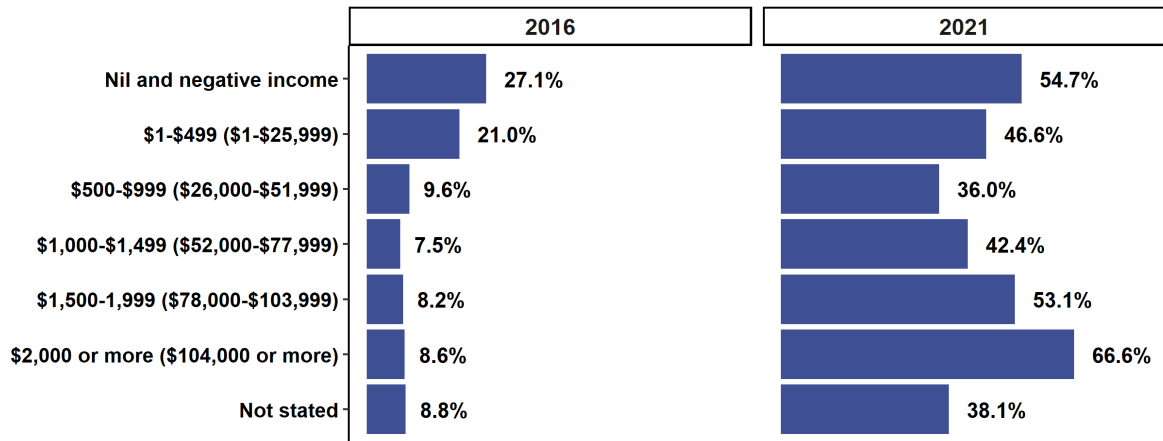
Across all income groups in GWS, working at home or not going to work became more common in 2021 due to the pandemic. In 2016, persons with nil and negative income (27.1%) and a weekly income of \$1-\$499 (21.0%) were most likely to either work at home or not go to work (see Figure 16). Meanwhile, in 2021, GWS workers with relatively higher weekly incomes were more likely to work at home or not go to work, aside from those with nil and negative income. Of all persons with a weekly income of \$2,000 and above, 66.6% worked at home or did not go to work in 2021. Persons within this income range commonly worked in ‘Professional, Scientific and Technical Services’, ‘Financial and Insurance Services’, and ‘Health Care and Social Assistance’. This was followed by persons with negative and nil income, with 54.7% of this cohort working from home or not having gone to work in 2021. They are usually part of the ‘Accommodation and Food Services’, ‘Retail Trade’, and Construction industries. Meanwhile, those who worked at home or did not go to work accounted for 53.1% of all employed persons who had a weekly income of \$1,500-\$1,999. In the 2021 Census, ‘Health Care and Social Assistance’, Construction, and ‘Education and Training’ were the common industries of GWS workers with this income range. This makes sense considering that these industries, although dependent on their roles and employers, are likely to provide more flexible working arrangements during the pandemic.

Furthermore, this section has shown how a person’s income relates to one’s transportation mode of choice. It has also demonstrated that these variables are somewhat linked to a person’s industry of employment.

These findings are important to situate within the context of COVID-19. Several LGAs in GWS were subjected to the harshest lockdowns during COVID-19 outbreaks in NSW. Despite these challenges, workers from GWS who had lower income ranges continued to service the state. GWS workers were more likely to travel longer distances than Greater Sydney workers in general (see Section 2). In 2021, Sydney was the top destination for the total GWS working population, even though workers in each of the GWS LGAs commonly worked within their LGAs of usual residence (see Table 3).

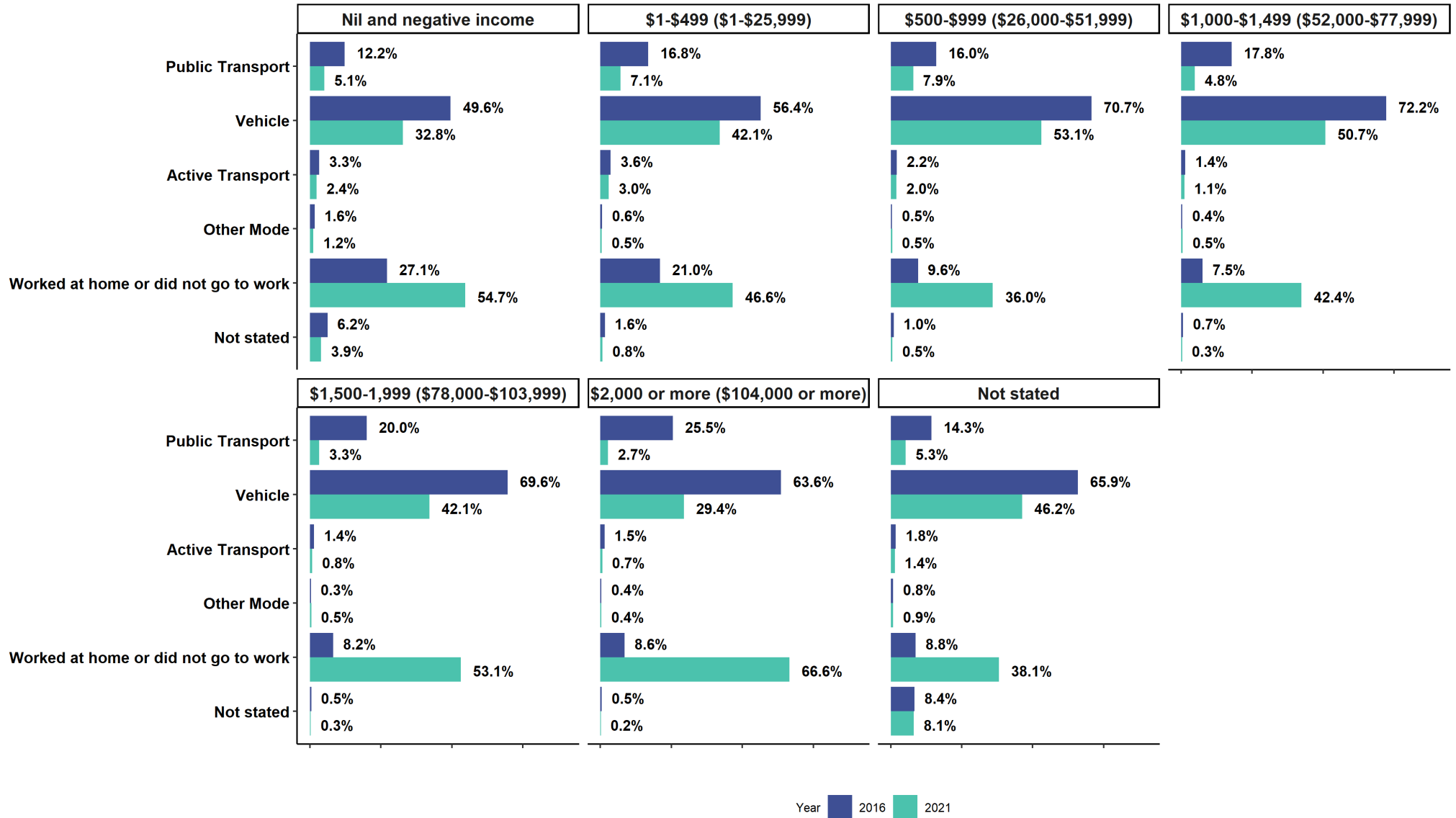
These findings relate to the worsening poverty divide of the Greater Sydney region. In a 2023 report, the NSW Council of Social Service (NCOSS) stated that NSW has almost one million people living below the poverty line and that ‘poverty is highly concentrated in Sydney’s Western and South-Western suburbs, with comparatively far lower rates in the city’s east.’^[29] As Rose and Nicholas state, ‘The “latte line” dividing Sydney’s western and eastern suburbs is hardening, with new research identifying deepening levels of poverty within already disadvantaged areas and groups.’^[30]

FIGURE 16. PERCENTAGES OF EMPLOYED PERSONS IN GWS WHO WORKED AT HOME OR DID NOT GO TO WORK ACROSS WEEKLY PERSONAL INCOME RANGES, 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | INCP and MTW06P Variables

FIGURE 17. WEEKLY PERSONAL INCOME RANGES AND METHOD OF TRAVEL TO WORK OF EMPLOYED PERSONS IN GWS (PERCENTAGES), 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | INCP and MTW06P Variables

4. Worked at home or did not go to work

To acquire information on the Australian population's transport behaviours, the 2021 ABS Census asked the question, 'How did Person [1] get to work on Tuesday 10 August 2021?' Respondents can select more than one method of travel to work across all categories except for the following categories: walked only, worked at home, and did not go to work.^[15] This means that respondents can select either 'walked only,' 'worked at home,' or 'did not go to work' without any other methods of travel to work.

In the 2021 Census, 522,294 employed persons from the 13 GWS LGAs worked at home or did not go to work. This constitutes almost half or 47.6% of all employed persons in the GWS region (see Section 3.1). As mentioned in earlier sections, the increases in both volume and proportion of GWS workers working at home or not going to work are likely due to the COVID-19 pandemic. The ABS states, 'A number of regions across the country were in various stages of lockdown on Census day, and the week preceding it, resulting in a greater number of people working from their homes. Not only may this impact their responses for their place of work, but also, their travel to work.'^[15]

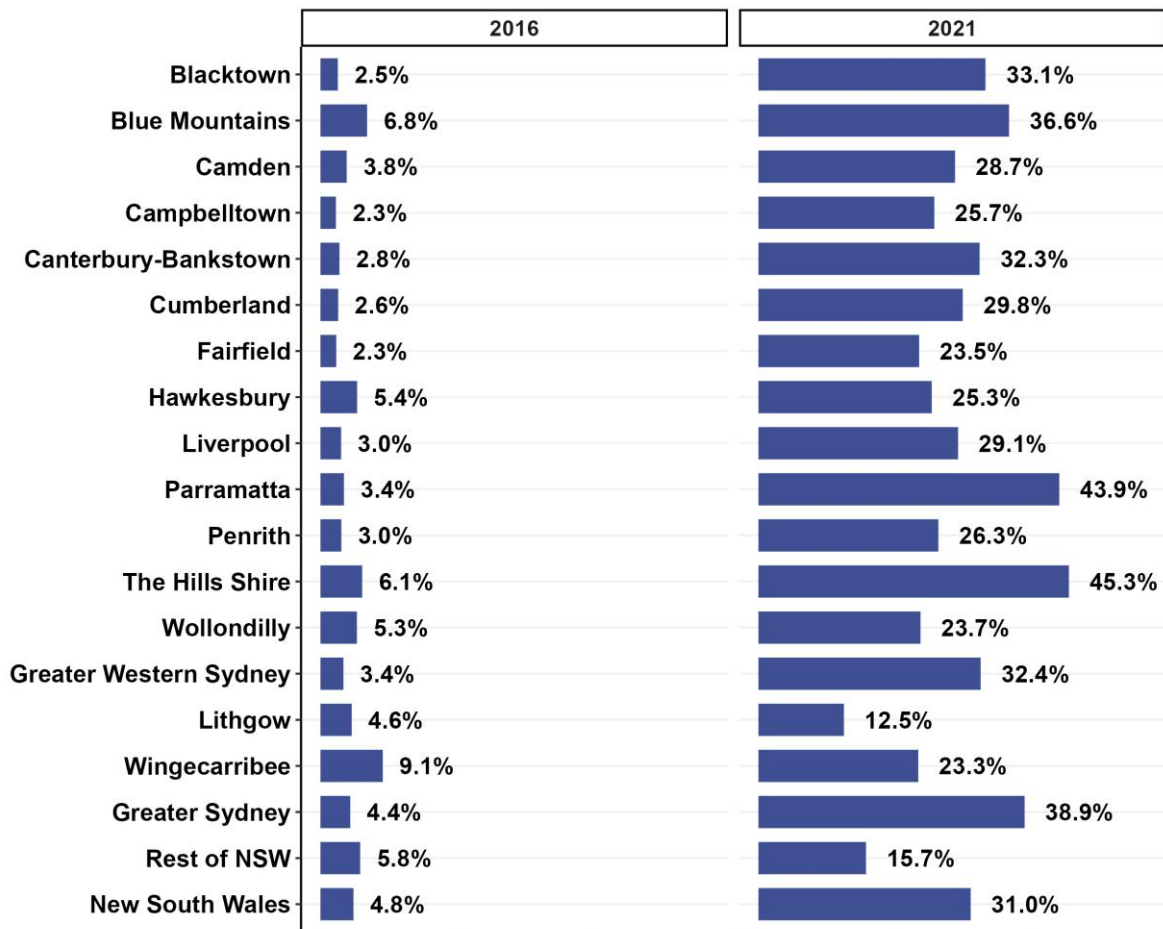
It is also important to look at GWS workers who worked at home and GWS workers who did not go to work separately. Computations for this section exclude persons falling under the 'Not Applicable' category and counts in this section denote the number of employed persons.[†] The total number of persons under this category and employed persons in this section were obtained from Section 3.1.

4.1 Worked at home

In the 2021 Census, 356,284 employed persons from GWS worked at home. This is a percentage increase of 945.9% or a ten-fold increase from 34,065 in the 2016 Census. Those who worked from home also accounted for 32.4% of all employed persons from GWS in 2021 (see Figure 18). This proportion is a huge increase from 3.4% in 2016.

[†] For the MTWP variable, the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' 'Persons aged under 15 years', 'Overseas visitors.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>

FIGURE 18. PERCENTAGES OF EMPLOYED PERSONS WHO WORKED AT HOME IN GWS AND COMPARATIVE REGIONS, 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | MTWP and MTW15P Variables

Compared to Greater Sydney workers (38.9%), GWS workers were less like to work from home (32.4%) in 2021. However, they were more likely to work from home than their counterparts from the Rest of NSW (15.7%) and NSW (31.0%).

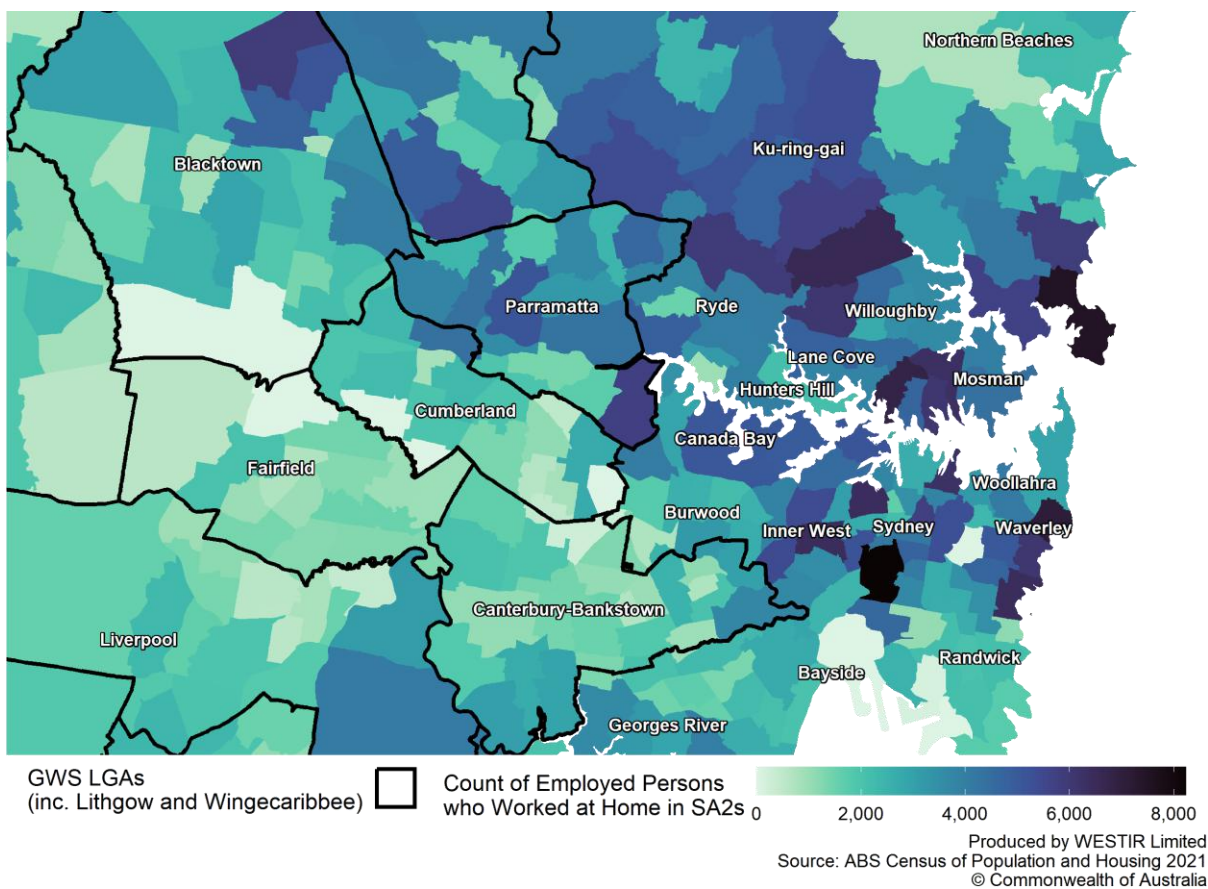
Map 4 and Map 5 show the geographical distribution of employed persons who worked at home in 2021 across SA2s in GWS and the Greater Sydney region. SA2s with lighter colours denote a number of persons closer to 0 (zero or nil) while those with darker colours represent a number of persons closer to 8,000 and above.

It is visible from Map 4 that, aside from SA2s in the Parramatta LGA, SA2s near the Sydney LGA, North Sydney, and eastern suburbs had darker shades of blue. These denote a number of employed persons who worked from home above 4,000.

Map 5 shows the counts of employed persons who worked at home in SA2s but showing a wider view to capture the entire GWS region. Parramatta, The Hills Shire, and several SA2s in Blacktown had darker shades of blue, indicating a higher number of workers who worked at home. This coincides with the LGA findings shown on Figure 18, where The Hills Shire (45.3%) and Parramatta (43.9%) had the highest proportions of workers who worked at home within their respective LGA populations.

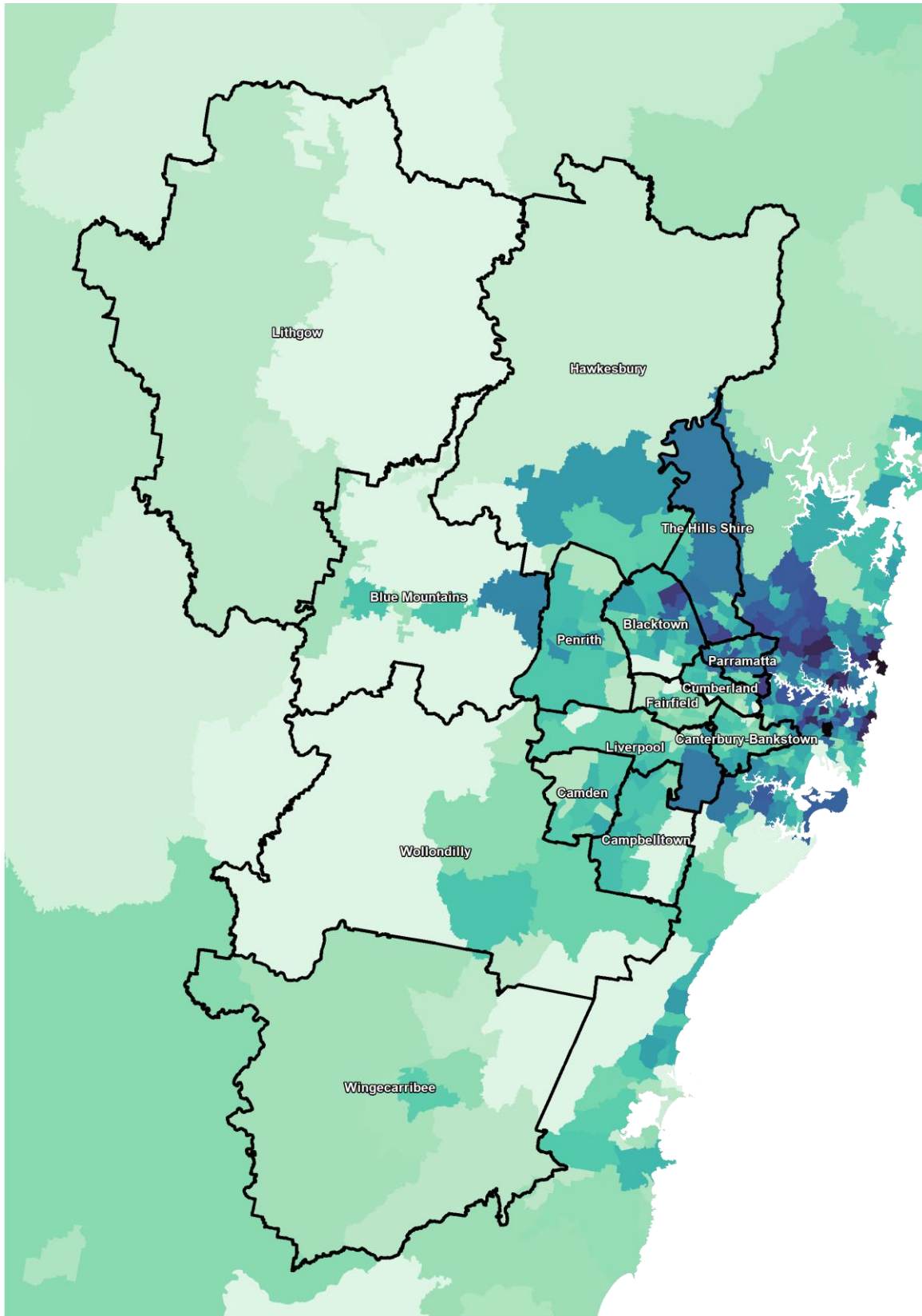
The ABS' webinar on Australia's journey to work in the 2021 Census tackled the changing nature of working from home.^[31] In 1981, those who commonly worked at home were dairy farmers, wheat and sheep farmers, rice growers, tobacco growers, and poultry farmers. By 2001, the most common occupations who worked at home were livestock farmers, mixed crop and livestock farmers, authors and related professionals, caravan park and camping ground managers, and crop farmers. By 2021, persons who worked at home were business and systems analysts or programmers, ICT managers, ICT network and support professionals, media professionals, and sales, marketing and public relations professionals. In previous decades, those who worked at home had occupations related to agriculture. This is a huge shift compared to the 2021 Census, wherein those who commonly worked at home had jobs related to technology, marketing, and sales, among others. The COVID-19 pandemic was also an important factor, as it drove a transition to remote work, particularly for these industries (see Section 8.3).

MAP 4. NUMBER OF EMPLOYED PERSONS WHO WORKED AT HOME IN GWS AND GREATER SYDNEY SA2S, 2021 (ZOOMED IN)



Data Source: DataPacks, 2021 Census General Community Profile, Table G62, Worked_at_home_Persons variable

MAP 5. NUMBER OF EMPLOYED PERSONS WHO WORKED AT HOME IN GWS AND GREATER SYDNEY SA2S, 2021



GWS LGAs (inc. Lithgow and Wingecarribee) Count of Employed Persons who Worked at Home in SA2s



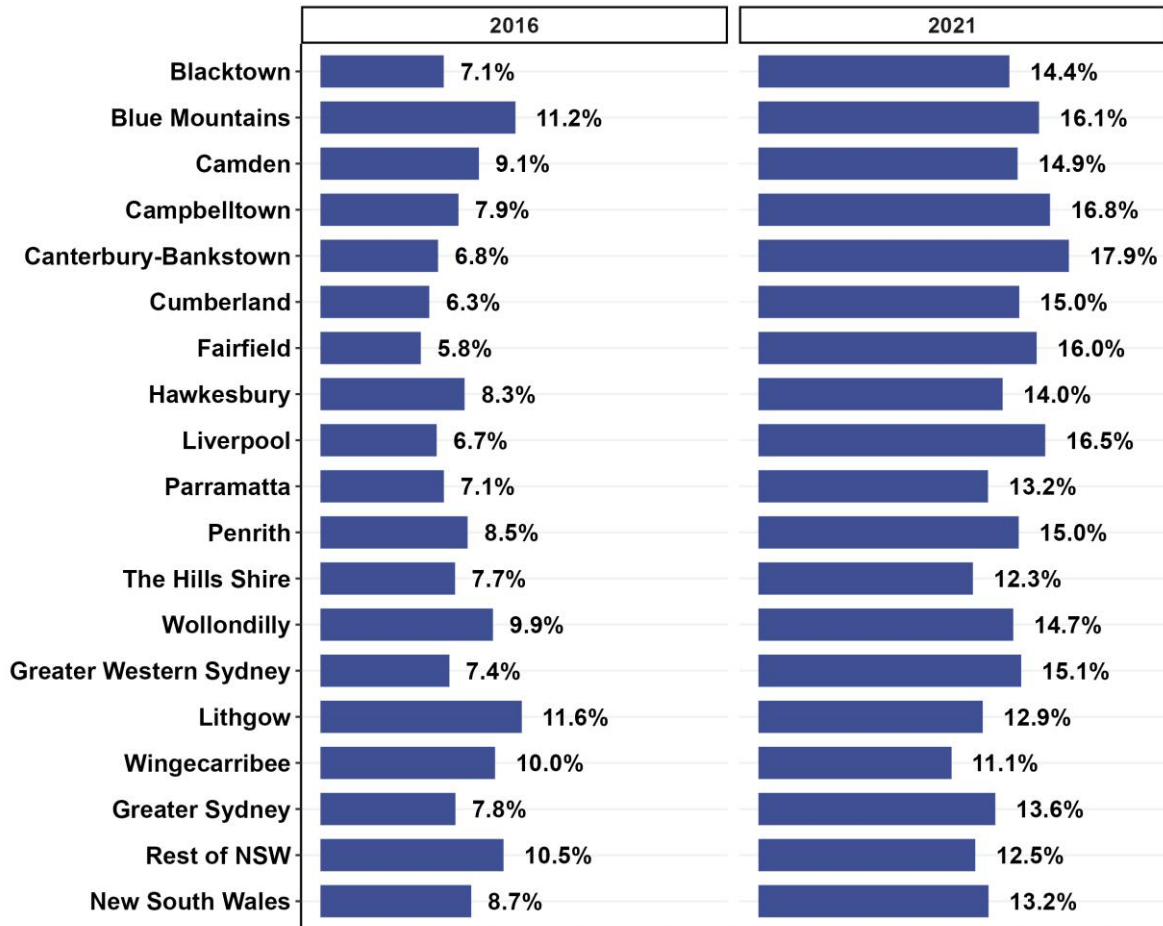
Produced by WESTIR Limited
 Source: ABS Census of Population and Housing 2021
 © Commonwealth of Australia

Data Source: DataPacks, 2021 Census General Community Profile, Table G62, Worked_at_home_Persons variable

4.2 Did not go to work

In GWS, 166,014 employed persons indicated that they did not go to work on 10 August 2021. This is more than double (120.5%) the figure from 2016 at 75,300. Of all GWS workers, 15.1% did not go to work in 2021, which is a 7.7 percentage-point increase from 7.4% in 2016 (see Figure 19). GWS (15.1%) had a higher proportion of workers who did not go to work in the 2021 Census, compared to Greater Sydney (13.6%), the Rest of NSW (12.5%), and NSW (13.2%).

FIGURE 19. PERCENTAGES OF NOT GOING TO WORK AMONG EMPLOYED PERSONS IN GWS AND COMPARATIVE REGIONS, 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | MTWP and MTW15P Variables

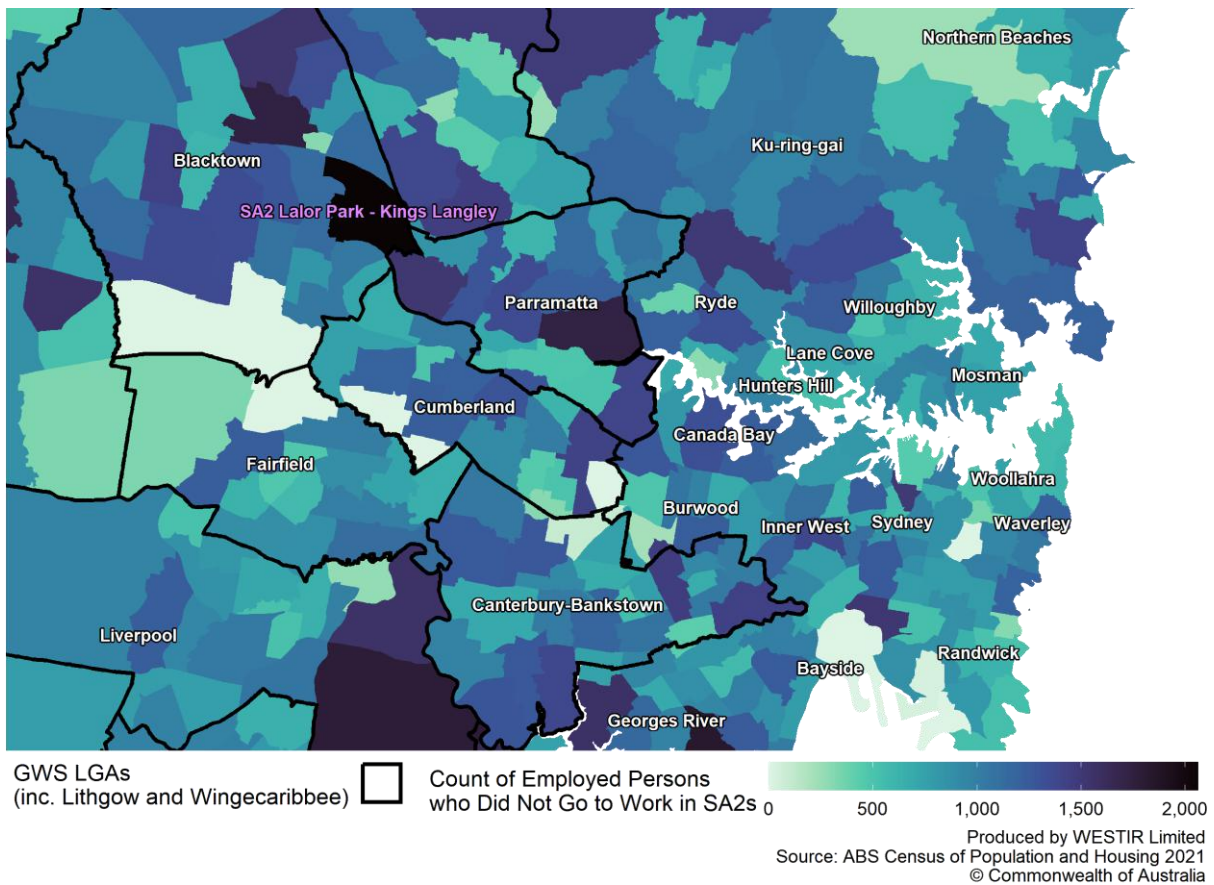
Map 6 and Map 7 show the number of employed persons who did not go to work on 10 August 2021 across SA2s in GWS and Greater Sydney. Lighter colours denote a number closer to 0, while darker shades represent a number around 2,000 and above.

Looking at Map 7, several SA2s in GWS have darker shades, denoting counts of more than 1,500. These SA2s can be observed in The Hills Shire, Parramatta, Cumberland, Penrith, Blacktown, Liverpool, Campbelltown, and Hawkesbury. This coincides with the findings shown on Figure 19, where the percentages of workers who did not go to work within GWS LGAs did not vary greatly. The Hills Shire had the smallest proportion in 2021 at 12.3%, while Canterbury-Bankstown had the highest proportion at 17.9%.

Westernmost GWS LGAs, including Lithgow and Wingecarribee, have lighter shades, indicating lower numbers of employed persons who did not go to work within these SA2s. Compared to the counts of persons who worked at home (Map 4 and Map 5), differences between eastern and western SA2s were not as obvious.

From Map 6, a zoomed in version of Map 7, one particular SA2 within Blacktown LGA has a relatively darker shade, indicating a number close to 2,000 or above. This SA2 is Lalor Park – Kings Langley (see Map 6). 2,061 employed persons did not go to work on 10 August 2021 from Lalor Park – Kings Langley. This SA2 had the highest number of workers who did not go to work in 2021 out of all NSW SA2s.

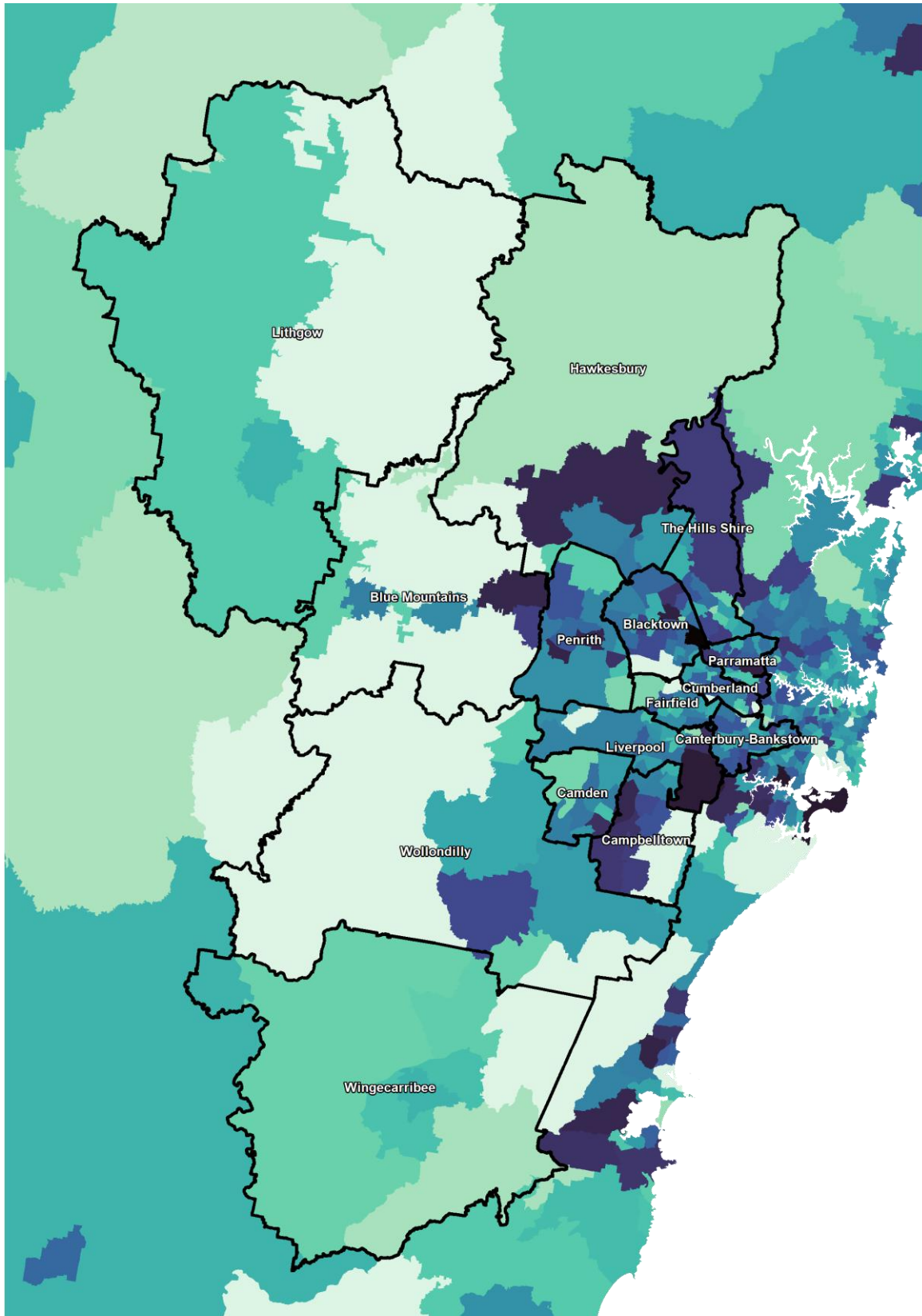
MAP 6. NUMBER OF EMPLOYED PERSONS WHO DID NOT GO TO WORK IN GWS AND GREATER SYDNEY SA2S, 2021 (ZOOMED IN)



Data Source: DataPacks, 2021 Census General Community Profile, Table G62, Did_not_go_to_work_Persons variable

The above findings show that GWS workers, as with workers from the Greater Sydney region, the Rest of NSW, and NSW, were more likely to work from home than not go to work on 10 August 2021. Because of this, it is important to examine the industries of employment of those who worked at home and those who did not go to work. In the 2021 Census, GWS workers who worked at home were usually in ‘Professional, Scientific and Technical Services’, ‘Education and Training’, and ‘Financial and Insurance Services’. Meanwhile, employed persons from GWS who did not go to work on 10 August 2021 were part of the Construction, ‘Retail Trade’, and ‘Health Care and Social Assistance’. These findings show the differences in the nature of work of these two groups of workers from GWS.

MAP 7. NUMBER OF EMPLOYED PERSONS WHO DID NOT GO TO WORK IN GWS AND GREATER SYDNEY SA2s, 2021



GWS LGAs
(inc. Lithgow and Wingecarribee)



Count of Employed Persons
who Did Not Go to Work in SA2s



Produced by WESTIR Limited
Source: ABS Census of Population and Housing 2021
© Commonwealth of Australia

Data Source: DataPacks, 2021 Census General Community Profile, Table G62, Did_not_go_to_work_Persons variable

5. Vehicle

5.1 Categories of vehicles

In the 2021 Census, vehicles were the second most common mode of travel to work for workers residing in GWS. Of the 1,098,393 employed persons in the GWS region, 492,553 or 44.8% used vehicles to get to work. There was a decrease in both the volume and the proportion of persons who used vehicles as a method of travel to work. As stated in Section 3.5, these decreases are due to the work from home mandates and mobility restrictions due to COVID-19. The proportion of vehicle users was also higher in GWS (44.8%) compared to Greater Sydney (38.2%). However, the figure for GWS is lower than the Rest of NSW (66.4%) and NSW (47.8%).

The ABS records four subcategories under the 'Vehicle' category as a method of travel to work, namely:

- 'Car, as driver',
- 'Car, as passenger',
- 'Truck', and
- 'Motorbike/scooter'.^s

Computations for this section exclude persons falling under the 'Not Applicable' category and counts in this section denote the number of employed persons.^t The total number of vehicle users and employed persons in this section were obtained from Section 3.1. Figure 20 shows the percentages of employed persons from GWS across these subcategories.

Of these four categories, '**Car, as driver**' was the most common method of travel to work for GWS workers. Of the 1,098,393 workers usually residing in GWS, 445,630 or 40.6% drove a car to get work in 2021. This is a 20.7 percentage-point decrease from 61.3% in 2016. Within GWS, Wollondilly (53.0%), Hawkesbury (51.0%), and Camden (48.5%) had the highest proportions of employed persons who used a car as a driver within their respective LGA populations. Lithgow (63.6%) and Wingecarribee (54.9%) had higher percentages than all GWS LGAs. It is also worth noting that these two LGAs had relatively lower decreases in volume and percentages of workers who drove a car to get to work. Compared to Greater Sydney (34.5%), GWS (40.6%) had a higher percentage of persons falling into the 'Car, as driver' category. However, GWS had a smaller percentage compared to the Rest of NSW (60.8%) and NSW (43.4%).

'**Car, as passenger**' ranked the second most common among the vehicle-related categories, despite only 3.2% of GWS workers falling into this category. Of the 1,098,393 workers who were residents of GWS, 35,259 or 3.2% used cars as passengers to get to work in 2021. This is a small percentage-point decrease of 1.5 from 4.7% in 2016. The number of persons under the 'Car, as passenger' category in GWS also declined by 26.2% from 47,808 in the 2016 Census to 35,259 in the 2021 Census. Within GWS LGAs, the percentage of workers who used a car as a passenger to get to work did not vary greatly, from 2.2% in the Blue Mountains and The Hills Shire to 4.4% in Fairfield. Following Fairfield with the highest percentages of

^s In TableBuilder, these subcategories can be found under MTW15P for the 2016 Census and MTWP 2-digit level for the 2021 Census.

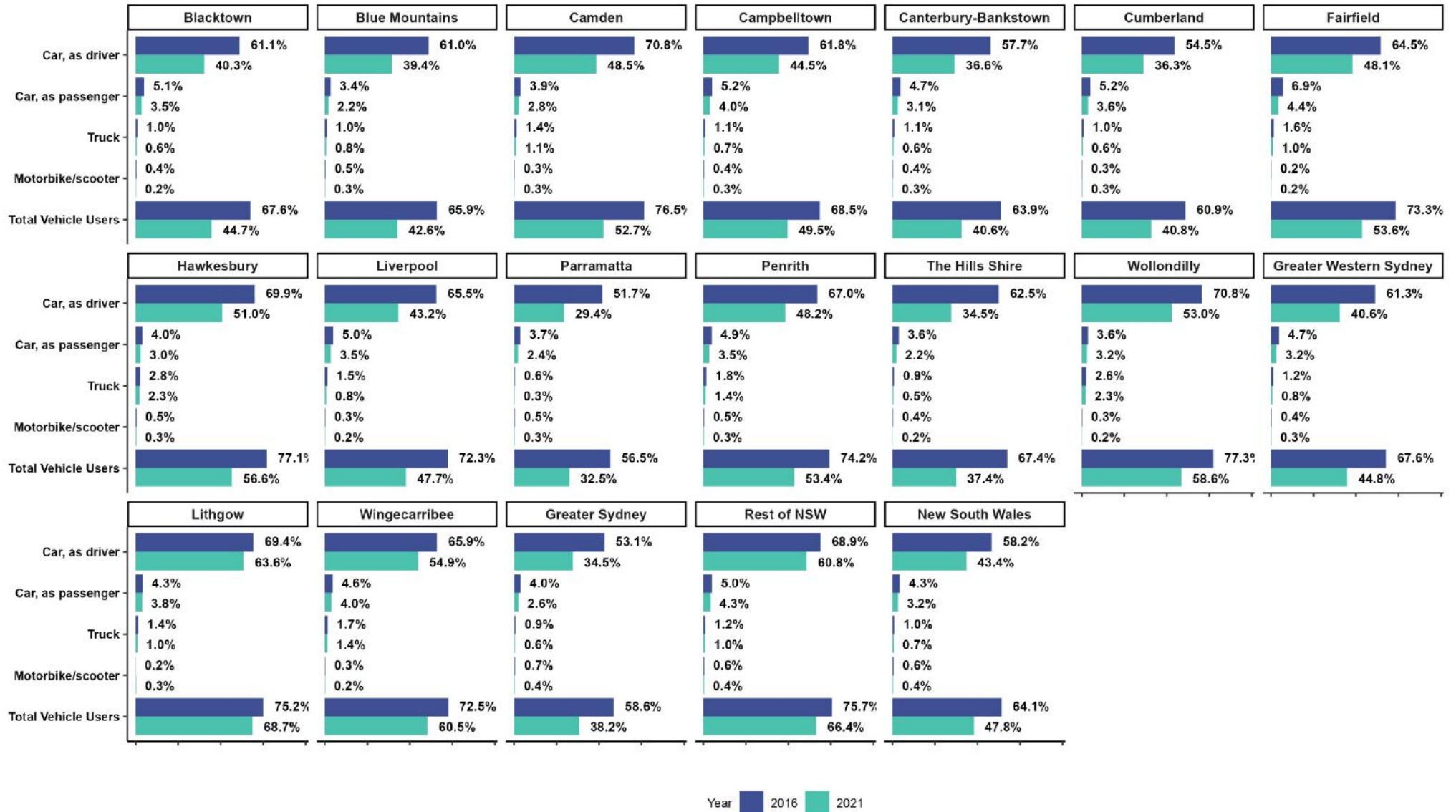
^t For the MTWP variable, the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' 'Persons aged under 15 years', 'Overseas visitors.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>

workers under this category were Campbelltown (4.0%) and Cumberland (3.6%). GWS (3.2%) had a higher proportion of employed persons who used a car as a passenger compared to Greater Sydney (2.6%), a similar proportion to NSW (3.2%), and a lower proportion than the Rest of NSW (4.3%)

There were also workers from GWS who used **trucks** to get to work, although, less common than car use. Of the 1,098,393 workers who were residents of GWS, 8,777 or 0.8% used a truck as a method of travel to work in 2021. This is a decrease of 0.4 percentage-points from 1.2% in 2016. The number of employed persons within this category also decreased from 12,585 to 8,777 by 30.3%. Across GWS LGAs, Wollondilly (2.3%), Hawkesbury (2.3%), and Penrith (1.4%) had the highest proportions of workers who used trucks to get to work in 2021. GWS (0.8%) had a higher percentage compared to Greater Sydney (0.6%) and NSW (0.7%) but a lower percentage than the Rest of NSW (1.0%).

A '**Motorbike/scooter**' was the least common subcategory among GWS workers in both the 2016 and 2021 Censuses. The number of motorbike or scooter users among GWS workers decreased by 26.6%, from 3,922 in 2016 to 2,879 in 2021. The share in motorbike/scooter use among GWS workers decreased marginally, from 0.4% in 2016 to 0.3% in 2021. In the 2021 Census, the percentage of employed persons used a motorbike or scooter to get to work did not vary significantly across GWS LGAs, ranging from 0.2% to 0.3%. GWS (0.3%) had a lower percentage of employed persons within this category compared to Greater Sydney (0.4%), the Rest of NSW (0.4%), and NSW (0.4%).

FIGURE 20. VEHICLE CATEGORIES OF EMPLOYED PERSONS IN GWS AND COMPARATIVE REGIONS (PERCENTAGES), 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | PURP and 2-digit level MTWP Variables

5.2 Number of motor vehicles per dwelling

Examining the number of registered motor vehicles in each dwelling can provide more context into vehicle use within the region. This subsection uses the VEHRD or 'Number of motor vehicles (ranges)' variable from the 2021 Census, which is based on a household's place of enumeration instead of a person's place of usual residence.^u This records responses to the Census question, 'How many registered motor vehicles owned or used by residents of this dwelling were garaged or parked at or near this dwelling on the night of Tuesday 10 August 2021?'. The latter is used for the majority of this paper unless stated otherwise. Counts in this section refer to the number of dwellings. Totals in this section were obtained by summing the number of dwellings across all categories.

The VEHRD variable has five possible categories, aside from the 'Not Applicable' category:

- 'No motor vehicles,'
- 'One motor vehicle,'
- 'Two motor vehicles,'
- 'Three motor vehicles,'
- 'Four or more motor vehicles,' and
- 'Not stated'.^[32]

In the 2021 Census, GWS dwellings were most likely to have one motor vehicle (34.2%) or two motor vehicles (33.6%) (see Figure 22). Within the GWS region, there were 298,027 dwellings with one motor vehicle and 292,835 dwellings with two motor vehicles. More than one in ten (11.5% or 100,710) GWS dwellings had three motor vehicles. Only 7.1% or 61,956 of dwellings had four or more vehicles, and 7.8% or 68,353 dwellings in GWS did not own motor vehicles in 2021 (see Appendix).

Overall, the number of GWS dwellings with at least one motor vehicle increased by 18.5%, from 636,070 in the 2016 Census to 753,528 in the 2021 Census. The share of dwellings with at least one motor vehicle also increased slightly, from 84.6% in 2016 to 86.4% in 2021. GWS (86.4%) exceeded Greater Sydney (84.2%) and NSW (85.7%) in terms of the proportion of dwellings owning at least one motor vehicle in 2021.^v However, the Rest of NSW (88.4%) had a slightly higher proportion compared to the GWS region.

Out of all GWS LGAs, The Hills Shire (95.1%), Camden (94.4%), and Wollondilly (93.2%) had the highest percentages of dwellings with at least one motor vehicle in the 2021 Census. Wingecarribee, although outside the GWS region, also had a higher percentage of dwellings with at least one motor vehicle at 92.3%.

In the 2021 Census, Parramatta (44.2%), Cumberland (38.3%), and Canterbury-Bankstown (37.0%) were most likely to have dwellings with **one motor vehicle** (see Figure 22). It is, again, worth noting that these three LGAs are the easternmost LGAs of GWS. In the 2016 Census, Parramatta (39.6%) and Cumberland (36.2%) had the highest proportions of dwellings with

^u The ABS states, 'Place of enumeration is where a person is counted on Census Night. It is considered neither a person, family, nor dwelling level variable but rather a geography and can be applied to all levels of data.' In addition, 'Place of enumeration is where a person is counted on Census Night. It is considered neither a person, family, nor dwelling level variable but rather a geography and can be applied to all levels of data.' <https://www.abs.gov.au/statistics/detailed-methodology-information/information-papers/comparing-place-enumeration-place-usual-residence>

The 'Not Applicable' category includes 'Unoccupied private dwellings', 'Non-private dwellings', and 'Migratory, off-shore and shipping SA1'. <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/number-motor-vehicles-ranges-vehrd>

^v The summation of multiple categories from Figures 21 and 22 will vary from the values mentioned in this section due to rounding.

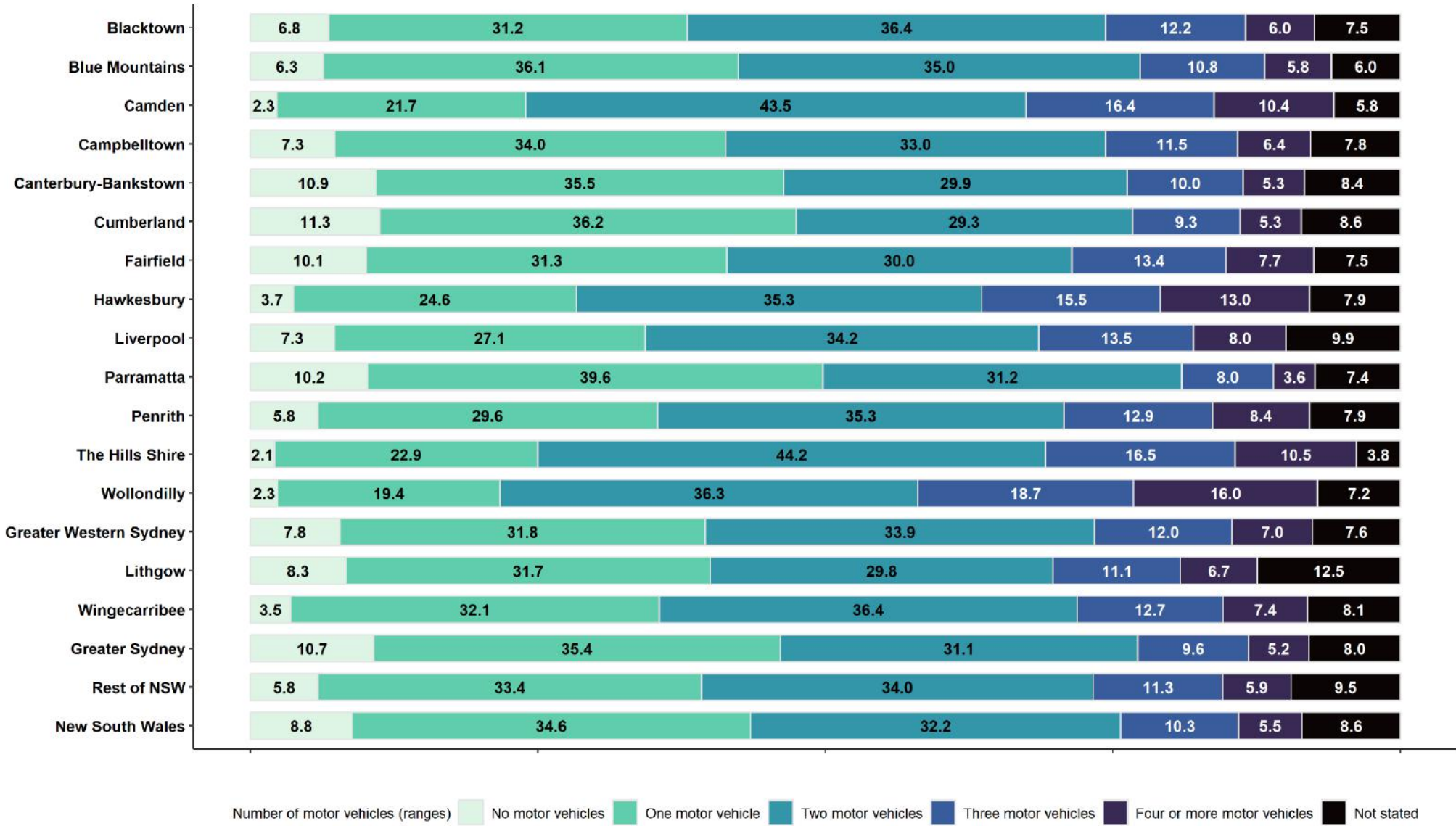
one motor vehicle, but the Blue Mountains ranked third, with a proportion of 36.1% (see Figure 21).

The GWS LGAs with the highest proportions of dwellings with **two motor vehicles** were Camden (44.3%), The Hills Shire (42.7%), and Wollondilly (36.9%) in 2021. The same LGAs had the highest proportions in 2016, but The Hills Shire (44.2%) previously had a higher figure compared to Camden (43.5%), and Blacktown (36.4%).

Although ownership of three motor vehicles was not as common in GWS, dwellings in Wollondilly (17.7%), Hawkesbury (15.9%), and Camden (15.6%) were most likely to have **three motor vehicles** among GWS LGAs in 2021. Hawkesbury and Wollondilly are the northernmost and southernmost LGAs of GWS, respectively. In 2016, Wollondilly (18.7%), The Hills Shire (16.5%), and Camden (16.4%) had the highest proportions of dwellings with three vehicles.

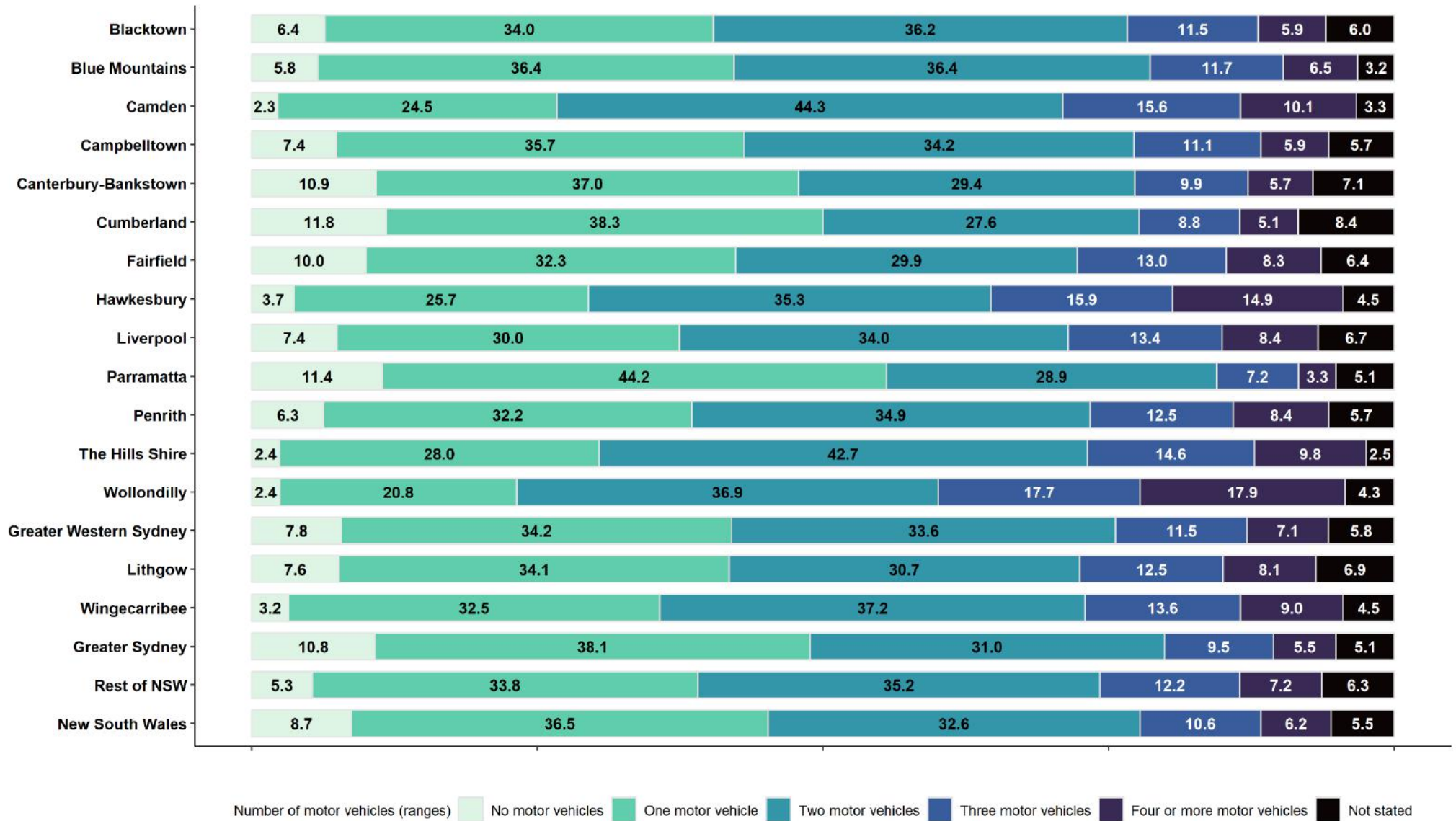
As with the previous category, Wollondilly (17.9%), Hawkesbury (14.9%), Camden (10.1%), had the highest shares of dwellings with **four or more motor vehicles** across all GWS LGAs in 2021. In the 2016 Census, Wollondilly (16.0%) had the highest percentage, followed by Hawkesbury (13.0%) and The Hills Shire (10.5%).

FIGURE 21. PERCENTAGES OF DWELLINGS WITH THE NUMBER OF MOTOR VEHICLES (RANGES) IN GWS AND COMPARATIVE REGIONS, 2016



Data Source: TableBuilder Pro, 2016 Census - Counting Dwellings, Place of Enumeration (MB) | VEHRD variable

FIGURE 22. PERCENTAGES OF DWELLINGS WITH THE NUMBER OF MOTOR VEHICLES (RANGES) IN GWS AND COMPARATIVE REGIONS, 2021



Data Source: TableBuilder Pro, 2021 Census - counting dwellings, place of enumeration | VEHRD variable

6. Public transport

Public transport lagged behind vehicle use and working from home or not going to work in 2021, partly due to the COVID-19 pandemic. Of all employed persons in GWS, only 5.2% (57,297 of 1,098,393) used public transport to travel to work in 2021. This reflects a 12.8 percentage-point decrease from 18.0% recorded in the 2016 Census. Compared to the Greater Sydney region (5.8%), GWS (5.2%) had a slightly lower proportion of public transport use among employed persons. However, it had a higher proportion compared to the Rest of NSW (1.0%) and NSW (4.2%).

In the 2021 Census, the ABS recorded five subcategories under the 'Public transport' category as a method of travel to work, namely:

- 'Train',
- 'Bus',
- 'Ferry',
- 'Tram/light rail', and
- 'Taxi/ride-share service'.^w

Computations for this section exclude persons falling under the 'Not Applicable' category and counts in this section denote the number of employed persons.^x The total number of public transport users and employed persons in this section were obtained from Section 3.1.

It is worth looking into the other modes GWS workers use alongside public transport. As mentioned in Section 4, the 2021 Census included a question, 'How did Person [1] get to work on Tuesday 10 August 2021?' Respondents are allowed to select all methods used.^y The MTWP variable is created by recording up to three methods of travel to work.^z This allows Census data users to identify combinations of transport methods that workers use.^{aa} The most common combinations under each subcategory will be mentioned in this section.

^w In TableBuilder, these subcategories can be found under MTW15P for the 2016 Census and MTWP 2-digit level for the 2021 Census.

The ABS made changes in the 2021 Census for these subcategories. In the 2016 Census, the light rail and ride-share services were not yet included. Below are the categories under 'Public transport' as recorded in the 2016 Census:

- 'Train',
- 'Bus',
- 'Ferry',
- 'Tram', and
- 'Taxi'.

To compare counts from the 2016 and 2021 Censuses, the author has retained the 2016 Census counts for the 'Tram' and 'Taxi' subcategories but has changed the subcategory names to 'Tram/light rail' and 'Taxi/ride-share service'. More information can be found here <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>.

^x For the MTWP variable, the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' 'Persons aged under 15 years', 'Overseas visitors.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>

^y The instruction states, 'If the person used more than one method of travel to work, select all methods used.' More information can be found here <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>.

^z According to the ABS, 'Respondents were able to select more than one response with up to three methods recorded. Where more than three methods were used, responses were accepted in the order they appeared on the form and the extra responses were rejected.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>

^{aa} The 3-digit level of the MTWP variable from the 2021 Census was used in this section. <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>

6.1 Train

In GWS, 45,605 employed persons used a train to get to work in 2021. This is a 69.1% decrease from 147,497 in 2016. Despite the decreased uptake due to the COVID-19 pandemic, it remains the most common mode of public transport for GWS workers. In 2021, 4.2% of all GWS workers indicated the 'train' as their method of travel to work. This figure is a 10.4 percentage-point decrease from 14.5% in 2016. The share of train users among employed persons in GWS (4.2%) was higher than Greater Sydney (4.1%), the Rest of NSW (0.2%), and NSW (2.8%), despite the pandemic. Among GWS LGAs, Cumberland (9.8%), Parramatta (5.5%), Campbelltown (5.2%), and Canterbury-Bankstown (5.2%) had the highest proportions of employed persons who used trains as their method of travel to work. Employed persons residing in GWS who used a train commonly used a train only (57.6%), used a train and a bus (22.1%), and used a train and a car as a driver (7.9%).

6.2 Buses

Buses were the second most common mode of public transport for GWS workers, accounting for 0.9% or 9,548 of GWS workers in the 2021 Census. As with the 'train' category, there was a decrease in the share of employed persons in GWS who used buses to get to work. In 2016, 3.2% of GWS workers indicated the 'bus' as their method of travel to work, reflecting a 2.4 percentage-point decrease in 2021. As expected, the volume of employed persons who used buses to get to work shrunk by 70.8%, from 32,711 in 2016 to 9,548 in 2021. Compared to Greater Sydney (1.4%) and NSW (1.1%), the proportion of workers who used buses to get to work was smaller in GWS (0.9%). However, GWS' proportion was larger than that of the Rest of NSW (0.6%). Across GWS LGAs, Parramatta (1.6%), The Hills Shire (1.3%), and Blacktown (1.1%) had the highest percentages of workers who used buses to get to work. More than eight of ten employed persons from GWS (81.5%) under the 'Bus' category used a bus only to get to work. Meanwhile, 7.4% used a bus and a car as a passenger, and 5.7% used a bus and a car as a driver.

6.3 Taxis and ride-share services

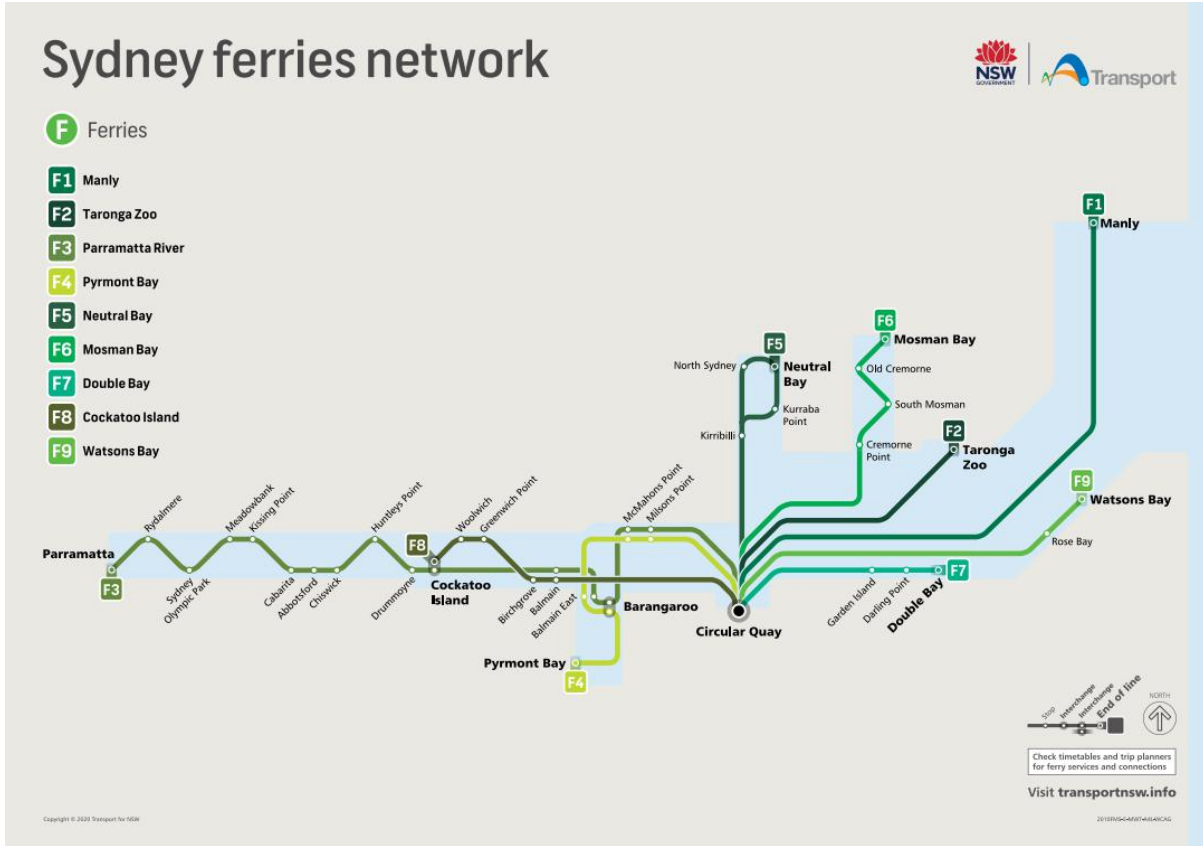
Taxis and ride-share services were the third most common mode of public transport, accounting for 1,719 or 0.16% of GWS workers in 2021. The number of GWS workers who used taxis or ride-share services decreased by 18.0%, from 2,096 in 2016 to 1,719 in 2021. Despite this drop, the 'Taxi/ride-share service' category witnessed the smallest percentage decrease across all subcategories in GWS. Meanwhile, the proportion of GWS workers falling under this category decreased from 0.21% in 2016 to 0.16% in 2021. GWS and its comparative regions had similar proportions of workers who used a taxi or ride-share service to get to work, with 0.16% for Greater Sydney, 0.14% for the Rest of NSW, and 0.15% for NSW. Cumberland (0.27%), Blacktown (0.21%), and Canterbury-Bankstown (0.20%) had the highest percentages of workers under this category within their respective LGA populations. A huge proportion (83.8%) of GWS workers under this category used only taxis/ride-share services, while 7.7% used taxis/ride-share services and a car as a passenger. Finally, 5.5% used a taxis/ride-share services and a car as a driver.

6.4 Ferries and trams/light rails

Ferries and trams/light rails were the least common modes of public transport for GWS workers. Only 200 or 0.02% of employed persons from GWS used a ferry to get to work. GWS workers (0.02%) were slightly less likely to use ferries compared to Greater Sydney (0.06%), the Rest of NSW (0.04%), and NSW (0.05%) workers. This is not surprising given that only three ferry stops lie within GWS along the Sydney ferries network namely, Parramatta, Rydalmere, and Sydney Olympic Park (see Map 8).

On the other hand, 188 or 0.02% of GWS workers used a tram/light rail to get to work. GWS had a similar percentage with the Rest of NSW (0.02%) but had a lower percentage than Greater Sydney (0.06%) and NSW (0.05%). The Parramatta Light Rail is expected to commence passenger services in 2024.^[33]

MAP 8. SYDNEY FERRIES NETWORK

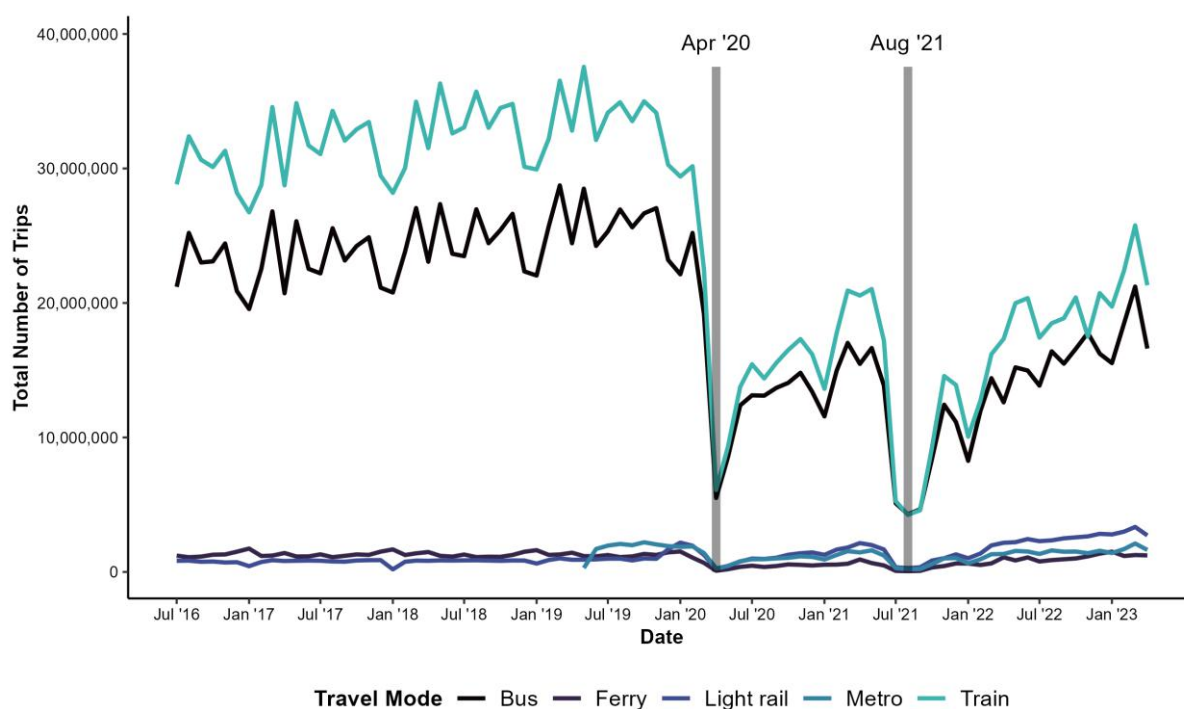


Map Source: Transport for NSW, [Sydney Ferries Network](#), 2020

6.5 Official transport utilisation figures

Examining the actual number of trips across various modes of travel, in addition to the 2021 Census data, uncovers more useful insights into transportation in NSW. Figure 23 shows total monthly utilisation figures from Transport for NSW across all transport modes from July 2016 to April 2023. For this period, the train and the bus consistently had the highest numbers of trips compared to other travel modes. A sharp decline in train and bus trips can be observed in April 2020 and August 2021, which can be attributed to the COVID-19 pandemic.

FIGURE 23. TRIPS PER TRAVEL MODE, JULY 2016 TO APRIL 2023 TRANSPORT FOR NSW



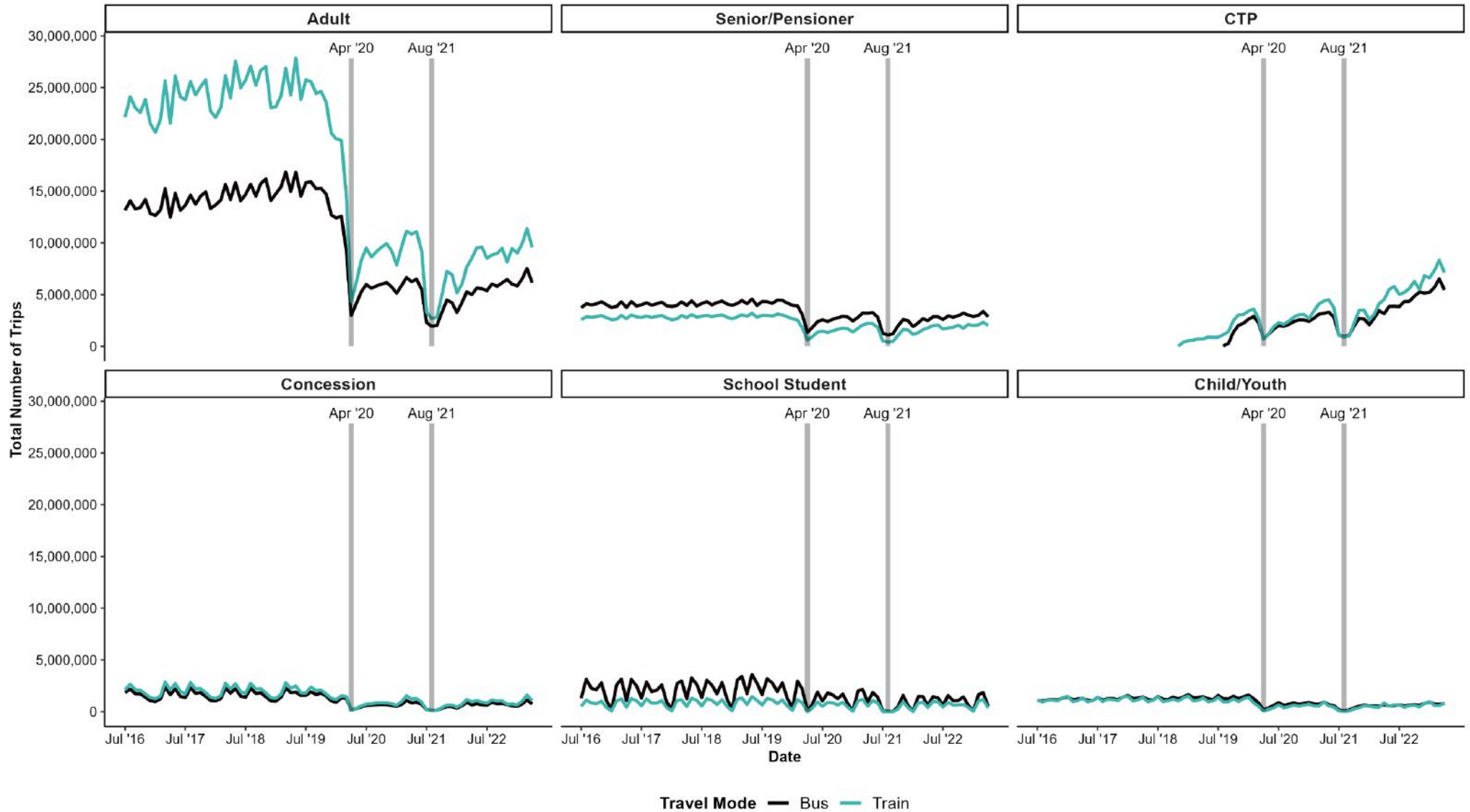
Data Source: April 2023, Transport for NSW, [Opal Trips - All Modes - Opal Trip Counts - by month, public transport mode and card type](#)

Meanwhile, Figure 24 shows the total monthly number of bus trips and train trips per card type for the following card types:

- Adult Opal – Persons 16 years and older
- Senior/Pensioner – Included in the Gold Opal card type
- Contactless payments (CTP) – American Express, MasterCard or Visa credit or debit card holders
- Concession Opal - Apprentice or trainee, Centrelink customers, People with disabilities, and Tertiary or TAFE students
- School Opal – Primary and secondary school students
- Child/Youth Opal – Persons aged 4 to 15

Across these six card types, a decline in the number of bus and train trips can be observed in April 2020 and August 2021. From July 2016 to April 2023, the Adult card type also had a significantly higher number for both train and bus trips compared to other card types. This also means that this card type witnessed a much sharper decrease in the number of trips compared to the other card types. The number of trips using CTP has also been increasing. Through CTP, transport users do not need to top up in advance but will be charged the same rate as an Adult Opal fare.

FIGURE 24. TRAIN TRIPS AND BUS STRIPS BY CARD TYPE, JULY 2016 TO APRIL 2023 TRANSPORT FOR NSW



Data Source: April 2023, Transport for NSW, [Opal Trips - All Modes - Opal Trip Counts - by month, public transport mode and card type](#). Includes the most common card types only: Adult, Senior/Pensioner, CTP, Concession, School Student, Child/Youth. For more information on card types, refer to [Opal Trips - All Modes - Opal Card Types - TfNSW Open Data Hub and Developer Portal](#).

7. Active transport

Active transport includes using a bicycle or walking to get to work. In GWS, only 1.4% (15,553 of 1,098,393) of employed persons used active transport in the 2021 Census. This percentage is a slight decrease from 2.0% in 2016. Amid this small percentage decrease, the overall volume of active transport users decreased by 24.8%, from 20,684 in the 2016 Census to 15,553 in the 2021 Census.

Across all GWS LGAs, Parramatta (2.2%), Cumberland (1.9%), the Blue Mountains (1.8%), and Hawkesbury (1.8%) had relatively higher proportions of employed persons who used active transport. Compared to Greater Sydney (2.7%), the Rest of NSW (3.3%), and NSW (2.9%), GWS had a smaller percentage of active transport users among employed persons within their respective populations.

In the 2021 Census, the ABS recorded two subcategories under the 'Active transport' category as a method of travel to work, namely:

- 'Bicycle', and
- 'Walked only'.^{bb}

Computations for this section exclude persons falling under the 'Not Applicable' category and counts in this section denote the number of employed persons.^{cc} The total number of active transport users and employed persons in this section were obtained from Section 3.1.

7.1 Bicycle

Among all GWS workers, 1,721 or 0.2% used a bicycle as their method of travel to work in the 2021 Census. While the proportion of GWS workers under this category did not change significantly, the number of persons decreased by 29.8%, from 2,450 in 2016 to 1,721 in 2021. Compared to Greater Sydney (0.4%), the Rest of NSW (0.4%), and NSW (0.4%) in the 2021 Census, the bicycle was a less common method to get work among employed persons in GWS. In the 2016 Census, the disparity in the proportion of bicycle use between GWS (0.2%) and its comparative regions were slightly larger (0.6% in the Rest of NSW, and 0.7% in both Greater Sydney and NSW). Across all GWS LGAs, the proportion of workers who used a bicycle to work also varied minimally in 2021, from 0.1% to 0.2%.

As with the previous sections, it is worth looking into the other modes GWS workers use alongside the 'bicycle' category. As mentioned in Section 4, the 2021 Census included a question, 'How did Person [1] get to work on Tuesday 10 August 2021?' Respondents are allowed to select all methods used.^{dd} The MTWP variable is created by recording up to three methods of travel to work.^{ee} This allows Census data users to identify combinations of

^{bb} According to the ABS, 'In cases where the combination of responses contained 'Did not go to work', 'Worked at home' or 'Walked only', then these unique responses override any others. If more than one of these unique responses is in the same combination, then a single response is selected in the order they appear.' More information can be found here <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>.

^{cc} For the MTWP variable, the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' 'Persons aged under 15 years', 'Overseas visitors.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>

^{dd} The instruction states, 'If the person used more than one method of travel to work, select all methods used.' More information can be found here <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>.

^{ee} According to the ABS, 'Respondents were able to select more than one response with up to three methods recorded. Where more than three methods were used, responses were accepted in the order they appeared on the form and the extra responses

transport methods that workers use.^{ff} The most common combinations under each subcategory will be reviewed in this section.

In the 2021 Census, out of all persons who recorded the 'bicycle' in any of their methods of travel to work, more than three out of four (75.3%) used a bicycle only to get to work (see Table 4). Albeit a much smaller percentage, the next most common method of travel to work among all bicycle users were 'Train, bicycle' (8.0%). This means that persons within this category had 'Train' as their primary method of travel to work and then 'Bicycle' as a secondary method based on the order of appearance in the Census form.

The same is true for the rest of the categories among bicycle users on Table 4. Following the 'Train, bicycle' category is 'Car as driver, bicycle', which means that 7.5% of all persons who recorded the 'bicycle' in any of their methods of travel to work also drove a car to get to work. 'Train, bus, bicycle' ranked fourth, at 2.0%. 'Car as passenger, bicycle' was the fifth most common method of travel to work, at 1.4%.

TABLE 4. BICYCLE USERS IN GWS (COUNTS AND PERCENTAGES), 2021

Rank	2021 Census			% Change	% Point Change
	Method of Travel to Work	Count	% of Total		
1	Bicycle	1,703	75.3%	-30.2%	2.9%
2	Train, bicycle	182	8.0%	-60.0%	-5.5%
3	Car as driver, bicycle	169	7.5%	-2.9%	2.3%
4	Train, bus, bicycle	46	2.0%	-38.7%	-0.2%
5	Car as passenger, bicycle	31	1.4%	-18.4%	0.2%
6	Train, car as driver, bicycle	26	1.1%	-31.6%	0.0%
7	Bus, bicycle	23	1.0%	-54.0%	-0.5%
8	Car as driver, car as passenger, bicycle	12	0.5%	9.1%	0.2%
9	Bicycle, other	10	0.4%	-9.1%	0.1%
10	Bus, car as driver, bicycle	9	0.4%	80.0%	0.2%
	Grand Total GWS Workers who used a bicycle^{gg}		2,279		

Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | MTWP and 3-digit level MTWP Variables

Findings in this section have two main implications. First is that bicycle use as a method of travel to work was less common in GWS than Greater Sydney, the Rest of NSW, and NSW since the 2016 Census. Map 9 and Map 10 show a visual representation of this disparity for select GWS LGAs and eastern LGAs. Using ABS Census and Transport for NSW Bicycle Network data, Map 9 illustrates the number of employed persons using bicycles only across SA2s, with darker colours indicating larger numbers of people, and infrastructure or facilities, denoted as grey lines, which bicycles can use. Map 10 also shows the number of employed persons using bicycles only across SA2s, with darker colours indicating larger numbers of people. However, it illustrates only selected infrastructure or facilities that may be considered more bicycle-friendly, such as 'Bicycle Lane', 'Bicycle Only', 'Bicycle Storage Area', 'Contra-flow Cycling', 'Quietway', 'Separated', and 'Shared Use'. From comparing Map 9 and Map 10,

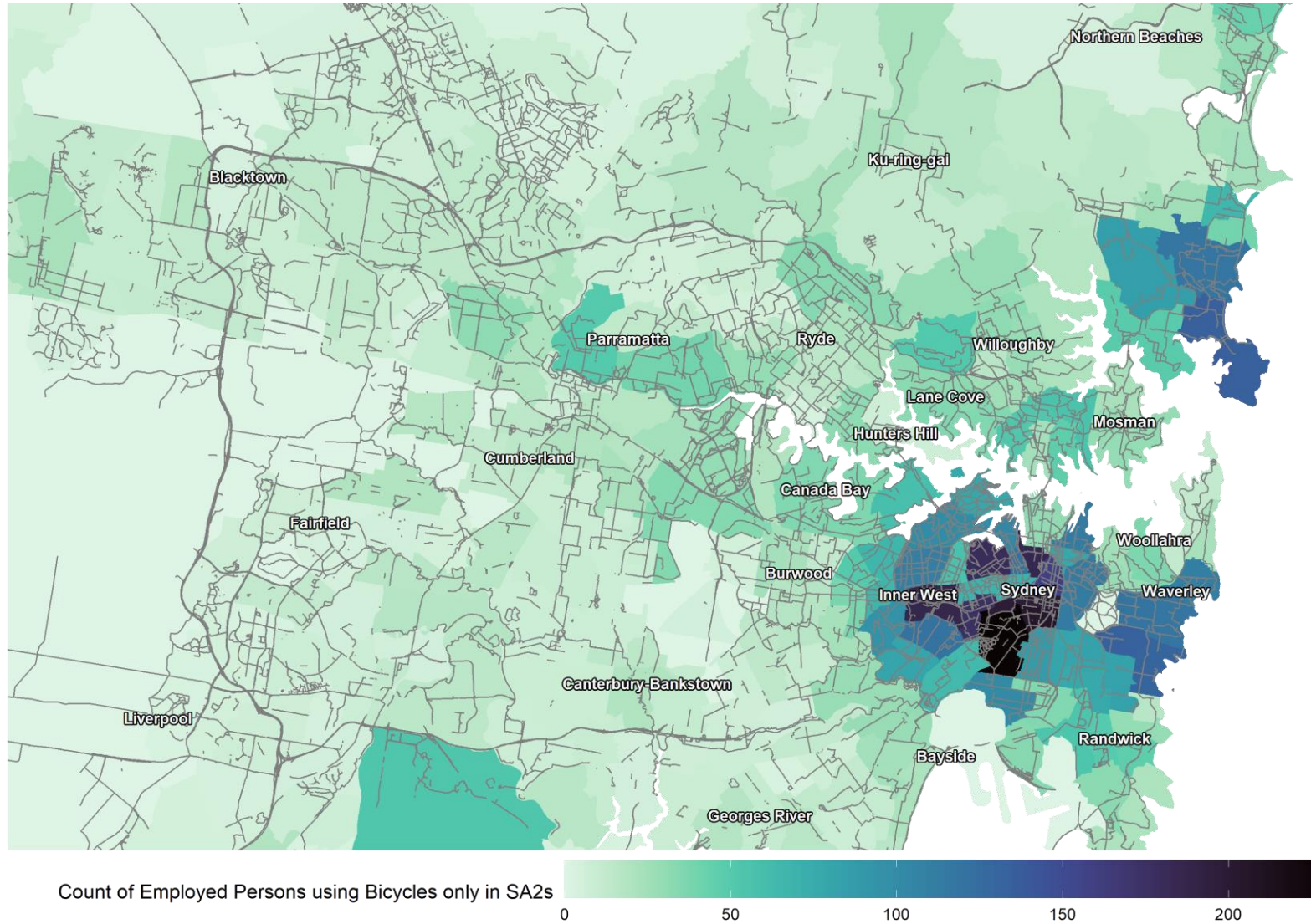
were rejected.' <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>

^{ff} The 3-digit level of the MTWP variable from the 2021 Census was used in this section. <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>

^{gg} The grand total here exceeds 1,721 as this includes all persons who used a bicycle to get to work, regardless of whether it is their primary method of travel to work.

it can be observed that there are limited pathways that can be considered more bicycle-friendly. Bicycle users and bicycle-friendly facilities are also heavily concentrated in the Sydney LGA. The existence of bicycle-friendly pathways in Liverpool, Blacktown, and Fairfield is visible. However, they are more dispersed geographically compared to the Sydney LGA. From these observations, it is critical to examine further the gap in cycling infrastructure in the Greater Sydney region and its impacts on overall bicycle use as a way to get to work.

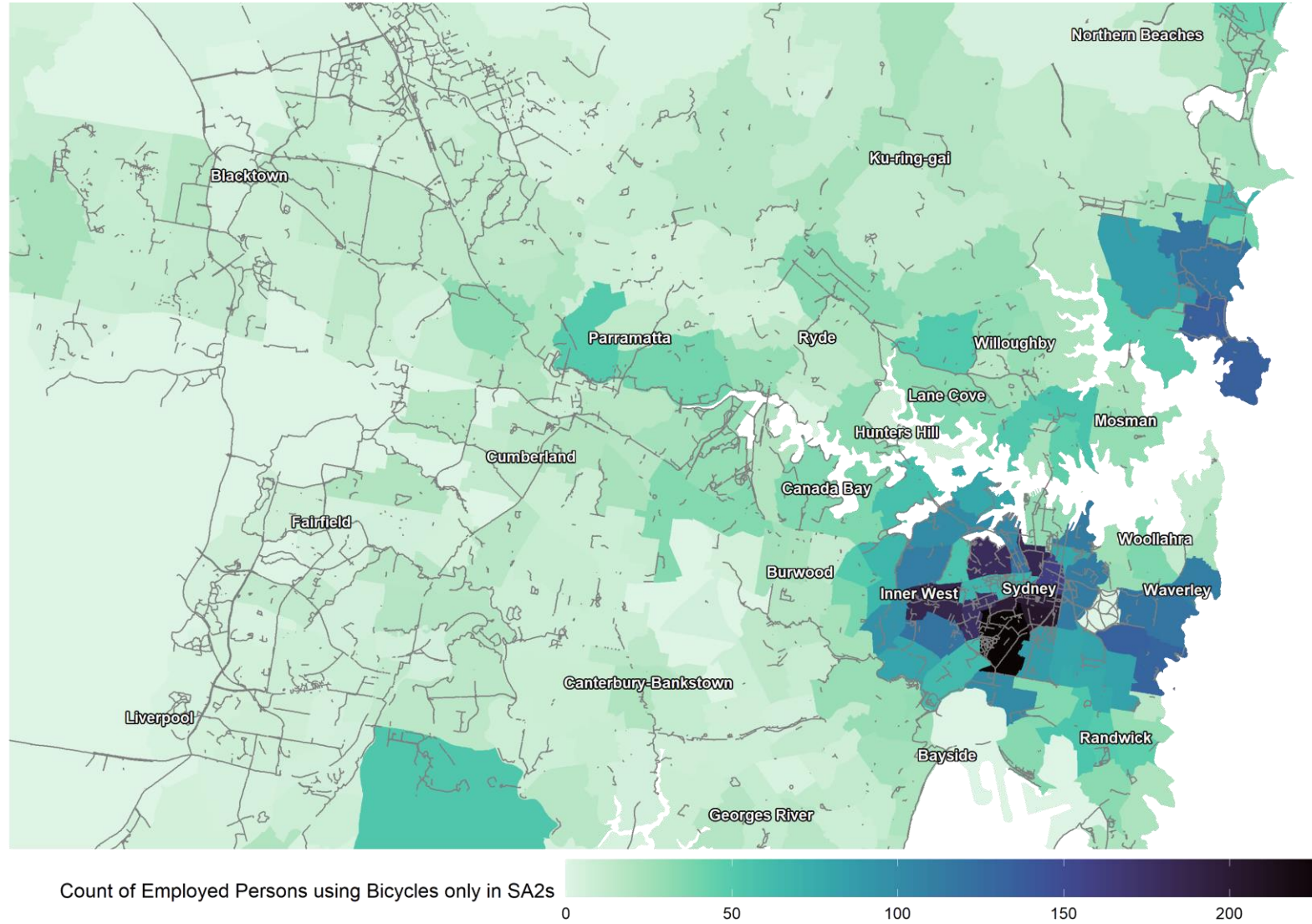
MAP 9. EMPLOYED PERSONS USING BICYCLES ONLY IN SA2s (COUNTS), 2021, AND THE TRANSPORT FOR NSW BICYCLE NETWORK, 2021 (MODIFIED)



Produced by WESTIR Limited
 Source: ABS Census of Population and Housing 2021
 © Commonwealth of Australia

Data Source: DataPacks, 2021 Census General Community Profile, Table G62, One_method_Bicycle_Persons variable, and 2018 (2021 modified) Transport for NSW, [Infrastructure Cycleway Data](#) (excludes Vehicle only and Bus Only facilities. For more information on Infrastructure Cycleway Data and facility types, [visit the TfNSW Bicycle Network Data Dictionary.](#))

MAP 10. EMPLOYED PERSONS USING BICYCLES ONLY IN SA2s (COUNTS), 2021, AND SELECTED FACILITIES IN THE TRANSPORT FOR NSW BICYCLE NETWORK, 2021 (MODIFIED)



Produced by WESTIR Limited
 Source: ABS Census of Population and Housing 2021
 © Commonwealth of Australia

Data Source: DataPacks, 2021 Census General Community Profile, Table G62, One_method_Bicycle_Persons variable, and 2018 (2021 modified) Transport for NSW, [Infrastructure Cycleway Data](#) (includes more bicycle friendly facility types such as: Bicycle Lane, Bicycle Only, Bicycle Storage Area, Contra-flow Cycling, Quietway, Separated, Shared Use. For more information on Infrastructure Cycleway Data and facility types, [visit the TfNSW Bicycle Network Data Dictionary](#).)

Second, while an overwhelming majority of all bicycle users use bicycles only to get to work, a quarter of them use bicycles with other methods of travel to work. This cohort would need a place to park their bicycles before shifting to another mode of transport. In addition to bicycle-friendly pathways, parking infrastructure is also crucial. As of July 2023, there are a total of 2,010 spots in bicycle lockers and sheds across NSW.^{hh}

Map 11. shows bike parking facilities across select GWS LGAs and eastern LGAs. Larger circles denote higher numbers of parking spots. Purple circles represent bike sheds, while blue green circles represent bike lockers. Darker grey lines illustrate the NSW railway network. Map 12 shows similar figures; however, it is zoomed out to show the entire Greater Sydney region.

From these maps, it can be observed that bicycle parking facilities are strategically placed along the railway network. However, looking farther away from the Sydney LGA using Map 12, parking facilities are less evident even along rail lines, specifically in Blue Mountains, Hawkesbury, Camden, Wollondilly, Lithgow, and Wingecarribee LGAs. In these LGAs, either 0.1 or 0.2% of employed persons used a bicycle to get to work, which is similar to the GWS percentage (0.2%).

For future research, it will be worth investigating how the lack of bicycle parking facilities in these peripheral LGAs impacts the uptake of active transport. Arbis *et al.*'s regression analysis from 2016 found three key factors that were predictive of bicycle parking behaviour in NSW, namely, station patronage, appropriate distancing of bicycle parking infrastructure, and the presence of passive and active surveillance.^[34] One of the key findings from their study was that 'secure bicycle parking devices may be more competent to encourage bicycle parking than open-air devices, particularly at smaller stations'.^[34, p. 503] This underscores the importance of bicycle sheds and lockers along train stations in peripheral Greater Sydney LGAs.

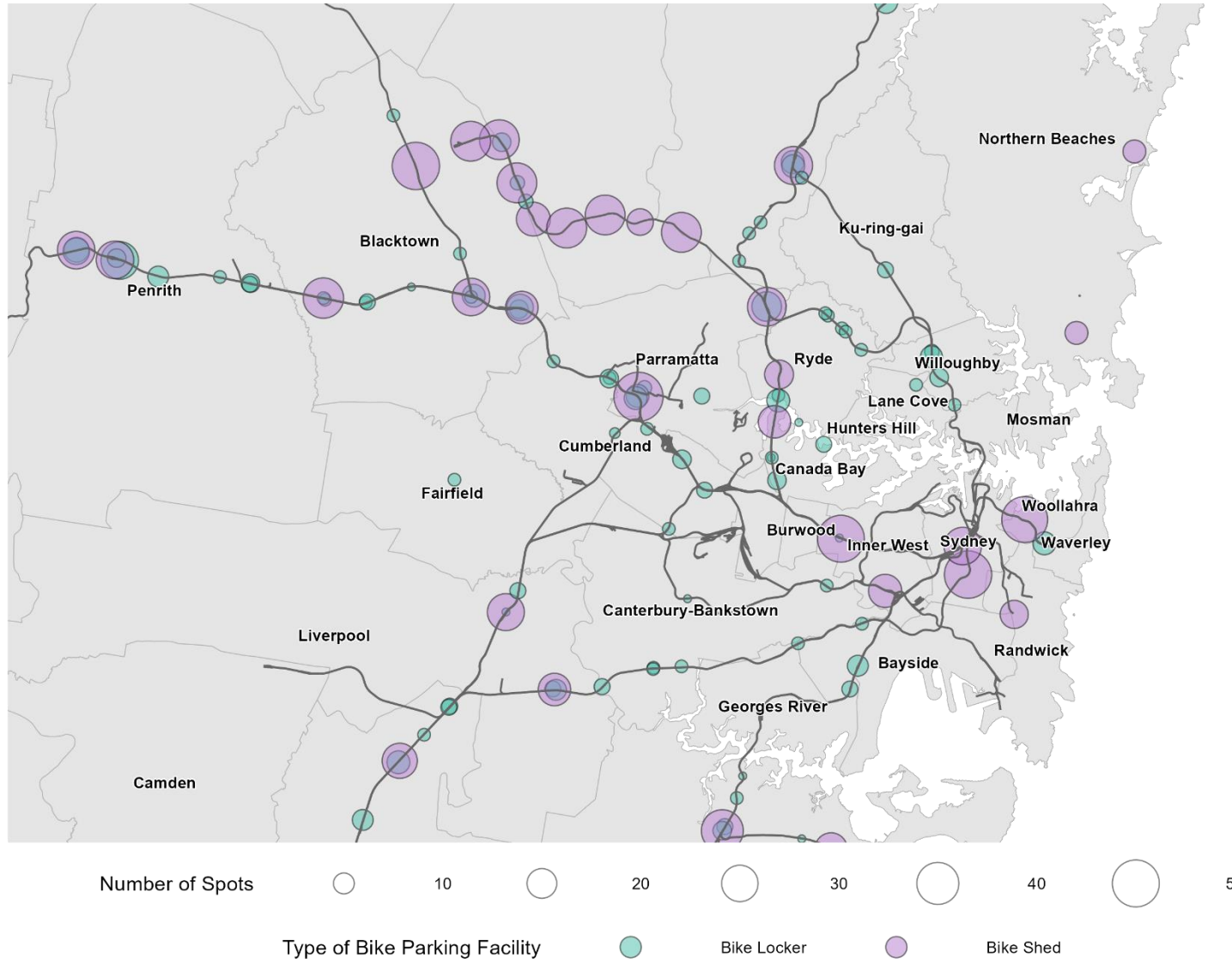
^{hh} Transport for NSW differentiates between bike sheds and bike lockers:

'Bike sheds are enclosed shared shelters where you can store your bicycle out of the weather, free of charge. They accommodate between 12 and 55 bicycles, depending on requirements at the bike shed location. You don't have to pre-book a space. To gain entry to a bike shed, just link your Opal card and accept the Bike shed terms and conditions. Please note, spaces cannot be guaranteed inside a shed as they are provided on a first in first served basis.

Bike lockers are individual, lockable spaces to help keep your bike and associated equipment protected from weather, theft and vandalism. There are over 830 bike lockers at 110 locations, so it's as simple as selecting your location and rental period and enjoying your exclusive locker access.'

<https://opendata.transport.nsw.gov.au/dataset/bike-parking>

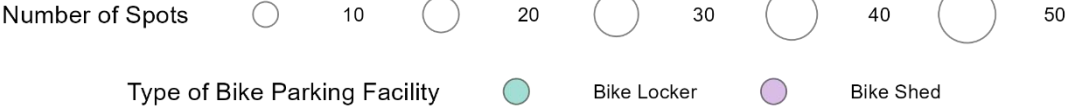
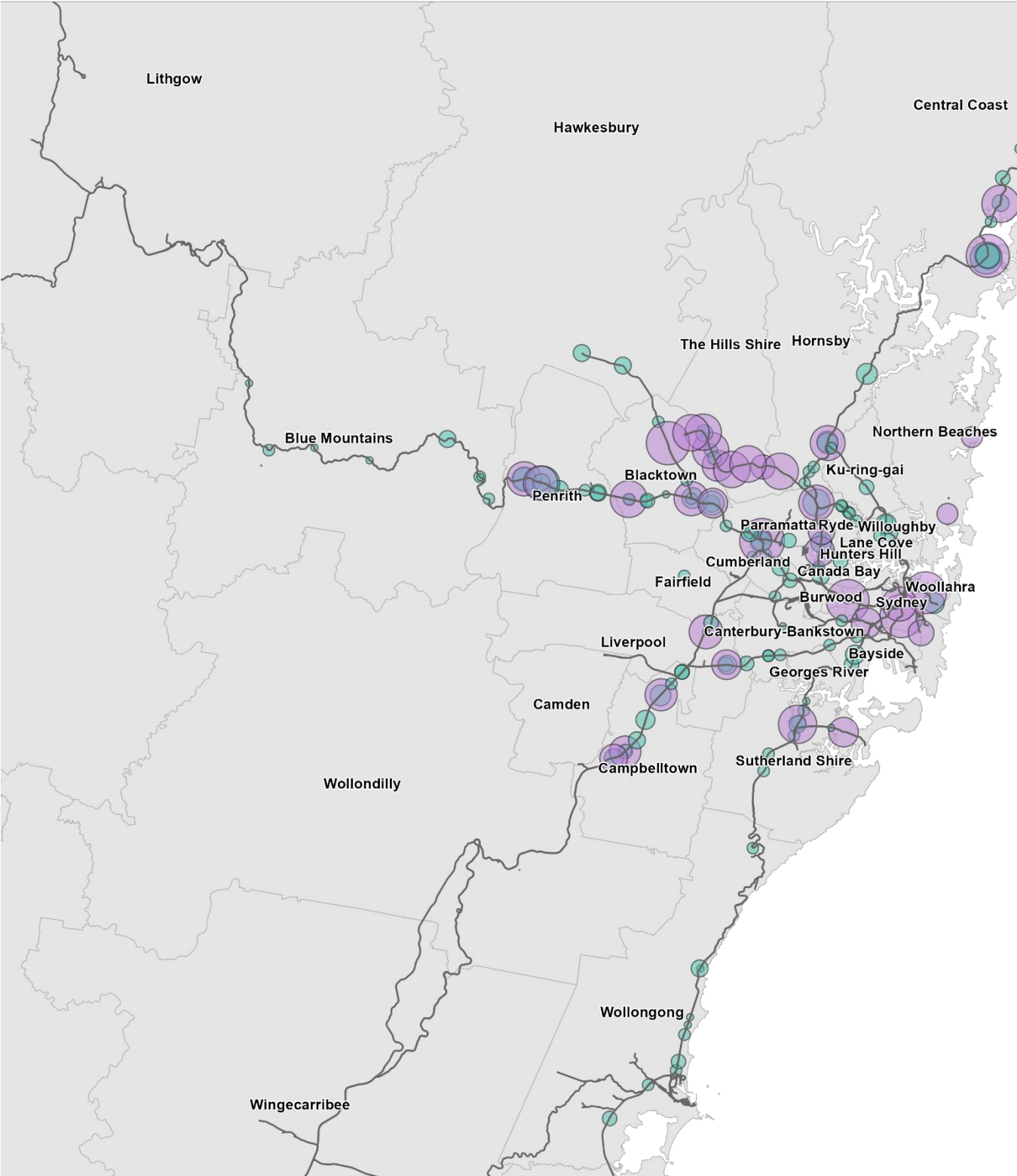
MAP 11. BIKE PARKING FACILITIES IN NSW, JULY 2023



Produced by WESTIR Limited
 Source: ABS Census of Population and Housing 2021
 © Commonwealth of Australia

Data Source: Transport for NSW, [Bicycle Locker Sheds – July 2023](#), and NSW Spatial Collaboration Portal, Railway Shapefile, [NSW Transport Theme – 31 Jul 2023](#)

MAP 12. BIKE PARKING FACILITIES IN NSW, JULY 2023 (ZOOMED OUT)



Produced by WESTIR Limited
 Source: ABS Census of Population and Housing 2021
 © Commonwealth of Australia

Data Source: Transport for NSW, [Bicycle Locker Sheds – July 2023](#), and NSW Spatial Collaboration Portal, Railway Shapefile, [NSW Transport Theme – 31 Jul 2023](#)

7.2 Walking only

Out of all GWS workers, 13,843 or 1.3% **'walked only'** as a method of travel to work in the 2021 Census. Of the two categories under active transport, 'walked only' was less common than active transport. The number of GWS workers who walked only decreased by 24.1%, from 18,240 in 2016 to 13,843 in 2021. This percentage decrease is smaller compared to that of the bicycle only category at 29.8% (see Section 7.1). On the other hand, the proportion of GWS workers falling under this category decreased from 1.8% in 2016 to 1.3% in 2021. Walking only as a way to get to work was less common in GWS than Greater Sydney (2.3%), the Rest of NSW (2.9%), and NSW (2.5%).

Parramatta (35.8%), the Blue Mountains (35.2%), and Fairfield (32.2%) had the largest percentage decreases in the number of persons who walked only between 2016 and 2021 across all LGAs. Only Wollondilly (2.9%) witnessed a percentage increase.

Across GWS, the LGAs with the highest proportions of workers who walked only to work were Parramatta (2.0%), Cumberland (1.7%), and Hawkesbury (1.7%). This is particularly interesting given that Parramatta (28.0%) and Cumberland (24.0%) have the lowest percentages of workers living in these LGAs who also work in the same LGA (see Section 1, Figure 2). Inversely, the highest percentage of workers living in a GWS LGA who are also working in the same LGA was recorded in Hawkesbury (46.3%).

On the other hand, the LGAs with the lowest percentages of workers who walked only to work were Camden (0.6%), Blacktown (0.7%), and The Hills Shire (0.8%). For these three LGAs, the percentages of workers residing in these LGAs who also worked in the same LGAs ranged from 31.3% to 32.1% (see Section 1).

From these findings, it is difficult to establish a relationship between the number of workers to walk only to work and the number of workers working and living in the same LGA. There could be other factors that influence why GWS workers choose to walk only to work.

8. Industry of employment

The INDP or Industry of employment variable records an employed person's industry based on their main job in the week prior to the Census night. Coded to the Australian and New Zealand Standards Industrial Classification (ANZSIC) from 2006, there are 20 one-digit level categories, with an additional 'Not stated' category:

- 'Agriculture, Forestry and Fishing',
- 'Mining',
- 'Manufacturing',
- 'Electricity, Gas, Water and Waste Services',
- 'Construction',
- 'Wholesale Trade',
- 'Retail Trade',
- 'Accommodation and Food Services',
- 'Transport, Postal and Warehousing',
- 'Information Media and Telecommunications',
- 'Financial and Insurance Services',
- 'Rental, Hiring and Real Estate Services',
- 'Professional, Scientific and Technical Services',
- 'Administrative and Support Services',
- 'Public Administration and Safety',
- 'Education and Training',
- 'Health Care and Social Assistance',
- 'Arts and Recreation Services',
- 'Other Services',
- 'Inadequately described', and
- 'Not stated'.

This section looks at these industries of employment against the place of usual residence, place of work, and method of travel to work.

Computations for this section exclude persons falling under the 'Not Applicable' category and counts in this section denote the number of employed persons.ⁱⁱ The totals in the section were obtained by summing the columns and/or rows.

8.1 Industry of employment and place of usual residence

In the 2021 Census, the top five industries of employment for workers usually residing in GWS were 'Health Care and Social Assistance', 'Retail Trade', Construction, 'Education and Training', and 'Professional, Scientific and Technical Services' (see Table 5). There were 150,865 workers usually residing in GWS who worked in the 'Health Care and Social Assistance' industry, accounting for 13.7% of all workers residing in GWS. 'Retail Trade' ranks second, with 106,548 (9.7%) of the 1,098,383 workers residing in GWS being part of this sector. Following 'Retail Trade' is the Construction industry, comprising 98,786 (9.0%) of all GWS workers. Ranking fourth and fifth were the 'Education and Training' and 'Professional, Scientific and Technical Services' industries, accounting for 89,702 (8.2%) and 82,464 (7.5%) of GWS workers, respectively.

ⁱⁱ For the INDP variable, the 'Not Applicable' category includes: 'Unemployed persons, looking for either full-time or part-time work,' 'Persons not in the labour force,' 'Persons with Labour force status (LFSP) not stated,' and 'Persons aged under 15 years'. <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/transport/method-travel-work-mtwp>

TABLE 5. TOP FIVE INDUSTRIES OF EMPLOYMENT OF GWS WORKERS, 2021

Industry of Employment	Count	% of Total
Health Care and Social Assistance	150,865	13.7%
Retail Trade	106,548	9.7%
Construction	98,786	9.0%
Education and Training	89,702	8.2%
Professional, Scientific and Technical Services	82,464	7.5%
Total Workers*		1,098,383

Data Source: TableBuilder Pro, 2021 Census - counting persons, 15 years and over | 1-digit level INDP Industry of Employment and LGA (Usual Residence) *Note: Total is a summation.

'Health Care and Social Assistance' was also the most common industry of employment for Greater Sydney (13.4%), the Rest of NSW (16.3%), and NSW (14.4%) (see Figure 25).

Aside from GWS (9.7%), 'Retail Trade' was another common industry of employment, ranking second among the Rest of NSW (9.4%) and NSW (9.0%) workers while ranking third among Greater Sydney workers (8.8%). From these percentages, it can be observed that GWS workers were slightly more likely to be working in the 'Retail Trade' sector compared to Greater Sydney (8.8%) and other comparative regions.

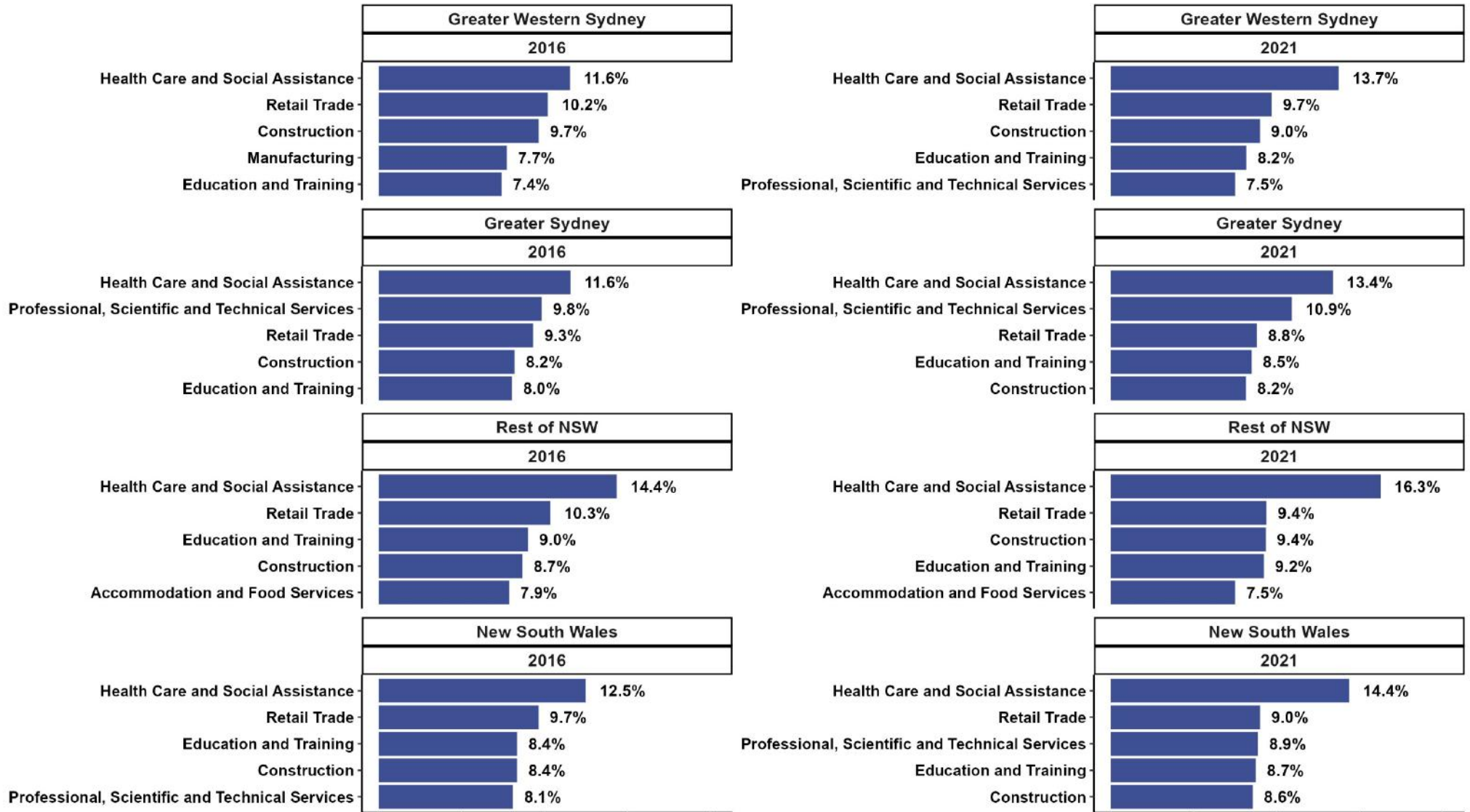
GWS (9.0%) had a higher proportion of workers in the Construction industry compared to Greater Sydney (8.2%) and NSW (8.6%) but had a smaller proportion than the Rest of NSW (9.4%).

While the 'Education and Training' industry was among the top five industries of employment across all four regions, workers from the Rest of NSW (9.2%) had a higher likelihood of working in this sector compared to GWS (8.2%), Greater Sydney (8.5%), and NSW workers (8.7%).

Lastly, Greater Sydney workers (10.9%) were more likely to work in the 'Professional, Scientific and Technical Services' industry compared to workers usually residing in GWS (7.5%), the Rest of NSW (4.9%), and NSW (8.9%). It is worth noting that, for the Rest of NSW, the 'Professional, Scientific and Technical Services' sector ranked ninth among the 21 sectors.

Figure 25 on page 73 shows the top five industries of employment in Greater Sydney, the Rest of NSW, and NSW for the 2016 and 2021 Censuses.

FIGURE 25. TOP FIVE INDUSTRIES OF EMPLOYMENT OF GWS WORKERS AND COMPARATIVE REGIONS, 2016 AND 2021



Data Source: TableBuilder Pro, 2016 Census - Counting Employed Persons, Place of Work (POW) and 2021 Census - counting persons, 15 years and over | 1-digit level INDP Variables

8.2 Industry of employment and place of work

It is also worth looking into the places of work of workers usually residing in GWS alongside their industries of employment. As shown in Section 1 (Table 3 on page 18), the following LGAs are the most common places of work among workers usually residing in GWS as recorded in the 201 Census: Sydney, Blacktown, Parramatta, Penrith, Canterbury-Bankstown, Liverpool, Cumberland, The Hills Shire, Fairfield, Campbelltown, No Fixed Address, Ryde, Camden, Hawkesbury, North Sydney, Blue Mountains, Bayside, Inner West, Willoughby, Strathfield.

This section computes the percentages of persons in specific industries of employment out of all workers residing in GWS per LGA as a destination of work. For instance, Sydney LGA is the most common destination for GWS workers across all LGAs. A quarter (25.0%) of all employed GWS residents working in Sydney LGA are in the 'Financial and Insurance Services' Sector.

Blacktown LGA is the second most common work destination for GWS workers, with 12.6% of all workers usually residing in GWS and working in Blacktown in the 'Retail Trade' industry. 'Health Care and Social Assistance' (12.2%) and 'Transport, Postal and Warehousing' (10.5%) rank second and third in the most common industries of employment for GWS employed residents working in Blacktown.

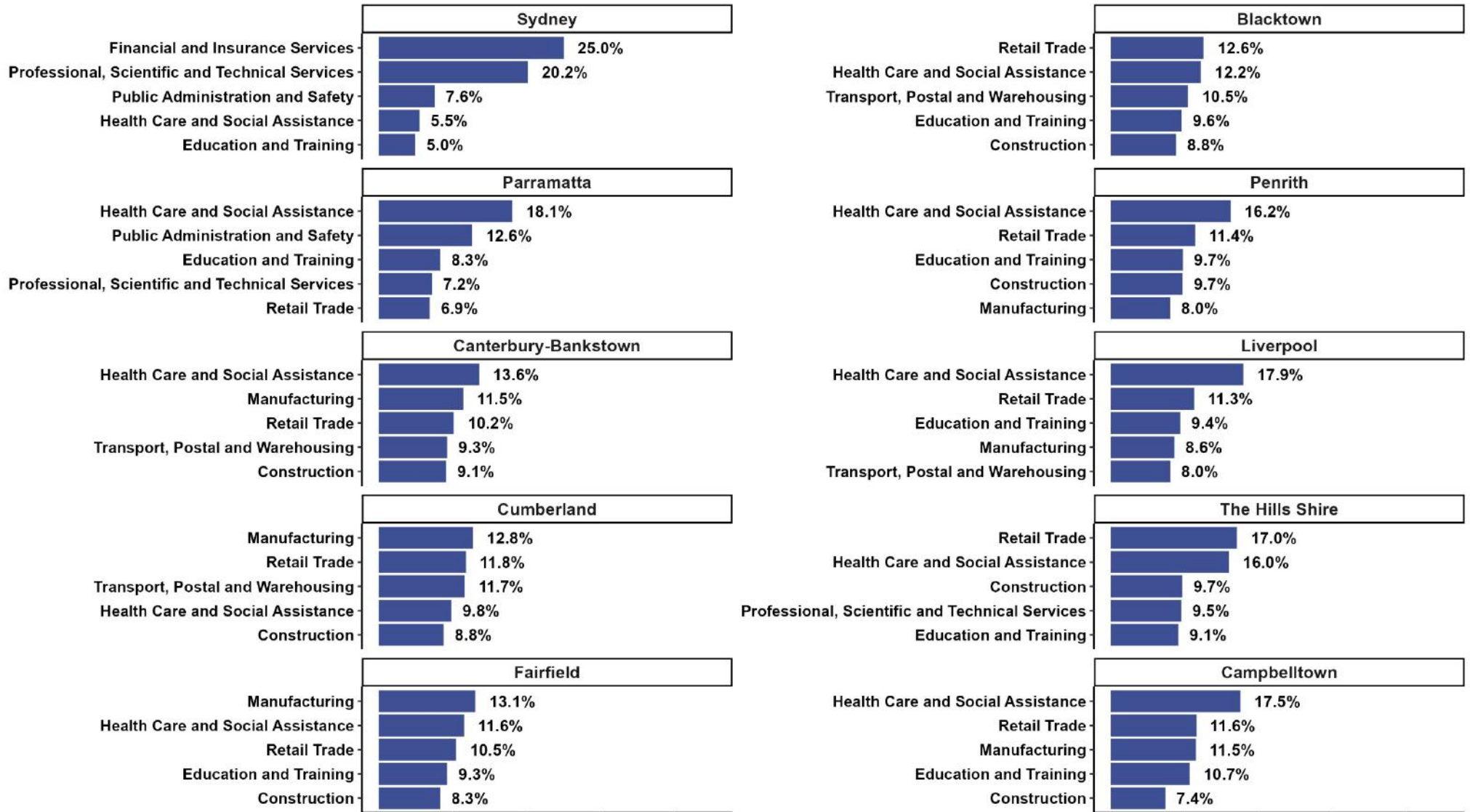
Following Sydney and Blacktown LGAs is Parramatta LGA. Out of all GWS employed residents working in Parramatta LGA, 18.1% were in the 'Health Care and Social Assistance' sector. This is followed by the 'Public Administration and Safety' (12.6%) and 'Education and Training' (8.3%) sectors.

The fourth most common destination for work among GWS workers is Penrith. Out of all GWS employed residents based in Penrith for work, 16.2% work in the 'Health Care and Social Assistance' sector. 'Retail Trade' (11.4%) and 'Education and Training' (9.7%) follow 'Health Care and Social Assistance' as the most common industries of employment for this cohort.

Canterbury-Bankstown LGA is the fifth most common LGA in terms of destination for work. Among all GWS workers who have Canterbury-Bankstown LGA as their destination for work, 13.6% were in the 'Health Care and Social Assistance' sector. Meanwhile, 11.5% and 10.2% were in the Manufacturing and 'Retail Trade' sectors, respectively.

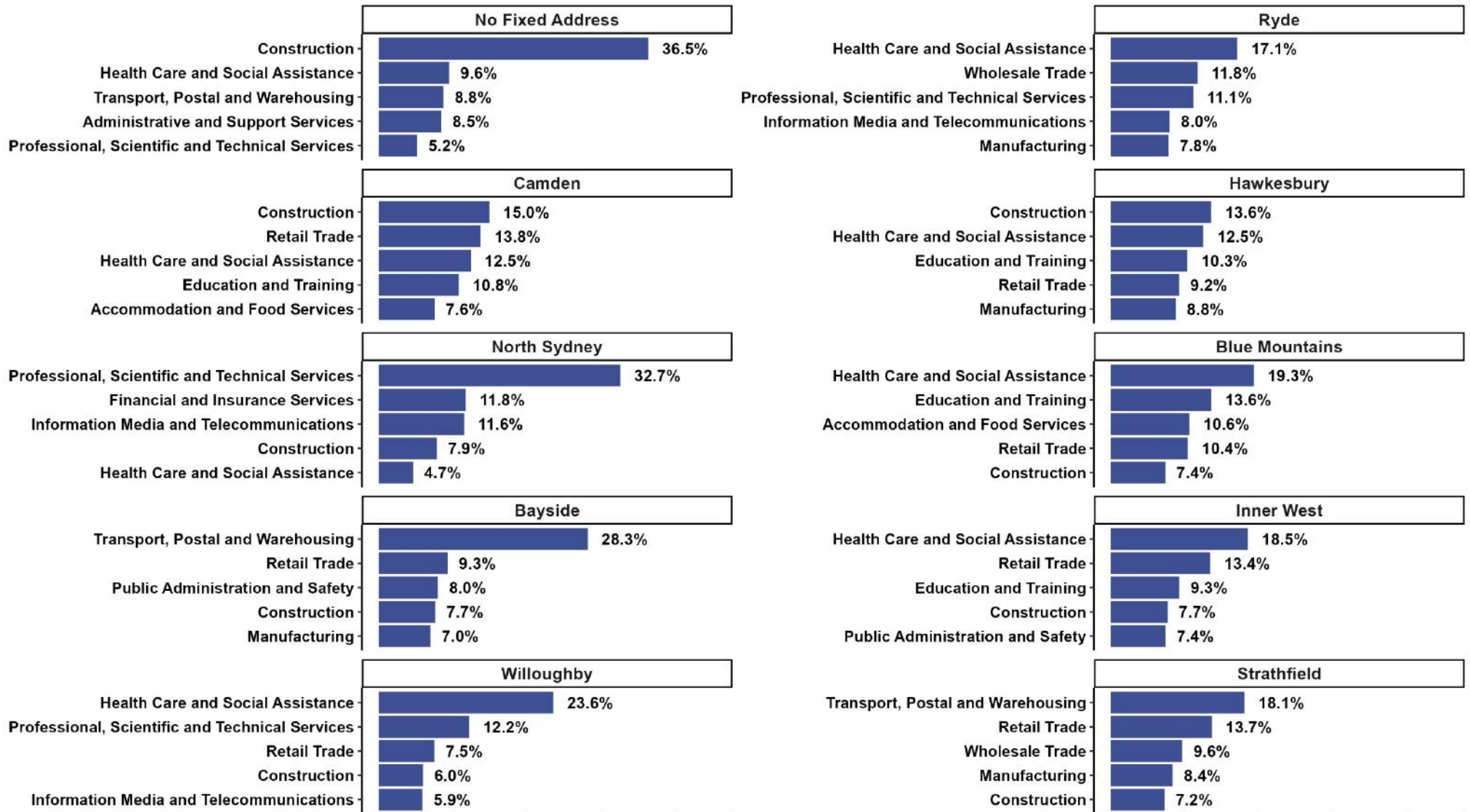
The rest of the top industries per LGA as a place of work are shown in Figure 26 and Figure 27. It is worth looking into the 'No Fixed Address' category on Figure 27. It shows that, among all workers usually residing in GWS without a fixed work address, 36.5% were in the Construction industry.

FIGURE 26. TOP FIVE INDUSTRIES OF EMPLOYMENT AMONG WORKERS USUALLY RESIDING IN GWS PER LGA AS A PLACE OF WORK, 2021 (PART 1)



Data Source: TableBuilder Pro, 2021 Census - counting persons, 15 years and over | LGA (UR), LGA (POW), 1-digit level INDP Variables

FIGURE 27. TOP FIVE INDUSTRIES OF EMPLOYMENT AMONG WORKERS USUALLY RESIDING IN GWS PER LGA AS A PLACE OF WORK, 2021 (PART 2)



Data Source: TableBuilder Pro, 2021 Census - counting persons, 15 years and over | LGA (UR), LGA (POW), 1-digit level INDP Variables

8.3 Industry of employment and method of travel to work

It is also important to look at how GWS residents travel to work within their industries of employment. The percentages in this section are computed by dividing the number of GWS residents in an industry using a particular method of travel by the total number of GWS residents in an industry of employment. For example, 60.3% of GWS residents working in the 'Health Care and Social Assistance' sector used a vehicle to get to work in the 2021 Census. Similarly, 49.4% of GWS residents in the Construction industry used a vehicle to get to work. This section will also compare the percentages across the top 10 industries of employment among GWS workers as shown on Figure 28.

Across the ten most common industries of employment, GWS residents in the 'Accommodation and Food Services' industry are most likely to use public transport to get to work (9.8% or 5,511). This is followed by the 'Health Care and Social Assistance' (7.9% or 11,855) and 'Retail Trade' (6.9% or 7,372) industries.

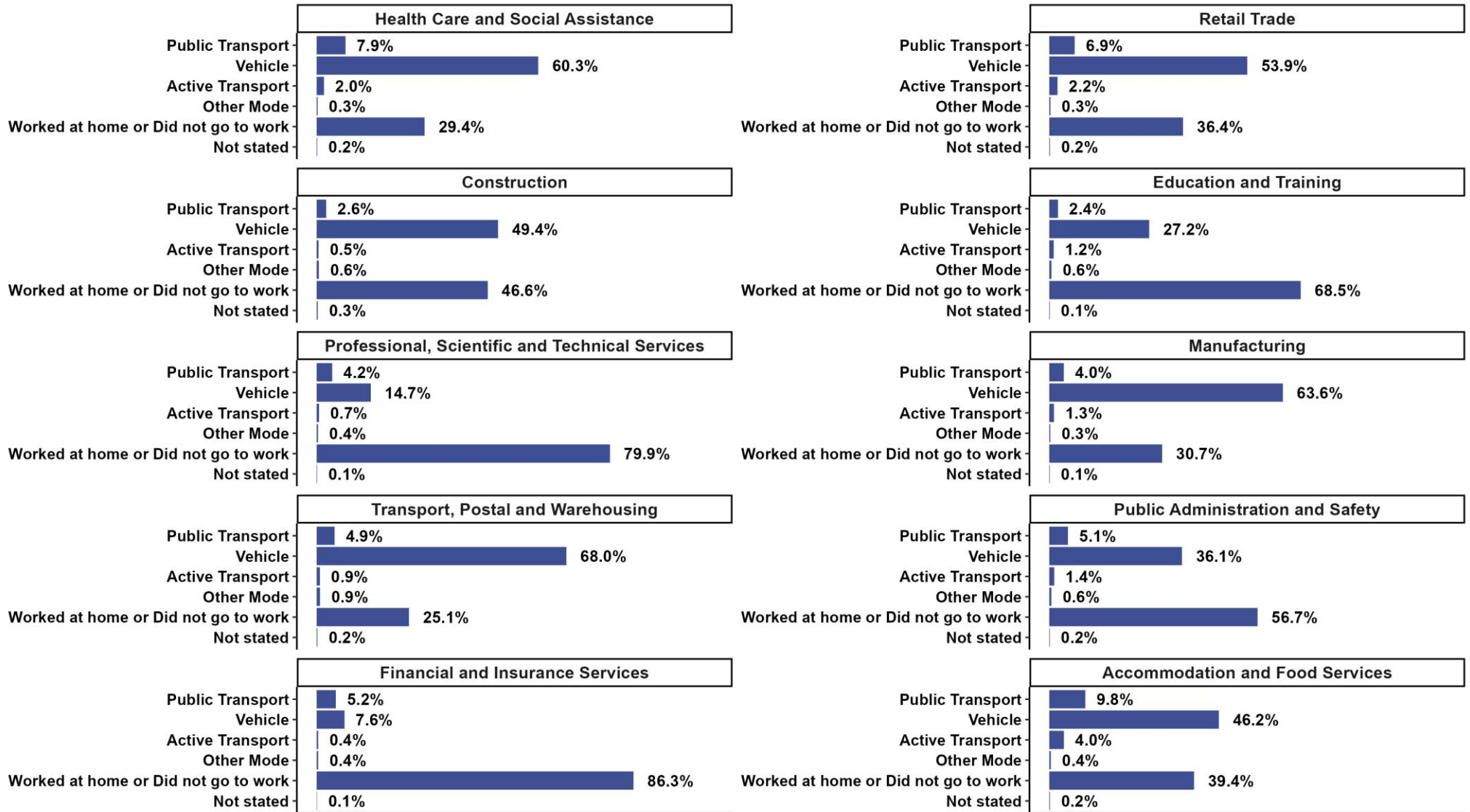
Meanwhile, vehicles are most likely to be used by GWS residents in 'Transport, Postal and Warehousing' (68.0% or 49,601) out of the top ten industries of employment. This is followed by Manufacturing (63.6% or 49,765) and 'Health Care and Social Assistance' (60.3% or 91,022).

As mentioned in previous section, there was a relatively low uptake of active transport in the 2021 Census. However, out of the top ten industries of employment among GWS residents, those working in the 'Accommodation and Food Services' (4.0% or 2,239) industry are most likely to use active transport. This industry is followed by 'Retail Trade' (2.2% or 2,395) and 'Health Care and Social Assistance' (2.0% or 3,011).

Generally, the COVID-19 pandemic has driven a transition to remote work. Across the ten most common industries of employment among GWS residents, those working in the 'Financial and Insurance Services' (86.3% or 52,348) industry were most likely to work at home or not go to work. This was followed by 'Professional, Scientific and Technical Services' (79.9% or 65,863) and 'Education and Training' (68.5% or 61,408).

Across these ten industries, the percentages of persons who used other modes (0.3%-0.6%) or did not state their method of travel to work (0.1%-0.3%) did not vary greatly.

FIGURE 28. METHOD OF TRAVEL TO WORK AMONG WORKERS USUALLY RESIDING IN GWS PER INDUSTRY OF EMPLOYMENT, 2021



Data Source: TableBuilder Pro, 2021 Census - counting persons, 15 years and over | LGA (UR), LGA (POW), 1-digit level INDP, 1-digit level MTWP Variables

Conclusion

It is evident that the COVID-19 pandemic had a significant impact on travel and travel to work, specifically. All categories of travel modes, except for 'Worked at home or did not go to work', decreased in both number and proportion. Public transport and vehicles witnessed the largest percentage decrease. Meanwhile, the number of GWS workers who worked at home or did not go to work increased by a staggering 377.7%. By 2021, close to half of all GWS workers fell into this category.

This report also looked at other demographic variables in relation to method of travel to work. While there were no extreme differences with how people from GWS travelled to work based on their age ranges in the 2021 Census, the youngest age group (15-19 years) was most likely to use active transport and least likely to work at home or not go to work. On the other hand, the oldest age range group (70 years and over) was least likely to use public transport to get to work in 2021. Although there was no significant variation in terms of sex, vehicles were more likely to be used by male workers than female workers usually residing in GWS. Female workers from GWS were more likely to use public transport than males.

Examining long-term health conditions and disability revealed differences in how people travelled to work based on their identification with these variables. For instance, GWS workers who had a long-term health condition were more likely to work at home or not go to work. Meanwhile, GWS workers who had a need for assistance with core activities usually residing in GWS had a higher probability of taking public transport, using active transport, and working at home or not going to work compared to employed persons who did not have a need for assistance.

How workers travel to work based on their industry of employment also seemed to vary. For example, GWS workers in the 'Accommodation and Food Services' industry were most likely to use public transport and active transport. 'Transport, Postal and Warehousing' workers were most likely to use vehicles. Finally, those in the 'Financial and Insurance Services' industry were most likely to work at home or not go to work.

Aside from how workers travelled to their places of work, this report also showed that GWS workers were more likely to travel farther distances than workers in Greater Sydney, the Rest of NSW, and NSW. Employed persons from GWS were more likely to travel at least 10 kilometres compared to Greater Sydney, the Rest of NSW, and NSW overall. This is also related to the finding that, for all GWS workers, Sydney LGA remains the most common destination for work even if it accounted for just over 10% in the 2021 Census. This means that the remaining overwhelming proportion of GWS workers are travelling elsewhere for work. However, it is also noteworthy that, for each GWS LGA of origin, the same LGA was the most commonly reported destination. For instance, workers usually residing in Blacktown were most likely to work in Blacktown.

This report highlights the complexities of transport and travel for workers, particularly in the context of GWS, which is at the forefront of the changing demographic and policy landscape of the Greater Sydney region. New investments and transport infrastructure projects are underway, such as the Parramatta Light Rail and the next phase of the Sydney Metro connecting Chatswood and Sydney CBD. However, the overall impact of these developments, alongside recovery from COVID-19 and Sydney's urban sprawl stretching further to its peripheries, remains to be seen. Furthermore, transport equity continues to be a pressing need and is yet to be achieved.

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Appendix

Origin and destination of travel to work, 2021

LGA (Place of Work)	Greater Western Sydney		Sydney		No Fixed Address		All Other LGAs		Total Workers*
Region (Place of Usual Residence)	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count
Blacktown	121,924	70.1%	20,421	11.7%	5,192	3.0%	26,414	15.2%	173,951
Blue Mountains	28,714	79.7%	2,598	7.2%	1,705	4.7%	2,993	8.3%	36,010
Camden	45,995	77.8%	4,624	7.8%	2,495	4.2%	6,017	10.2%	59,131
Campbelltown	53,030	73.2%	7,915	10.9%	2,411	3.3%	9,050	12.5%	72,406
Canterbury-Bankstown	64,867	48.8%	24,583	18.5%	5,412	4.1%	38,080	28.6%	132,942
Cumberland	52,136	60.9%	12,728	14.9%	3,093	3.6%	17,631	20.6%	85,588
Fairfield	49,101	77.2%	5,621	8.8%	2,134	3.4%	6,732	10.6%	63,588
Hawkesbury	27,986	84.3%	1,064	3.2%	1,859	5.6%	2,272	6.8%	33,181
Liverpool	65,106	72.7%	9,389	10.5%	3,013	3.4%	12,026	13.4%	89,534
Parramatta	60,197	49.3%	23,585	19.3%	3,788	3.1%	34,641	28.3%	122,211
Penrith	82,999	81.7%	6,517	6.4%	4,198	4.1%	7,883	7.8%	101,597
The Hills Shire	56,998	59.5%	14,099	14.7%	3,358	3.5%	21,339	22.3%	95,794
Wollondilly	20,490	77.7%	904	3.4%	1,634	6.2%	3,343	12.7%	26,371
Greater Western Sydney	729,543	66.8%	134,048	12.3%	40,292	3.7%	188,421	17.2%	1,092,304
Lithgow	754	9.1%	91	1.1%	403	4.9%	7,029	84.9%	8,277
Wingecarribee	2,333	9.8%	952	4.0%	1,661	7.0%	18,747	79.1%	23,693
DCJ Nepean Blue Mountains	140,453	78.4%	10,270	5.7%	8,165	4.6%	20,177	11.3%	179,065
DCJ South Western Sydney	300,922	64.3%	53,988	11.5%	18,760	4.0%	93,995	20.1%	467,665
DCJ Western Sydney	291,255	61.0%	70,833	14.8%	15,431	3.2%	100,025	20.9%	477,544
Greater Sydney	847,375	35.1%	513,824	21.3%	89,970	3.7%	962,239	39.9%	2,413,408
Rest of NSW	16,965	1.4%	13,149	1.1%	61,165	5.1%	1,096,409	92.3%	1,187,688
New South Wales	864,618	24.0%	527,205	14.6%	151,595	4.2%	2,060,067	57.2%	3,603,485

Data Source: TableBuilder Pro, 2021 Census - counting persons, 15 years and over | PURP and MTW06P Variables

* Totals in this section were directly obtained from TableBuilder, except for GWS. Values for GWS were obtained by summing the 13 GWS LGAs.

Distance to work, 2021

Distance to Work	Nil distance		Over 0 km to less than 2.5 km		2.5 km to less than 10 km		10 km to less than 30 km		30 km to less than 50 km		50 km to less than 250 km		250 km and over		Total Workers*
Region (Place of Usual Residence)	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count
Blacktown	9,008	5.3%	8,843	5.2%	37,889	22.3%	69,087	40.7%	40,665	24.0%	3,040	1.8%	1,165	0.7%	169,697
Blue Mountains	3,623	10.5%	3,247	9.4%	5,252	15.2%	8,360	24.2%	5,464	15.8%	8,265	23.9%	366	1.1%	34,577
Camden	3,699	6.5%	3,194	5.6%	12,466	21.9%	15,354	26.9%	13,411	23.5%	8,435	14.8%	421	0.7%	56,980
Campbelltown	3,551	5.0%	4,067	5.8%	15,963	22.7%	20,274	28.8%	19,530	27.8%	6,537	9.3%	443	0.6%	70,365
Canterbury-Bankstown	8,524	6.7%	12,827	10.0%	36,018	28.1%	64,911	50.7%	4,370	3.4%	691	0.5%	814	0.6%	128,155
Cumberland	4,427	5.3%	7,733	9.3%	24,288	29.3%	40,446	48.8%	5,083	6.1%	400	0.5%	532	0.6%	82,909
Fairfield	3,273	5.3%	5,359	8.7%	19,717	32.0%	23,130	37.5%	9,519	15.4%	395	0.6%	294	0.5%	61,687
Hawkesbury	2,938	9.3%	2,594	8.2%	5,041	16.0%	11,187	35.5%	6,019	19.1%	3,472	11.0%	238	0.8%	31,489
Liverpool	5,147	5.9%	6,336	7.3%	19,674	22.6%	35,844	41.2%	18,386	21.2%	1,009	1.2%	534	0.6%	86,930
Parramatta	8,058	6.8%	10,181	8.5%	29,611	24.8%	64,658	54.2%	5,079	4.3%	661	0.6%	978	0.8%	119,226
Penrith	5,474	5.6%	6,857	7.0%	24,769	25.3%	32,190	32.9%	19,172	19.6%	8,776	9.0%	652	0.7%	97,890
The Hills Shire	8,944	9.6%	5,138	5.5%	19,422	20.9%	36,610	39.3%	20,659	22.2%	1,511	1.6%	814	0.9%	93,098
Wollondilly	2,050	8.2%	1,671	6.7%	2,416	9.7%	6,823	27.4%	5,884	23.6%	5,844	23.5%	197	0.8%	24,885
Greater Western Sydney	68,716	6.5%	78,047	7.4%	252,526	23.9%	428,874	40.5%	173,241	16.4%	49,036	4.6%	7,448	0.7%	1,057,888
Lithgow	490	6.2%	1,679	21.3%	1,667	21.1%	2,181	27.6%	674	8.5%	1,140	14.4%	68	0.9%	7,899
Wingecarribee	2,593	11.6%	3,153	14.1%	4,995	22.4%	5,599	25.1%	1,121	5.0%	4,571	20.5%	257	1.2%	22,289
DCJ Nepean Blue Mountains	12,525	7.3%	14,377	8.4%	36,729	21.4%	53,918	31.4%	31,329	18.2%	21,653	12.6%	1,324	0.8%	171,855
DCJ South Western Sydney	28,837	6.4%	36,607	8.1%	111,249	24.7%	171,935	38.1%	72,221	16.0%	27,482	6.1%	2,960	0.7%	451,291
DCJ Western Sydney	30,437	6.5%	31,895	6.9%	111,210	23.9%	210,801	45.3%	71,486	15.4%	5,612	1.2%	3,489	0.8%	464,930
Greater Sydney	180,433	7.7%	230,238	9.8%	678,202	29.0%	900,818	38.5%	236,932	10.1%	92,116	3.9%	21,165	0.9%	2,339,904
Rest of NSW	79,914	6.7%	192,768	16.2%	365,794	30.8%	302,219	25.4%	109,428	9.2%	114,057	9.6%	24,503	2.1%	1,188,683
New South Wales	260,343	7.4%	423,003	12.0%	1,043,996	29.6%	1,203,036	34.1%	346,360	9.8%	206,167	5.8%	45,662	1.3%	3,528,567

Data Source: TableBuilder Pro, 2021 Census - counting persons, 15 years and over | PURP and DTWP Variables

*Totals in this section were obtained by summing the number of persons across all categories.

Method of travel to work, 2021

Method of Travel to Work	Public Transport		Vehicle		Active Transport		Other Mode		Worked at home or did not go to work		Not stated		Total Workers*
Region (Place of Usual Residence)	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count
Blacktown	10,387	5.9%	78,182	44.7%	1,432	0.8%	852	0.5%	83,233	47.6%	849	0.5%	174,935
Blue Mountains	732	2.0%	15,477	42.6%	670	1.8%	140	0.4%	19,140	52.7%	137	0.4%	36,296
Camden	1,307	2.2%	31,321	52.7%	445	0.7%	243	0.4%	25,938	43.6%	226	0.4%	59,480
Campbelltown	4,385	6.0%	36,048	49.5%	780	1.1%	336	0.5%	30,894	42.4%	344	0.5%	72,787
Canterbury-Bankstown	8,480	6.3%	54,237	40.6%	2,291	1.7%	753	0.6%	66,986	50.1%	848	0.6%	133,595
Cumberland	9,470	11.0%	35,137	40.8%	1,674	1.9%	539	0.6%	38,568	44.8%	639	0.7%	86,027
Fairfield	2,793	4.4%	34,189	53.6%	915	1.4%	329	0.5%	25,187	39.5%	413	0.6%	63,826
Hawkesbury	504	1.5%	18,872	56.6%	604	1.8%	128	0.4%	13,122	39.3%	130	0.4%	33,360
Liverpool	3,483	3.9%	42,920	47.7%	1,506	1.7%	519	0.6%	41,059	45.6%	472	0.5%	89,959
Parramatta	9,022	7.3%	39,945	32.5%	2,715	2.2%	553	0.4%	70,287	57.1%	524	0.4%	123,046
Penrith	3,299	3.2%	54,565	53.4%	1,279	1.3%	431	0.4%	42,099	41.2%	415	0.4%	102,088
The Hills Shire	3,200	3.3%	36,114	37.4%	875	0.9%	399	0.4%	55,622	57.7%	266	0.3%	96,476
Wollondilly	235	0.9%	15,546	58.6%	367	1.4%	86	0.3%	10,159	38.3%	125	0.5%	26,518
Greater Western Sydney	57,297	5.2%	492,553	44.8%	15,553	1.4%	5,308	0.5%	522,294	47.6%	5,388	0.5%	1,098,393
Lithgow	61	0.7%	5,711	68.7%	336	4.0%	28	0.3%	2,103	25.3%	69	0.8%	8,308
Wingecarribee	238	1.0%	14,496	60.5%	708	3.0%	104	0.4%	8,261	34.5%	161	0.7%	23,968
DCJ Nepean Blue Mountains	4,596	2.6%	94,625	52.6%	2,889	1.6%	727	0.4%	76,464	42.5%	751	0.4%	180,052
DCJ South Western Sydney	20,921	4.5%	228,757	48.7%	7,012	1.5%	2,370	0.5%	208,484	44.3%	2,589	0.6%	470,133
DCJ Western Sydney	32,079	6.7%	189,378	39.4%	6,696	1.4%	2,343	0.5%	247,710	51.6%	2,278	0.5%	480,484
Greater Sydney	140,504	5.8%	927,687	38.2%	65,257	2.7%	11,358	0.5%	1,275,700	52.5%	10,202	0.4%	2,430,708
Rest of NSW	12,494	1.0%	830,961	66.4%	41,466	3.3%	5,821	0.5%	352,474	28.2%	7,725	0.6%	1,250,941
New South Wales	153,114	4.2%	1,759,830	47.8%	106,905	2.9%	17,233	0.5%	1,629,110	44.2%	17,966	0.5%	3,684,158

Data Source: TableBuilder Pro, 2021 Census - counting persons, 15 years and over | PURP and MTW06P Variables

*Totals in this section were obtained by summing the number of persons across all categories.

Number of motor vehicles per dwelling, 2021

Method of Travel to Work	No motor vehicles		One motor vehicle		Two motor vehicles		Three motor vehicles		Four or more motor vehicles		Not stated		Total Dwellings*
Region (Place of Usual Residence)	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count
Blacktown	8,164	6.4%	43,380	34.0%	46,152	36.2%	14,672	11.5%	7,534	5.9%	7,625	6.0%	127,527
Blue Mountains	1,828	5.8%	11,498	36.4%	11,497	36.4%	3,683	11.7%	2,053	6.5%	1,009	3.2%	31,568
Camden	861	2.3%	9,342	24.5%	16,915	44.3%	5,940	15.6%	3,868	10.1%	1,263	3.3%	38,189
Campbelltown	4,447	7.4%	21,477	35.7%	20,561	34.2%	6,674	11.1%	3,571	5.9%	3,446	5.7%	60,176
Canterbury-Bankstown	13,513	10.9%	45,938	37.0%	36,505	29.4%	12,294	9.9%	7,072	5.7%	8,818	7.1%	124,140
Cumberland	9,006	11.8%	29,318	38.3%	21,179	27.6%	6,758	8.8%	3,924	5.1%	6,434	8.4%	76,619
Fairfield	6,418	10.0%	20,738	32.3%	19,189	29.9%	8,343	13.0%	5,339	8.3%	4,099	6.4%	64,126
Hawkesbury	893	3.7%	6,182	25.7%	8,479	35.3%	3,817	15.9%	3,583	14.9%	1,084	4.5%	24,038
Liverpool	5,456	7.4%	21,979	30.0%	24,937	34.0%	9,845	13.4%	6,177	8.4%	4,873	6.7%	73,267
Parramatta	10,994	11.4%	42,490	44.2%	27,804	28.9%	6,888	7.2%	3,182	3.3%	4,880	5.1%	96,238
Penrith	4,857	6.3%	24,859	32.2%	26,914	34.9%	9,676	12.5%	6,452	8.4%	4,420	5.7%	77,178
The Hills Shire	1,475	2.4%	17,085	28.0%	26,064	42.7%	8,938	14.6%	5,970	9.8%	1,497	2.5%	61,029
Wollondilly	441	2.4%	3,741	20.8%	6,639	36.9%	3,182	17.7%	3,231	17.9%	776	4.3%	18,010
Greater Western Sydney	68,353	7.8%	298,027	34.2%	292,835	33.6%	100,710	11.5%	61,956	7.1%	50,224	5.8%	872,105
Lithgow	683	7.6%	3,052	34.1%	2,745	30.7%	1,121	12.5%	725	8.1%	613	6.9%	8,939
Wingecarribee	684	3.2%	6,932	32.5%	7,931	37.2%	2,902	13.6%	1,912	9.0%	956	4.5%	21,317
DCJ Nepean Blue Mountains	8,261	5.8%	45,591	32.2%	49,635	35.0%	18,297	12.9%	12,813	9.0%	7,126	5.0%	141,723
DCJ South Western Sydney	31,820	16.4%	130,147	67.2%	132,677	68.5%	49,180	25.4%	31,170	16.1%	24,231	12.5%	193,802
DCJ Western Sydney	29,639	9.4%	132,273	41.8%	121,199	38.3%	37,256	11.8%	20,610	6.5%	20,436	6.5%	316,147
Greater Sydney	206,112	10.8%	728,037	38.1%	592,793	31.0%	182,326	9.5%	105,522	5.5%	96,864	5.1%	1,911,654
Rest of NSW	60,615	5.3%	387,136	33.8%	403,352	35.2%	140,442	12.2%	82,726	7.2%	72,336	6.3%	1,146,607
New South Wales	266,731	8.7%	1,115,173	36.5%	996,145	32.6%	322,768	10.6%	188,245	6.2%	169,202	5.5%	3,058,264

Data Source: TableBuilder Pro, 2021 Census - counting dwellings, place of enumeration | VEHRD variable

* Totals in this section were obtained by summing the number of dwellings across all categories.