



Capacity and place amenity analysis

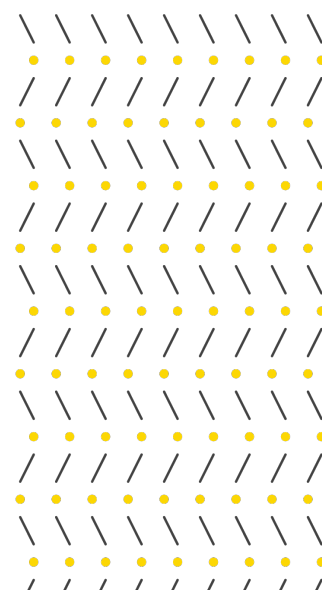
Edgecliff, Sydney

for Longhurst Group

12 March 2024

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1. Introduction

Purpose

This report offers a data-driven analysis of infrastructure capacity and amenity assets in the suburb of Edgecliff, located in the Eastern Suburbs of Sydney, New South Wales. The primary objective is to develop a thorough understanding of the current state of infrastructure capacity, accessibility and level of amenity in Edgecliff and the potential impacts that additional development may have on this and the liveability criteria.

Approach

The analysis draws upon a diverse range of data sources, including spatial data and population demographics obtained from the ABS, and transport network capacity and travel patterns from Transport NSW data.

In addition, benchmark analysis serves as a comparative tool to assess the performance of the suburb in relation to other locations. By benchmarking Edgecliff against comparable areas, we can gain insights into its strengths, weaknesses, and overall performance in terms of liveability, socio-economic diversity, and the quality of infrastructure and amenities.

Benchmarked suburbs include other inner ring suburbs close to the Sydney CBD, such as Bondi Junction, Neutral Bay, Crows Nest and St Leonards, and Waterloo, Zetland, and Alexandria. These areas provide relevant points of comparison due to their similarities in terms of spatial characteristics, population size, and socio-economic factors – and are areas undergoing change with renewal of existing buildings and additional residential development being delivered.

Additionally, the benchmarking process extends beyond the suburb level and includes comparisons to the Woollahra Local Government Area (LGA) and the Greater Sydney region. By evaluating Edgecliff within the context of the Woollahra LGA and the larger metropolitan area, we can understand the relative performance of the suburb.



2. Population and forecasted growth

Population demographics

Figure 1 illustrates the age distribution in the Woollahra area. The NSW Government projects a decline of 2.72% and 5.85% in the working-aged and young family population (5 - 39 years old) in the LGA between 2021 and 2041. This suggests a migration trend among individuals in this age group, with a preference for leaving the Woollahra LGA.

The main contributing factors to this migration are affordability and housing availability challenges, as higher housing costs and living expenses hinder the working-aged and young family cohorts from residing in the area.

In addition to the decline in the working aged and young family population. Figure 1 also shows a significant increase in the ageing population within the Woollahra LGA. This shift in demographics emphasizes the need to address housing requirements for the elderly population, to promote ageing-in-place initiatives.

Woollahra and Edgecliff can provide housing solutions that cater to the ageing population known as Ageing-in-Place, such as proximity to amenities and healthcare services, which enables them to remain in their community comfortably. While simultaneously creating new opportunities for young singles and professionals to access more affordable and spacious housing options in Woollahra. This promotes diversity and a mix of generations in the region, enabling the vacancy chain in the areas housing typology to continue.

Edgecliff population cohort projection 2021 – 2041

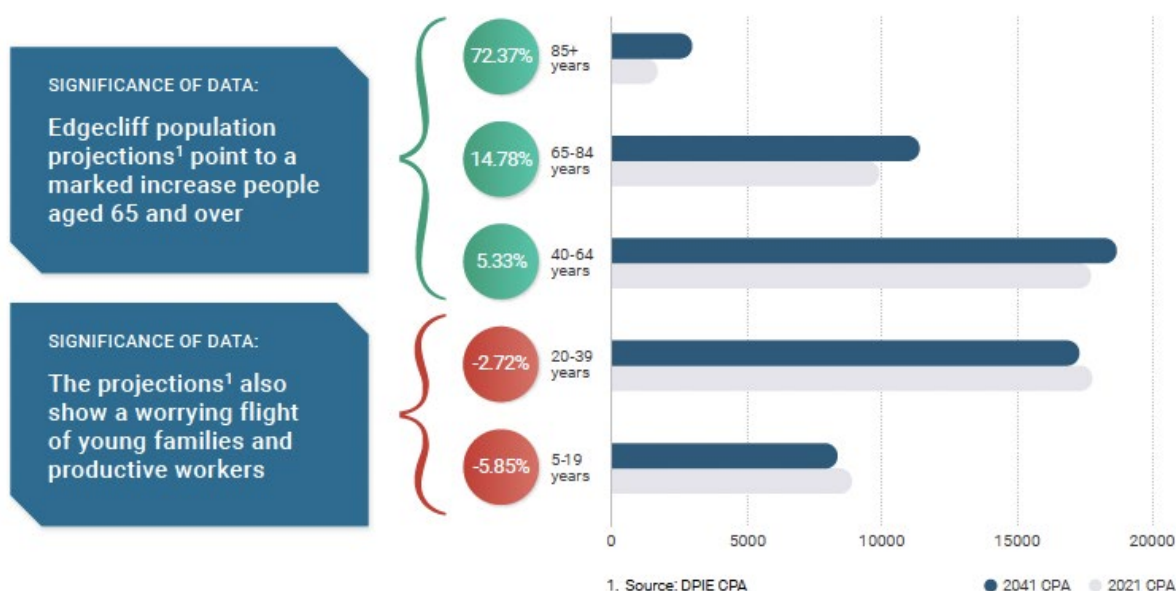


Figure 1: Woollahra LGA Age Cohort Projections. Source: *DPE Population Projections 2021 – 2041*

Population size

Figure 2 highlights the population decrease over 60 years in the Woollahra Local Government Area. Comparing Woollahra; to the wider Sydney Metropolitan area, New South Wales and Australia we have seen these areas have all experienced growth of the local residential population, in most instances doubling their population. Comparatively Woollahra has seen a decrease in their population by approx 15%. Edgecliff as a region, is an established suburb of the Woollahra LGA that has previously supported a much greater population then seen in the 2021 ABS Census.

One notable advantage of Edgecliff as an established suburb is its existing infrastructure which has the capacity to accommodate a larger population. The presence of well developed amenities and ample greenspace further amplifies Edgecliff's potential to accommodate an increase in population, particularly when the proposed increase in population from new development is still within the capacity of the previous population size of Woollahra LGA. Furthermore, there is no need for additional infrastructure construction, as the current infrastructure can adequately meet the demands of a larger residential population.

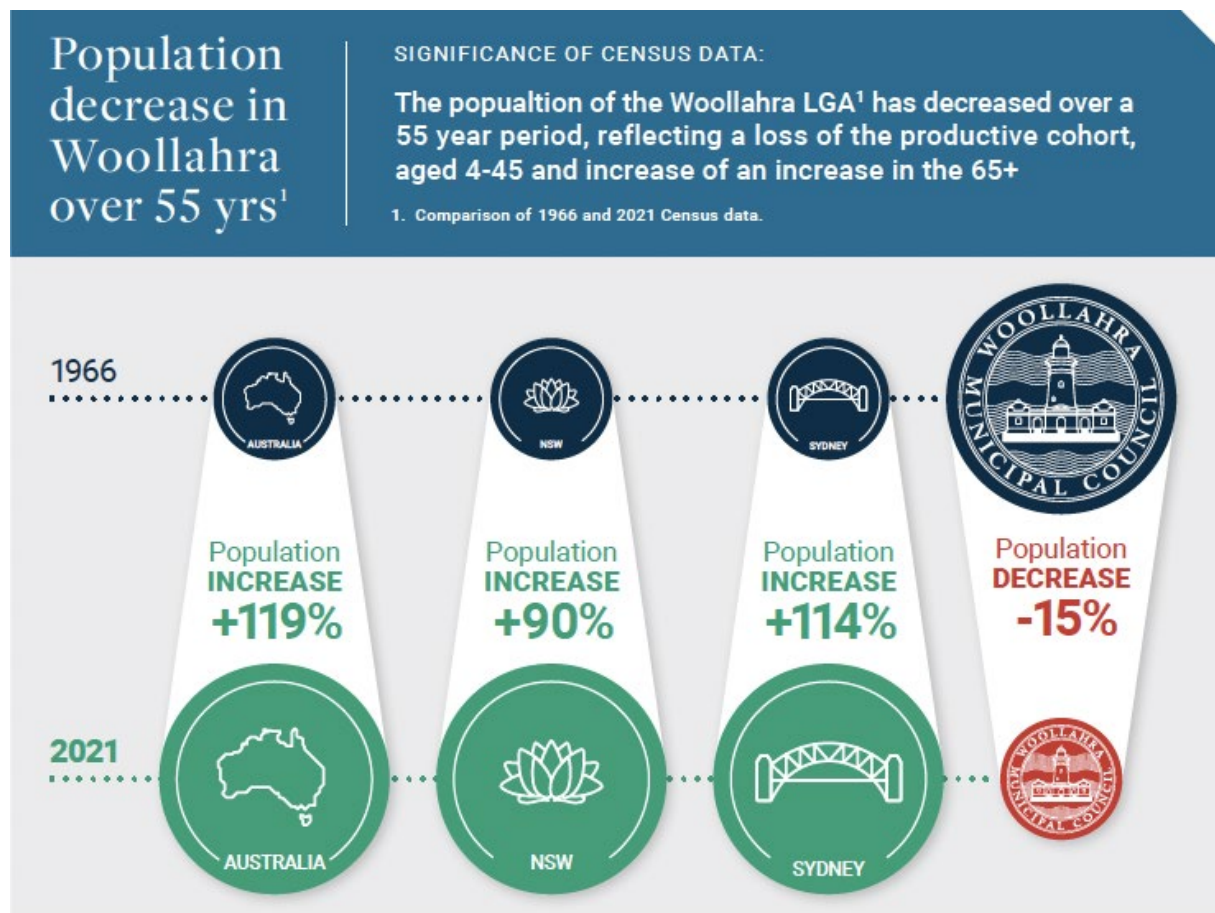


Figure 2: Population changes as percentages for selected regions. Source: ABS Census for 1996, 2001, 2006, 2011, 2016 and 2021

Migration patterns

Figure 3 below provides insight into the migration patterns in Woollahra, broken down by 5-year age cohorts. Data shows a significant outflow of individuals (on net) between the ages of 35 and 49 years old moving away from the LGA. This pattern of migration away from the area can indicate the inadequate housing options available, which forces families and working aged people to seek housing outside of the area that is more appropriate in size and type for their needs as well as in more affordable locations.

The net migration pattern in the cohort 35–49-year-olds indicate limited choices for individuals that have grown up in the local government area of Woollahra, highlighting the need to introduce more housing stock to improve the vacancy chain and additional affordable options within the region for smaller more convenient style of housing. Subsequently, by expanding this housing diversity, a range of housing choices that cater to a wider range of socio-economic factors become available which will ultimately encourage individuals to remain in the Woollahra community.

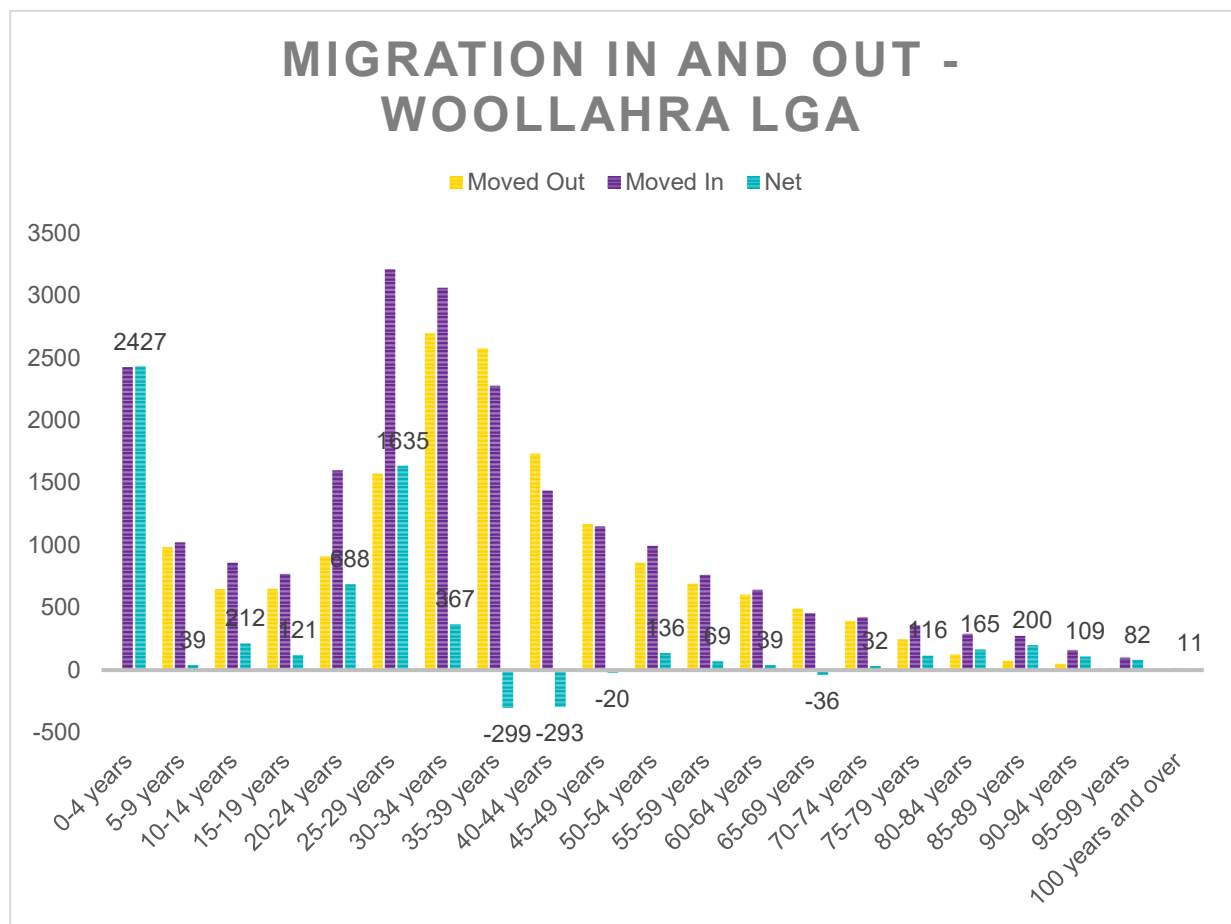


Figure 3: Migration age cohort trends in 2021. Source: 2021 ABS Census



3. Housing

Housing supply opportunities

The NSW Productivity commission Whitepaper 2021 found that NSW is not building homes where people want to live noting *'High housing prices and rents in eastern Sydney reflect the quality of local employment opportunities, its high levels of amenity and a limited supply of housing because of a restrictive planning system.'* It further noted that *'Several of the innermost Sydney LGAs, including Woollahra, Randwick, and Mosman, are less dense than middle-ring areas such as Burwood and Canada Bay.'*

Redevelopment of the Edgecliff Centre will better support two aspects of local housing market in Woollahra:

1. Housing targeted for young professionals, individuals and families looking for convenient housing, well located with amenity and access to transport.
2. Housing targeted for downsizers who want to "Age in Place" without moving into assisted living. Due to the typology of existing apartment stock have resisted leaving the larger family homes enabling the housing cycle to be completed.

Housing supply gap

Figure 4 provides insights into housing utilisation characteristics in the Woollahra LGA. It reveals that 70% of dwellings in the area contain at least one spare bedroom per household, while 1.2% of dwellings necessitate additional space. A more detailed breakdown of that data reveals that 37% of homes have one spare bedroom, 23% of homes have two spare bedrooms and 10% of homes have three or more spare bedrooms. That is, 1 in every 10 homes that have three or more bedrooms underutilised.

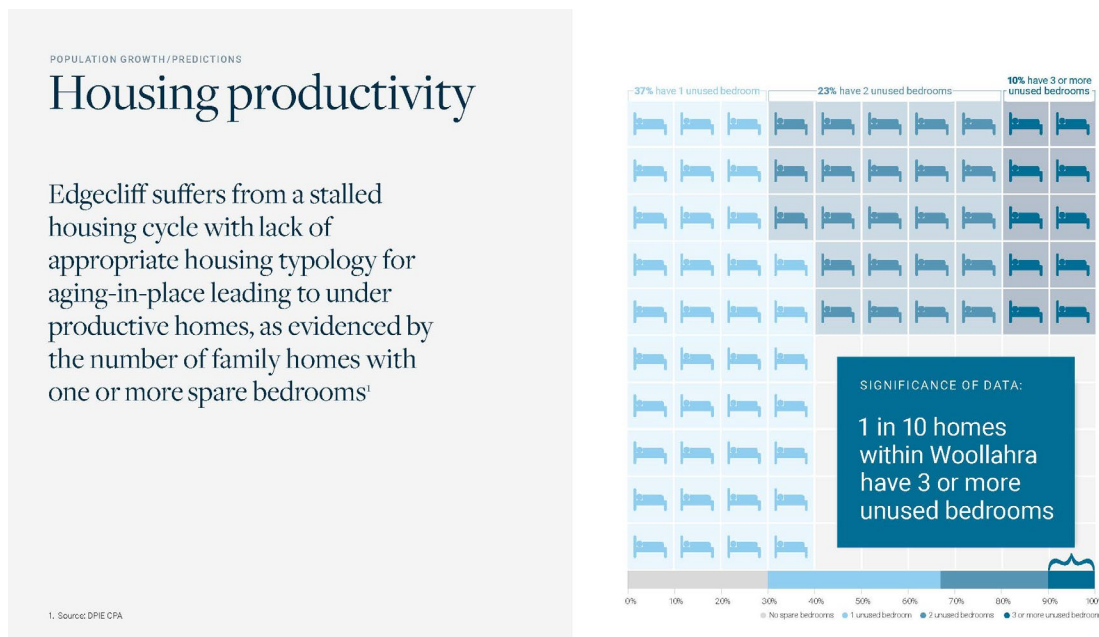


Figure 4: Number of spare bedrooms per household in Woollahra. Source: 2021 ABS Census - Counting Dwellings (Enumeration)

These findings reveal the extent of the underutilisation of the current housing stock within the region as of 2021. The supply of well-located unit stock will enable those residents with a desire to transition to smaller housing typologies to remaining rooted in their community.

Housing diversity

Figure 5 shows that Edgecliff and Woollahra have a substantial proportion of dwellings classified as detached, semi-detached, or one to two-story blocks. Edgecliff surpasses 30% while Woollahra exceeds 50% in this category.

This stark comparison becomes more significant when benchmarked against other locations in the Greater Sydney region. For instance, Waterloo and Zetland only have approximately 10% of such dwellings, while St Leonards has less than 5%. In comparison to Bondi Junction, Edgecliff exhibits a similar proportion of separate houses and semi-detached one or two-story blocks. Additionally, Edgecliff has a significantly lower percentage (23%) of dwellings classified as nine or more stories compared to Bondi Junction.

By expanding the supply of apartment offerings in Edgecliff, there is opportunity to enhance the diversity of housing options while respecting the concerns of the community to preserve single detached dwellings.

Providing more housing choice, locally, enables existing residents to move within the area to housing that suits their life stage and lifestyle desires. For example, older residents living in single detached dwellings that have had adult children move away are able to downsize to apartments, which frees up larger houses for other family households that want the space. Creating a well-balanced housing market that supports a variety of living choices supports a diverse community.

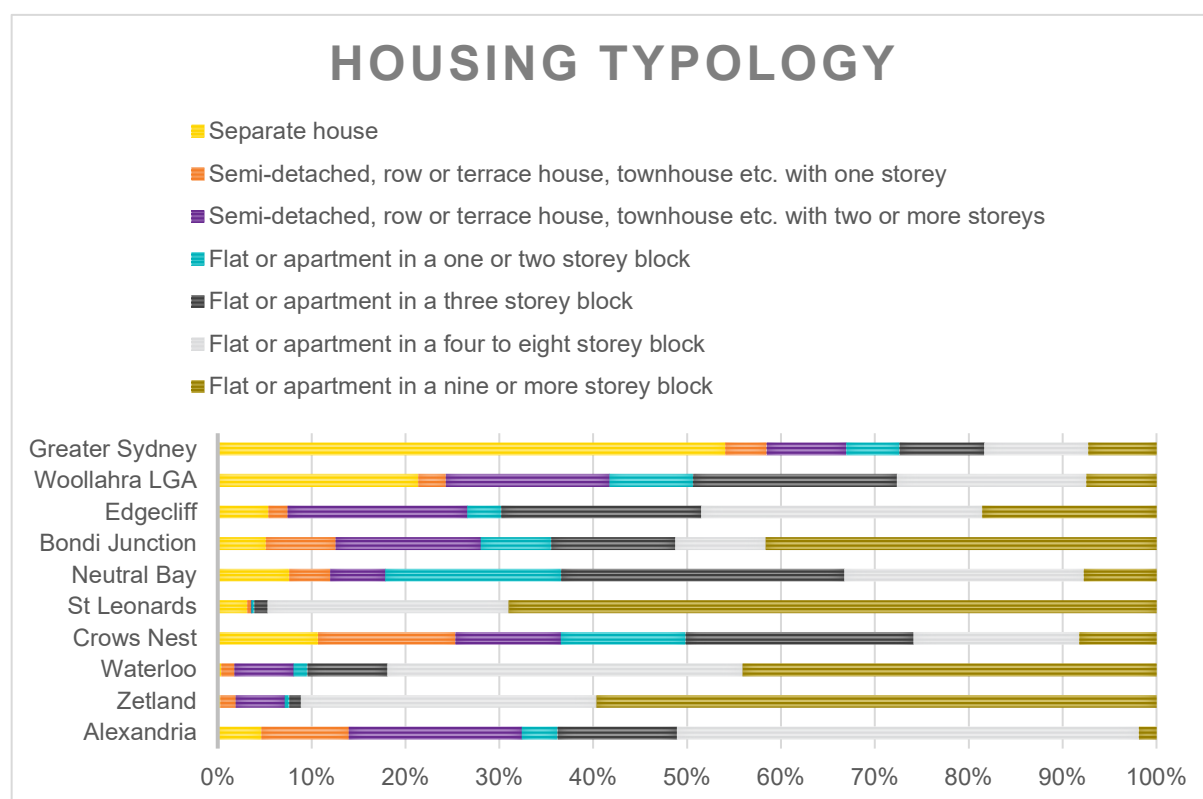


Figure 5: Housing typology breakdown in Edgecliff and benchmarked regions. Source: 2021 ABS Census - Counting Dwellings (Enumeration)

The concept of the housing vacancy chain is relevant when considering the extent of spare rooms in the Woollahra LGA. New developments offer an opportunity for low-maintenance, well connected and accessible homes that can be attractive options to downsizers. By providing these homes, it can enable a proportion of existing occupants to move from larger family homes to new, fit-for-purpose stock. This transition enhances the accessibility of existing stock to others, who may be at different life stages, enabling the existing housing stock to be more productively used.



4. Public transport

Public transport network

Edgecliff is well serviced by the rail and bus network and located on New South Head Road, it is an important interchange for the Eastern Suburbs – a gateway between the Eastern Suburbs and Sydney CBD.

Edgecliff Station is serviced by the T4 Eastern Suburbs and Illawarra Line which provides easy access to Bondi Junction, the CBD and Sydney Airport.

New South Head Road is a key arterial road that connects the Eastern Suburbs to the Sydney CBD. Buses provide connections to and from the Sydney CBD to the wider Woollahra LGA, via Edgecliff and connect to the bus network across the broader Eastern Suburbs

Train capacity

Edgecliff Station is the second station from the terminus of the T4 Eastern Suburbs and Illawarra Line (Bondi Junction Station). Edgecliff Station is only two stations away from the Sydney CBD, with access to Martin Place and Wynyard stations.

Analysis of opal data and trips on the train network¹ shows that less than 2.8% of trains stopping at Edgecliff Station are at maximum passenger capacity during peak hours, meaning that there is no seating room or limited to standing room only. Figure 6 shows the train network across inner Sydney and capacity of trains during peak hours. Almost all stations have most trains arriving at the station during peak hours having no seating room or limited to standing room only, within the exception of Edgecliff and Bondi Junction Stations.

The COVID-19 pandemic has changed commuting patterns. Figure 8 shows mode to work data and comparing pre-covid patterns (in 2016) and post-covid patterns (in 2021), there has been an increase in people that work from home in Edgecliff and a reduction of people who caught the train to work. These travel patterns mean trains on the network would have even more capacity during peak hours with less people using the train network to commute to work.

Edgecliff Train Station which is the most frequented method of public transport used in the surrounding area has significant latent capacity and is underutilised during both peak hour periods particularly when compared to similarly located train stations both North and South of the Sydney CBD. These findings highlight that the surrounding area around the Edgecliff Transport Interchange have significant capacity to increase density as part of the growing trend of transport orientated development.

¹ Analysis conducted for 2017 Opal data to reflect pre-covid travel patterns.



Public transport capacity

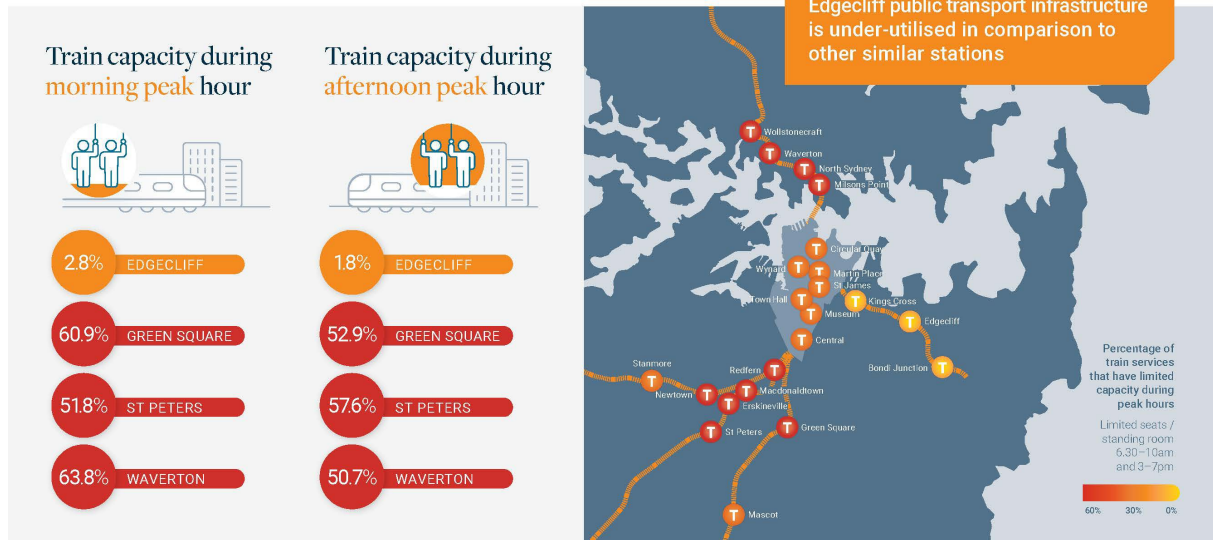


Figure 4: Opal data analysis of services at capacity during peak hours. Data Source: 2019 Opal Data, <https://opendata.transport.nsw.gov.au/dataset/opal-trips-train>

Quality of services

In 2018, Edgecliff train station was upgraded under the Transport Access Program (TAP), aiming at delivering a better experience for public transport customers in Edgecliff. The program provides greater accessibility, security, and integration of the transport infrastructure. The station upgrade has provided customers at Edgecliff with improved amenity in the station area, including:

- A new lift from the bus interchange to the concourse level.
- An additional new lift connecting the concourse level to the station platform.
- Replacement of four escalators to the station platform.
- New fire stairs between the station platform and concourse level.
- Installation of four new ticket gates and relocation of the existing ticket gates.
- New pedestrian crossings, ramps, wind breaks and relocated bus sheds in the bus interchange.
- Three new kiss and ride spaces on Mclean Street, plus sheltered seating, and a new bicycle rack.
- Adjustments and upgrades to the electrical, lighting, drainage, seating, and CCTV.

5. Traffic and parking

Car Ownership Patterns and Peninsula Nature of LGA

The analysis conducted emphasizes the need to increase population density in Edgecliff compared to other areas within the LGA to minimise congestion pinch points along the road network.

Examining car ownership trends in Woollahra and the surrounding networks reveals the following: In Edgecliff, residents are twice as likely to commute to work using public transport rather than private vehicles. Additionally, Edgecliff residents are twice as likely to not own a private vehicle and half as likely to own two or more cars compared to the rest of the Woollahra LGA. Considering these findings and the nature of the road network, constructing homes further within the LGA peninsula would exacerbate the existing concerns regarding local intersections and the wider road network.



Figure 7: Car ownership statistics by household. Data Source: 2021 ABS Census.

Geographically, the LGA forms a peninsula with two key arterial roads serving as gateways. The primary gateway, centred around New South Head Road in Edgecliff, provides access to and from various destinations such as Sydney CBD, North Shore, and the beaches via the harbor tunnel, as well as Sydney's west via the Cross City Tunnel and the south and southwest via the Eastern Distributor. The second arterial road, Old South Head Road, serves the Eastern Suburbs of Waverley and Randwick.

Therefore, it is crucial to carefully consider the location of future housing developments within the LGA to mitigate potential strain on the road infrastructure and address the transportation preferences and patterns of Edgecliff residents, who heavily rely on public transport options.

Encouraging less driving

Table 1 provides a summary of the population's mode of travel to work. Edgecliff shows higher reliance on public transport and active transport methods, comparable to other inner-city hubs like Bondi Junction, St Leonards, Waterloo, and Zetland. Edgecliff also has a lower proportion of private vehicle dependence compared to the greater Sydney average and Woollahra. Additionally, a higher percentage of Edgecliff residents work from home compared to greater Sydney.

Furthermore, it is important to note that the proposed renewal of Edgecliff Centre will not create additional traffic generation. This approach aligns with sustainable urban planning principles and encourages residents to rely on alternative modes of transportation.

Being a transport interchange, there are various public transport options at Edgecliff.

Redevelopment of the Edgecliff Centre and attracting more people to live in close proximity of the interchange enables a transit-oriented community. By prioritising access to public transportation and promoting walkability, the proposed redevelopment project reduces the need for private vehicle usage and generation of localised traffic congestion.

	Public Transport	Private Vehicle	Active Transport	Worked at Home
Greater Sydney	6.8%	44.6%	3.1%	45.5%
Woollahra LGA	5.2%	25.3%	5.7%	63.8%
Edgecliff	10.1%	19.1%	7.2%	63.6%
Bondi Junction	12.7%	20.8%	8.5%	58.0%
Neutral Bay	7.0%	22.4%	5.7%	65.0%
Crows Nest	6.9%	18.4%	8.9%	65.7%
St Leonards	9.5%	15.0%	8.2%	67.4%
Waterloo	10.2%	21.8%	9.0%	58.9%
Zetland	11.1%	24.5%	5.3%	59.1%
Alexandria	7.6%	20.0%	7.4%	65.0%

Table 1: Method of Travel to Work in benchmarked locations. Source: 2021 ABS Census - Counting Dwellings (Enumeration)

Figure 8 shows the changes in the method of travel to work in Edgecliff between 2016 and 2021. Considering the impact of the COVID-19 pandemic, there has been a significant decrease in the number of people using trains (-391%), cars (-43%), and walking (-61%) as their primary mode of transportation to work. On the other hand, there has been a substantial increase in the number of individuals working from home (89%) during this period.



The COVID-19 pandemic has had a profound impact on commuting patterns, with many people shifting towards remote work arrangements to ensure safety and comply with social distancing measures. This explains the significant increase in those working from home between 2016 and 2021. The decrease in the use of trains, cars, and walking suggests a link to the increase in remote work policies and a shift towards flexible work options.

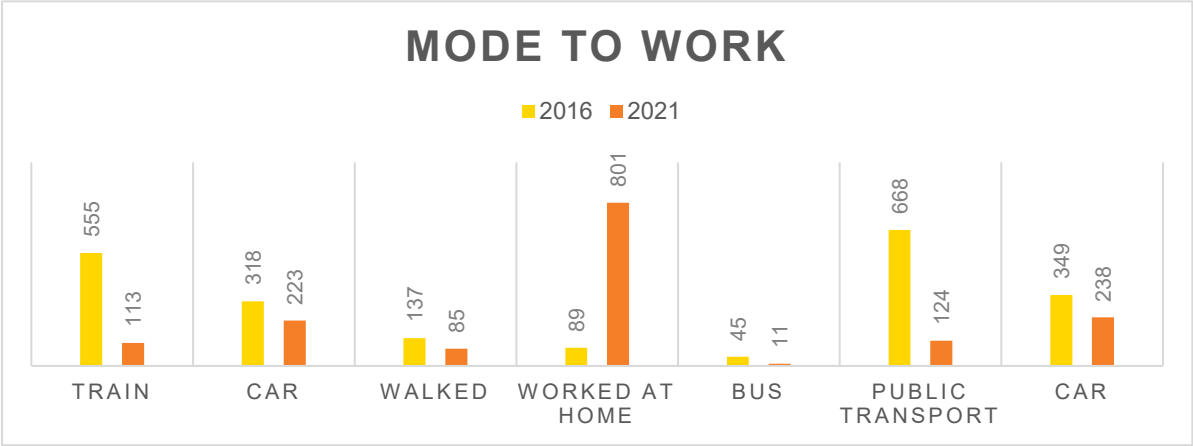


Figure 5: Mode of travel to work comparison between 2016 and 2021 for Edgecliff. Source 2021 ABS Census

The time series depicted in Figure 9 showcases the evolving working arrangements in Edgecliff. Over the period from August 2015 to 2021, there has been a consistent upward trend in the proportion of individuals classified as having flexible work arrangements. Notably, there has been a substantial surge in the number of people regularly working from home in a job or business, particularly following the impact of the COVID-19 pandemic, with a significant increase observed in August 2021.

The shift towards flexible work arrangements and remote work options highlights the importance of providing suitable housing choices that cater to individuals' evolving needs. By affordable housing projects in Edgecliff, the community can better accommodate the growing demand for housing that supports remote work, while also leveraging the existing access to public transportation options and proximity to essential services.

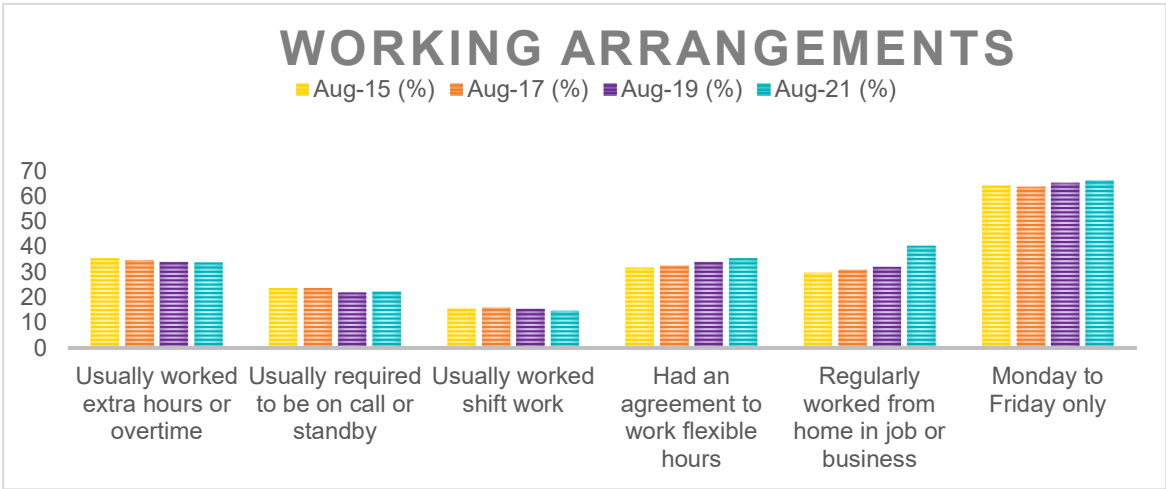


Figure 6: Working Arrangements time series for Edgecliff

6. Public open space

Access to quality green space

Access to quality green space and its quality are crucial aspects of Edgecliff's urban environment. Edgecliff is advantageously situated close to regional open spaces, offering the local community about 24 hectares of accessible open space within walking distance. This includes 7 parks located within the suburb itself. The current provision of open space in Edgecliff is estimated at 9.42 hectares per 1000 residents. Figure 10 shows the access to public green space compared to other suburbs around inner Sydney. Consequently, Edgecliff provides up to 10 times more green space per resident than other inner-city areas, countering claims of a drastic decrease in available green space and ensuring the maintenance of substantial open spaces for community use. Figure 11 highlights the location of these green spaces alongside community facilities within Edgecliff, showing that residents have access to parks, a public library, and schools within an 800-metre walkable distance.

Edgecliff's green spaces are distinguished by notable areas such as Trumper Park and Oval, which spans 5.6 hectares, and Rushcutters Bay Park, covering 5.33 hectares. Trumper Park includes an oval and nature reserve, while Rushcutters Bay Park offers harbour views, water access, and a marina. A 2021 community survey conducted by Woollahra Council reflected high satisfaction levels among the community, with libraries, parks, recreation areas, playgrounds, sporting fields, facilities, and harbourside facilities scoring above 90%. This underscores the importance of preserving green spaces and establishing green connections between locations, which are among the key priorities in Woollahra Council's strategic plan. The emphasis on both the accessibility and quality of green spaces highlights their significance in enhancing the usability of these areas for a wide range of activities and for people of all ages, throughout different times of the day.

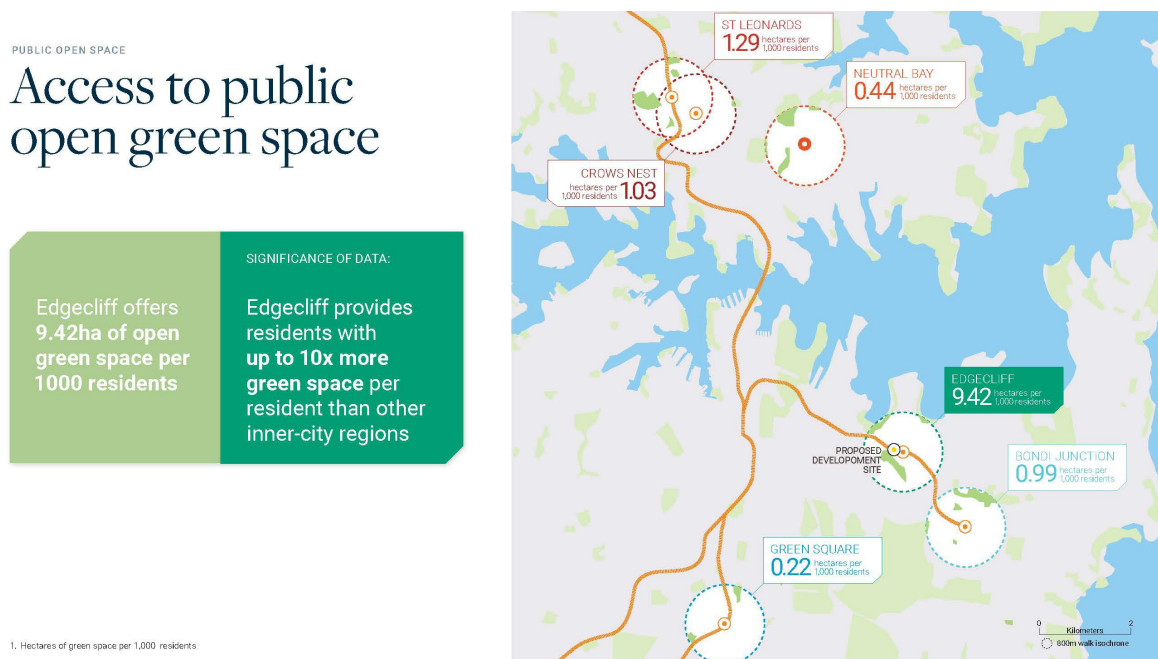


Figure 10: Access to public open green space. Source: Six Maps – Spatial analysis.

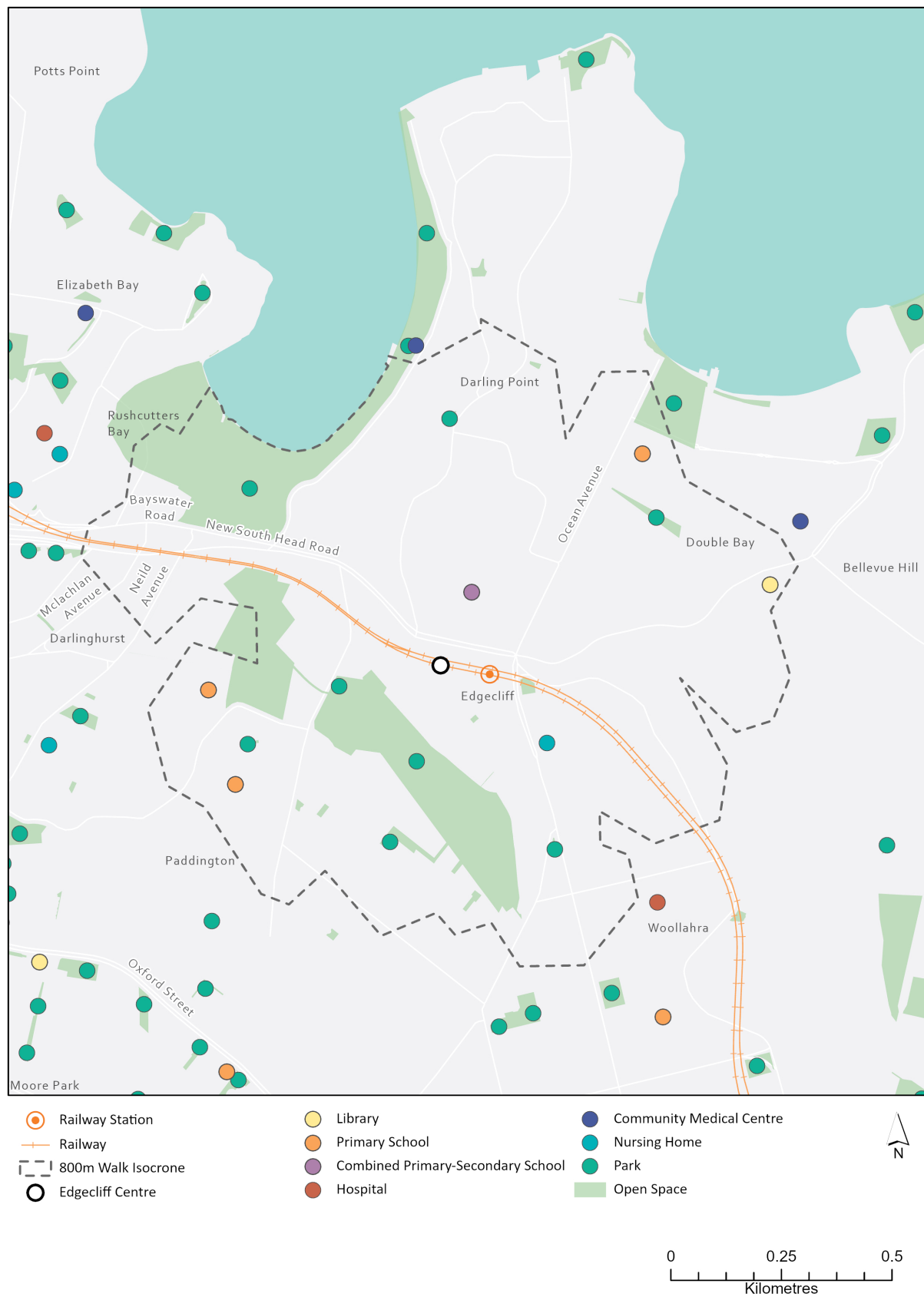


Figure 11: Map of green space locations and community facilities in Edgecliff



7. Access to health services

Proximity and quality of services

A key indicator to determine a hospital's capacity is Principal Referral Hospital Emergency Wait Times for Emergency Department admissions as well as funding towards new hospitals and departmental upgrades.

An analysis of Principal Referral Hospital Emergency Wait Times across Sydney highlight that the best performing Emergency Department is St Vincent's Public Hospital with half the waiting time to its nearest comparable hospital.

Edgecliff is well located, St Vincent's Hospital, is located within a 1.2 kilometre walking radius. St Vincent's has a top-performing emergency department with less than 4 minutes of waiting time, when compared to other principal referral hospitals in Sydney.

Recent government funding has improved healthcare facilities in the area, including a \$14 million upgrade to St Vincent's Public Emergency Departments and the completion of the \$782 million Acute Services Building at Prince of Wales Hospital in Randwick, expanding emergency and critical care services. Prince of Wales is also well located to Edgecliff, only 4km away.

The presence of nearby hospitals with improved facilities and efficient emergency departments is an advantage for Edgecliff. The proximity of the recently upgraded St Vincent's Hospital and Prince of Wales Hospital ensures that residents will have convenient and reliable medical services. This further enhances the appeal and suitability of the Edgecliff Centre site for new residents.

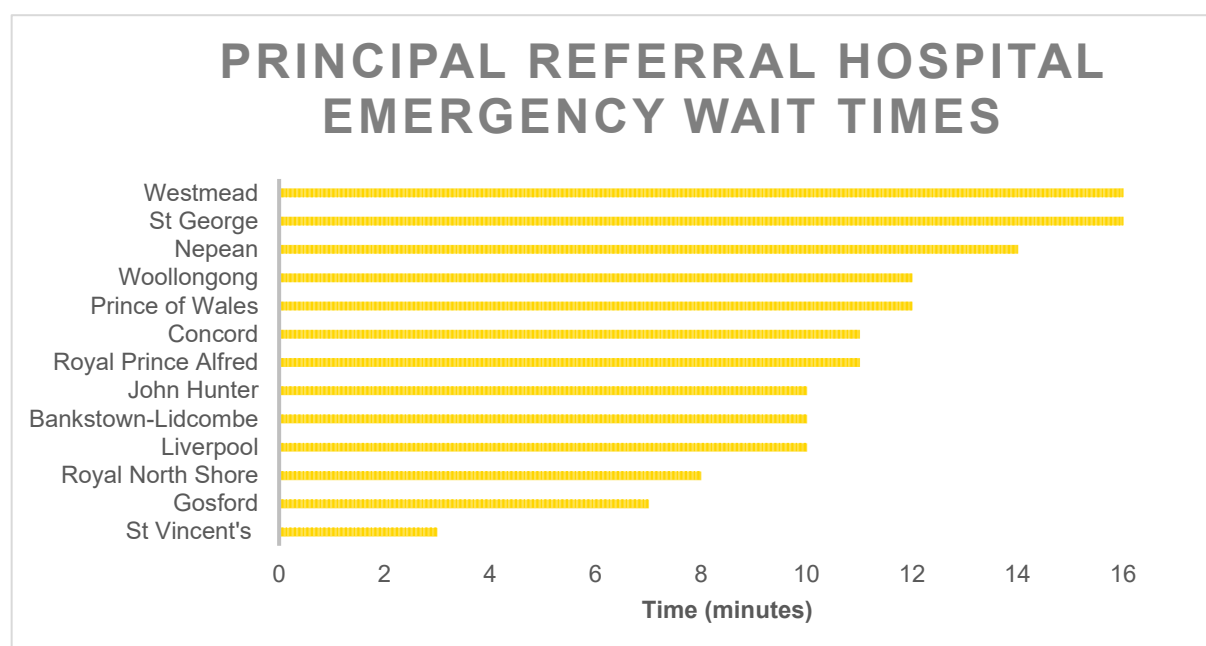


Figure 12: Emergency wait times for benchmarked hospitals across Greater Sydney. Source: AIHW

8. Access to education

Capacity of local schools

Edgecliff is conveniently located near three government primary schools: Double Bay Public School, Glenmore Road Public School, and Woollahra Public School. The NSW Government ensures that every school-aged child is accommodated in a government school. Primary schools are represented in this analysis as catchments are smaller and more local, whereas much larger catchments are used for secondary schools planning and enrolments are less directly linked to the immediate local residential population.

The combined enrolment numbers for the three local public schools peaked at 1,476 students in 2016 but have been decreasing. The current population of primary-aged children in Edgecliff is under 200, which is less than 15% of the maximum capacity. Even with an additional 250 residents from the proposed development, the estimated increase of 20 primary-aged students would not reach the previous maximum enrolment in 2016.

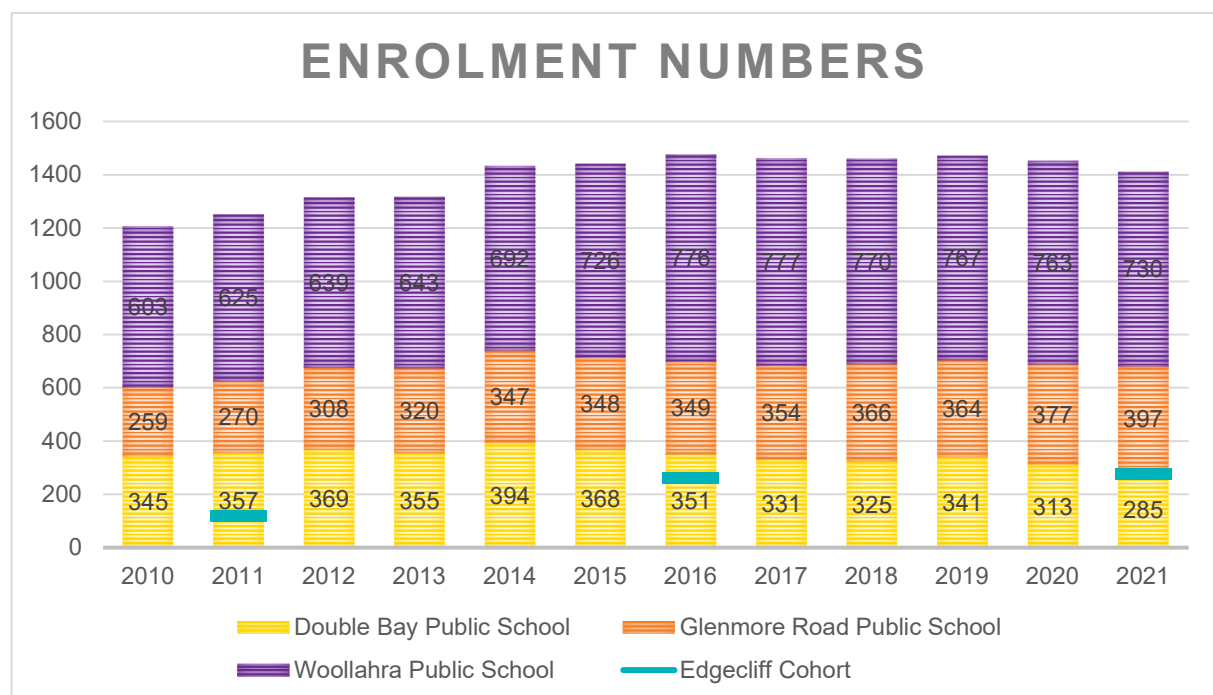


Figure 13:7 Public school enrolment numbers. Data Source: NSW government schools by size (2008-2021)



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