

391-423 Pacific Highway, Crows Nest

Market Appraisal

Deicorp Projects
(Crows Nest) Pty Ltd.

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Executive Summary

BACKGROUND

Deicorp are progressing a planning proposal for a mixed-use development at 391-423 Pacific Highway, Crow Nest known as the Five Ways Triangle (the Site).

The planning proposal included an indicative concept plan which envisaged the redevelopment of the Site for a 16 storey mixed-use building comprising 8,002sqm of commercial floorspace, 129 dwellings and 247 basement car spaces.

The Planning Proposal received Gateway approval from the NSW Department of Planning and Environment (DPE) in March 2023. Deicorp are now progressing a State Significant Development Application (SSDA-66826207) to enable development of the Site and are currently revising the concept scheme (the Revised Scheme) included in the planning proposal.

Specifically, the development comprises the:

- Construction of 191 apartments, 8,002 sqm of commercial and retail and associated basement parking;
- Infrastructure upgrades, landscaping, civil and stormwater works;
- Lot consolidation and Stratum Subdivision; and
- Replace existing signage with a digital signage.

North Sydney Development Control Plan

The Site is subject to the North Sydney Development Control Plan (DCP). Under the DCP, car parking provision is based on maximum car parking rates by land use type. The applicable car parking rates are summarised in **Table ES-1**.

Table ES-1: Maximum Parking Rates (High Accessibility Area), North Sydney Development Control Plan

Development Type	Zone	Maximum Parking Rate	
<ul style="list-style-type: none">• Residential flat buildings• Shop top housing	B4 Mixed Use	Studio	0.3 / Dwelling
		1-Bedroom	0.4 / Dwelling
		2-Bedroom	0.7 / Dwelling
		3-Bedroom	1.0 / Dwelling
Non-Residential	B4 Mixed Use	All	1.0 /400sqm non-residential GFA

Source: NSDCP 2013

The Revised Scheme

The Revised Scheme includes 24,137sqm GFA comprising 191 apartments, 8,002sqm of commercial floorspace and 324 basement car spaces.

Based on the maximum car parking rates outlined in the North Sydney DCP, the Revised Scheme would be permitted a maximum of 110 car spaces. The Revised Scheme proposes delivering some 324 spaces.

Atlas Economics (Atlas) is engaged by Deicorp to investigate residential and non-residential demand for car parking across North Sydney and the Lower North Shore.

DEMAND FOR PRIVATE VEHICLES

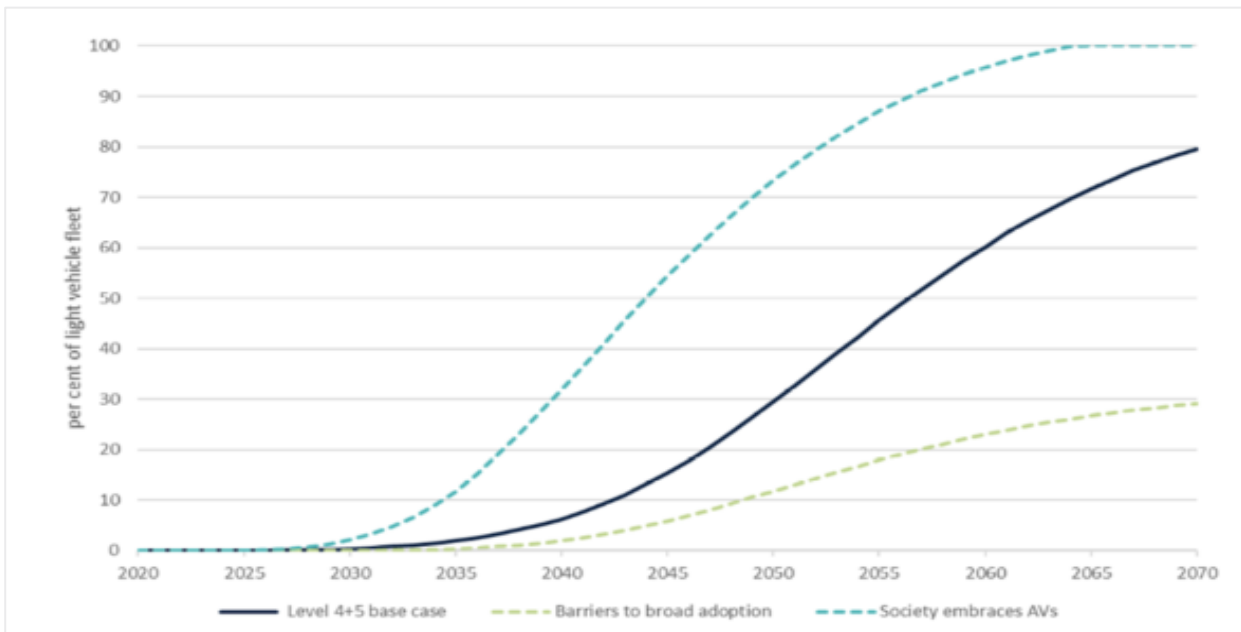
At a national level, Australia has amongst the highest levels of private passenger vehicle ownership in the world. On a per household basis, Census data shows that vehicle ownership rates across Australia have remained largely unchanged over the past decades, declining marginally from 1.8 vehicles per household in 1991 to 1.7 vehicles per household in 2021.

Socio-demographic analysis undertaken in this Study suggest that households and workers in the North Sydney LGA are highly car-dependant. Key findings at the local level show:

- 78% of households in North Sydney owned one or more private vehicles, with ~25% owning two or more.
- Car ownership rates are higher than that recorded in 1991 with ownership growth outpacing that of Greater Sydney.
- North Sydney is amongst the most affluent areas in Australia, with household income levels being a well-established driver for private vehicle ownership (BITRE, 2019; BITRE, 2018; Wang and Curtis, 2015).

Looking forward, the uptake of autonomous vehicles has long been forecasted to potentially replace the need for private vehicle ownership. However, the arrival and uptake of AVs has been widely overestimated in forecasts to date (Global Data, 2020). As shown in **Figure ES-1**, forecasts by the Commonwealth Government's Bureau of Infrastructure, Transport and Regional Economics suggest that AV take-up is likely to be a much longer-term prospect than initially expected.

Figure ES-1: Autonomous Vehicle Penetration Rates (2020-2070), Australia



Source: BITRE (2021)

Despite the uncertainty around the arrival of AVs, their arrival is largely a matter of when and not if. However, it is clear that it is a much more longer term proposition than has been recently conceived and demand for private passenger vehicles is going to remain strong for the several upcoming decades at least. It is also unclear what impact, if any, the availability and uptake of AVs will have upon vehicle ownership trends.

MARKET DEMAND FOR CAR PARKING

Provision of private car parking has historically been an expected feature of commercial offices and apartments within Crows Nest. Whilst market investigations suggests that increased public transport accessibility provided by the future Crows Nest Metro Station will temper these market expectations somewhat, adequate provision of car parking will still be required. These is attributed to a mix of factors in both sectors:

- Couple families with children and older downsizers form the largest buyer cohorts for new apartments in Crows Nest and neighbouring St Leonards.
- Downsizers in particular are becoming an increasingly important buyer group for apartments, with features such as ample parking an important drawcard in facilitating their transition from larger dwelling formats.
- As a secondary office market, Crows Nest/St Leonards has traditionally attracted commercial occupiers seeking better 'value for money' compared to traditional CBD markets (e.g. Sydney CBD, North Sydney). The provision of ample car parking has been an important feature of this offering.
- The Crows Nest/St Leonards office market is currently the worst performing major office market in Greater Sydney, recording a vacancy rate of ~24% in July 2023 (PCA, 2023). Market investigations indicate that one of the markets core strengths is the ample provision of car parking provided in most office buildings.

Given the market dynamics outlined above, market feedback on the maximum residential and non-residential car parking rates outlined in the North Sydney DCP has been largely negative, particularly in the case of commercial office. The capacity of future development to effectively attract demand for new residential and commercial uses with limited car parking provision is uncertain and presents significant market risk moving forward.

DRAFT HOUSING SEPP 2023

The NSW Department of Planning and Environment (DPE) are currently in the process of revising the State Environmental Planning Policy (Housing) 2021 (the Housing SEPP). The draft legislation, to be known as the State Environmental Planning Policy (Housing) 2023, has been provided the property industry for review and comment prior to public exhibition.

The draft Clause 19 outlines the non-discretionary development standards applicable to development seeking additional floorspace through the provision of a minimum of 15% affordable housing. Under the draft Clause 19, the following *minimum* residential car parking rates are to be provided:

- One bedroom dwellings - at least 0.5 parking spaces
- Two bedroom dwellings - at least 1.0 parking space
- Three bedroom dwellings - at least 1.5 parking spaces.

Based on these minimum parking rates, and assuming the Revised Scheme included the required affordable housing component of 15% of total gross floor area, a minimum of 187.5 car spaces would be required. This aligns with the number of car spaces proposed in the Revised Scheme.

Table ES-2: Minimum Car Parking Provision under draft Housing SEPP 2023, Revised Scheme

Apartments	No.	Proposed Housing SEPP 2023 Parking Rates	Minimum Car Spaces
Residential	191		190
1-bedroom	40	0.5 / dwelling	20
2-bedroom	114	1.0 / dwelling	114
3-bedroom	37	1.5 / dwelling	56
Total			190

Source: Atlas Economics/Deicorp

RECOMMENDATIONS

The maximum car parking rates which would apply to the Revised Scheme are considered unviable in meeting the socio-demographic and property market realities of the local Crows Nest area. This has been demonstrated from:

- Historical and current socio-demographic characteristics of the local North Sydney resident catchment.
- Forecast take-up of autonomous vehicles across Australia.
- Market expectations for new residential and commercial floorspace in Crows Nest.

There is real market risk that if development of the Revised Scheme were to be progressed based on the maximum parking rates identified in the North Sydney DCP, newly constructed floorspace face significant market resistance.

For instance, under the North Sydney DCP, the maximum number of car spaces permitted for the 8,002sqm of non-residential floorspace proposed in the Revised Scheme would be 20 car spaces. Based on a generic workspace ratio of 1 worker per 30sqm of GFA, this would mean just 20 workers out of a potential 267 workers would be entitled to a car space.

Accordingly, it is recommended that the Revised Scheme adopt higher car parking rates in order to meet the requirements of the local market. Should the Revised Scheme being progressed through the draft Housing SEPP 2023 and meet its specified requirements, the Revised Scheme should adopt the minimum car parking rates proposed therein. These rates are considered adequate to meet current and future socio-demographic and market demand.

It is recommended that in order to ensure the viability of the non-residential floorspace (8,002sqm) in the Revised Scheme, higher parking rates to those outlined in the North Sydney DCP be provided. The number of non-residential car spaces proposed in the Revised Scheme (134) are considered appropriate to meet contemporary occupier demands.

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1. Introduction

1.1 Background

Deicorp are progressing a planning proposal for a mixed-use development at 391-423 Pacific Highway, Crow Nest known as the Five Ways Triangle (the Site). Located within the North Sydney local government area (LGA), the planning proposal sought to increase the maximum height of buildings from 16m to 62.5m, introduce an FSR control of 5.8:1 and increase the minimum non-residential FSR from 0.5:1 to 2.5:1.

The planning proposal included an indicative concept plan which envisaged the redevelopment of the Site for a 16 storey mixed-use building comprising 8,002sqm of commercial floorspace, 129 dwellings and 247 basement car spaces.

The Planning Proposal received Gateway approval from the NSW Department of Planning and Environment (DPE) in March 2023. Deicorp are now progressing a State Significant Development Application (SSDA-66826207) to enable development of the Site and are currently revising the concept scheme (the Revised Scheme) included in the planning proposal.

Specifically, the development comprises the:

- Construction of 191 apartments, 8,002 sqm of Commercial & Retail and associated basement parking;
- Infrastructure upgrades, landscaping, civil and stormwater works;
- Lot consolidation and Stratum Subdivision; and
- Replace existing signage with a digital signage.

North Sydney Development Control Plan

The Site is subject to the North Sydney Development Control Plan (DCP). The North Sydney DCP provides a series of planning and design controls to guide development within the North Sydney LGA.

Under the North Sydney Development Control Plan (DCP), car parking provision is based on maximum car parking rates by land use type. The North Sydney DCP also defines 'High Accessibility Areas' which are subject to more restrictive maximum car parking rates. The Site falls within the High Accessibility Area centred around the Crows Nest Village Centre.

The maximum car parking rates applicable to the Site are summarised in **Table 1-1**.

Table 1-1: Maximum Parking Rates (High Accessibility Area), North Sydney Development Control Plan

Development Type	Zone	Maximum Parking Rate	
<ul style="list-style-type: none">• Residential flat buildings• Shop top housing	B4 Mixed Use	Studio	0.3 / Dwelling
		1-Bedroom	0.4 / Dwelling
		2-Bedroom	0.7 / Dwelling
		3-Bedroom	1.0 / Dwelling
		Motorcycle Parking	1.0 / 10 car spaces
Non-Residential	B4 Mixed Use	All	1.0 /400sqm non-residential GFA

Source: NSDCP 2013

The number of car spaces being proposed in the Revised Scheme are higher than the maximum number of spaces permitted in 'High Accessibility Areas' under the North Sydney DCP.

To inform the SSDA, Deicorp are investigating demand for car spaces in the Crows Nest and Lower North Shore market and assess the appropriateness of the car parking provision envisaged in the Revised Scheme.

1.2 The Site and Proposal

The Site is an amalgamation of several properties on the corner of Pacific Highway, Alexander Street and Falcon Street that collectively comprise a site area of ~3,200sqm.

The Site is located some 4km north of the Sydney Central Business District (CBD) and on the northern fringe of the North Sydney CBD – a major urban centre characterised by a -25,000 increase in workers and ~14,000 increase in residents over the past two decades.

The Revised Scheme includes 24,137sqm GFA comprising 191 apartments, 8,002sqm of commercial floorspace and 324 basement car spaces. The apartment and carparking mix is summarised in **Table 1-2**.

Table 1-2: Yield Summary, The Revised Scheme

Apartments	No.	Size (min)	Proportion
Residential			
1-bedroom	40	33	21%
2-bedroom	114	80	60%
3-bedroom	37	106	19%
Total	191		100%
Carparking			
Residential	190		
Non-residential	134		
Carshare/Service	4		
Total	328		

Source: Deicorp

Based on the maximum car parking rates outlined in the North Sydney DCP (**Table 1-1**), the Revised Scheme would be permitted a maximum of 130 car spaces. The Revised Scheme proposes delivering some 324 spaces.

1.3 Scope and Approach

Atlas Economics (Atlas) is engaged by Deicorp to investigate residential and non-residential demand for car parking across North Sydney and the Lower North Shore.

The Study seeks to identify whether the maximum parking rates outlined in the North Sydney DCP are market supported and what impact they could have on the viability of new residential and employment floorspace proposed in the Revised Scheme. To meet the requirements of the brief, the following tasks have been undertaken:

- Review historical socio-demographic data to observe at both the local North Sydney and Lower North Shore region:
 - Car ownership patterns.
 - Household composition.
 - Income levels.
 - Resident's employment location.
 - Method of travel to work.
- Review recent projections on the adoption of autonomous vehicles across Australia.
- Assess demand for car spaces within new Lower North Shore residential and commercial developments.
- Review the recently exhibited draft Housing State Environmental Planning Policy 2023 (Housing SEPP).
- Synthesise findings and conclusions from the foregoing tasks to demonstrate the need for varying car parking rates.

1.4 Assumptions and Limitations

Atlas acknowledges several assumptions and limitations associated with this Study.

- At the time of writing, the fallout from the COVID-19 pandemic across the NSW economy is still playing out. The medium to long-term implications for population and employment growth are yet to be fully understood.
- The 2021 Census was administered during the COVID-19 pandemic and at a time of widespread lockdowns across Australia's east coast. Activity recorded at this time may not be accurately representative of employment levels.
- Market research is carried out on a 'desktop' basis without the benefit of site surveys and internal inspections.

Notwithstanding the above, all due care, skill and diligence has been applied to this Study as is reasonably expected.

2. Demand for Private Vehicles

This Chapter considers several of the key socio-economic demand drivers for private vehicle usage in the North Sydney LGA, including car ownership patterns, household composition, incomes and employment and the future adoption of autonomous vehicles (AVs).

2.1 Drivers of Demand

Demand for private carparking is inherently linked to private vehicle ownership levels. Demand for private vehicles is in turn influenced by a broad mix of locational, socio-economic and cultural factors.

Table 2-1 briefly outlines some of the demand drivers for private passenger vehicles.

Table 2-1: Drivers of Demand for Private Passenger Vehicles

Driver	Description
Location and Travel Distance	Location is arguably the primary driver for private vehicle demand. Regional locations across Australia which are less proximate to services, employment and other urban services compared to metropolitan and urban areas are typically characterised by higher levels of private vehicle ownership.
Household Size and Composition	Household size and composition often dictates the need for one or multiple private vehicles. For instance, family households with children typically have higher private vehicle requirements than lone person households.
Resident and Local Worker Profile	The industries and occupations of local residents and local workers has a direct implication for private vehicle demand. Certain sectors/occupations with no fixed address are reliant upon workers utilising private vehicles (e.g. most trades persons). Conversely, office workers based in the CBDs will typically commute via public transport and are less reliant on private vehicle.
Household Income Levels	Household income is a major contributor to vehicle ownership rates. Multiple studies have demonstrated that whilst higher income levels are correlated with public transport usage for work commutes, vehicle ownership rates increase as household incomes rise (BITRE, 2019).
Accessibility, Frequency and Mix of Public Transport	The type, frequency and ease of accessing public transport has a major influence on private vehicle usage and ultimately demand. Public transport-rich locations are often correlated with softer demand for private vehicles, depending on other factors such as household composition and employment requirements.
Lifestyle Preferences and Cultural Norms	Cultural tastes and preferences contribute to demand for private vehicles. Outdoor activity (e.g. bushwalking, camping, sports, etc) is often dependant on private transport.
Emerging Technologies and Services	Rideshare applications (e.g. Uber) are continuing to influence demand for private vehicle ownership. The availability of these services is mostly focused in highly populated, urban areas and take-up has been primarily observed in the young to middle aged demographic.

Source: Atlas Economics

2.2 Australian Car Ownership Levels

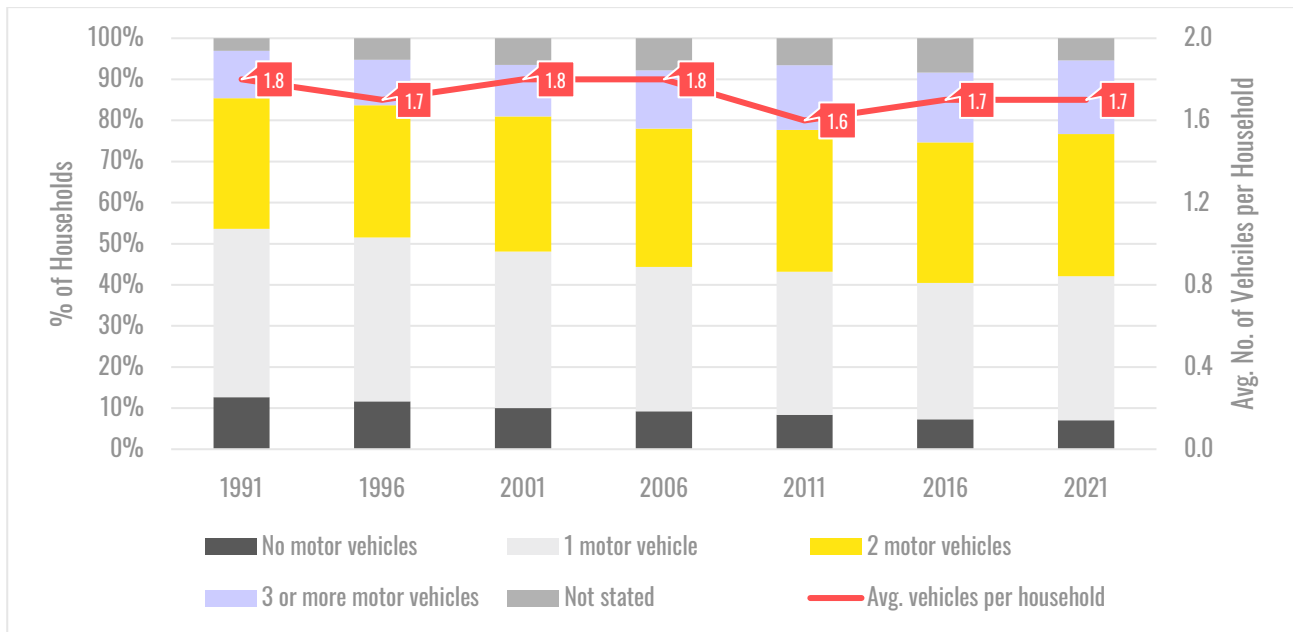
Owing to its significant geographical size, high income levels, young and growing population and lifestyle factors, Australia has historically recorded amongst the highest levels of private passenger vehicle ownership in the world.

As at the 2021 Census, Australia recorded a vehicle ownership rate of 0.78 vehicles per capita. This is comparable to Italy (0.76) and Canada (0.78), though lower than New Zealand (0.88) and the United States (0.89).

Private vehicle ownership levels across much of the Western world have continued to grow in most countries, as average income levels have risen and the cost of vehicles has fallen.

On a per household basis, Census data indicates that vehicle ownership rates across Australia have been relatively static, declining marginally from 1.8 vehicles per household in 1991 to 1.7 vehicles per household in 2021. That said, the proportion of households which own two or more vehicles has risen over this period. **Figure 2-1** illustrates historical vehicle ownership rates across Australia over 1991-2021.

Figure 2-1: Historical Vehicle Ownership (1991-2021), Australia



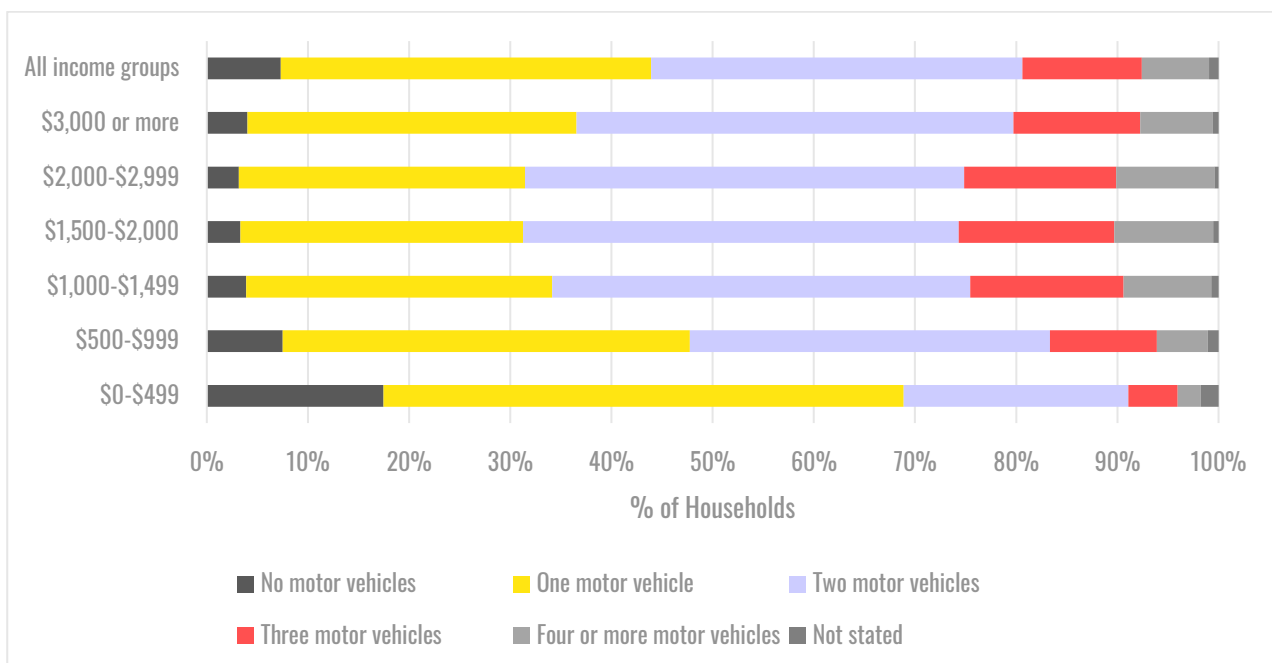
Source: ABS (1992, 1997, 2002, 2007, 2012, 2017, 2022)

Census data also clearly illustrates the correlation between income levels and private vehicle ownership. As at 2021, almost 70% of households earning more \$2,000 per week owned two or more private vehicles. When considering all income levels, only just over 50% of households owned two or more private vehicles.

The direct linkage between income levels and private vehicle ownership rates has been well-documented in numerous Australian (BITRE, 2019; BITRE, 2018; Wang and Curtis, 2015) and international studies (Memmott, 2007; South African Department of Transport, 2017; UK Department of Transport, 2016).

Figure 2-2 illustrates the breakdown in number of private vehicles per household and by income.

Figure 2-2: Vehicle Ownership by Income Band (2021), Australia



Source: ABS (2022)

2.3 Local Vehicle Ownership

2.3.1 Ownership Rates

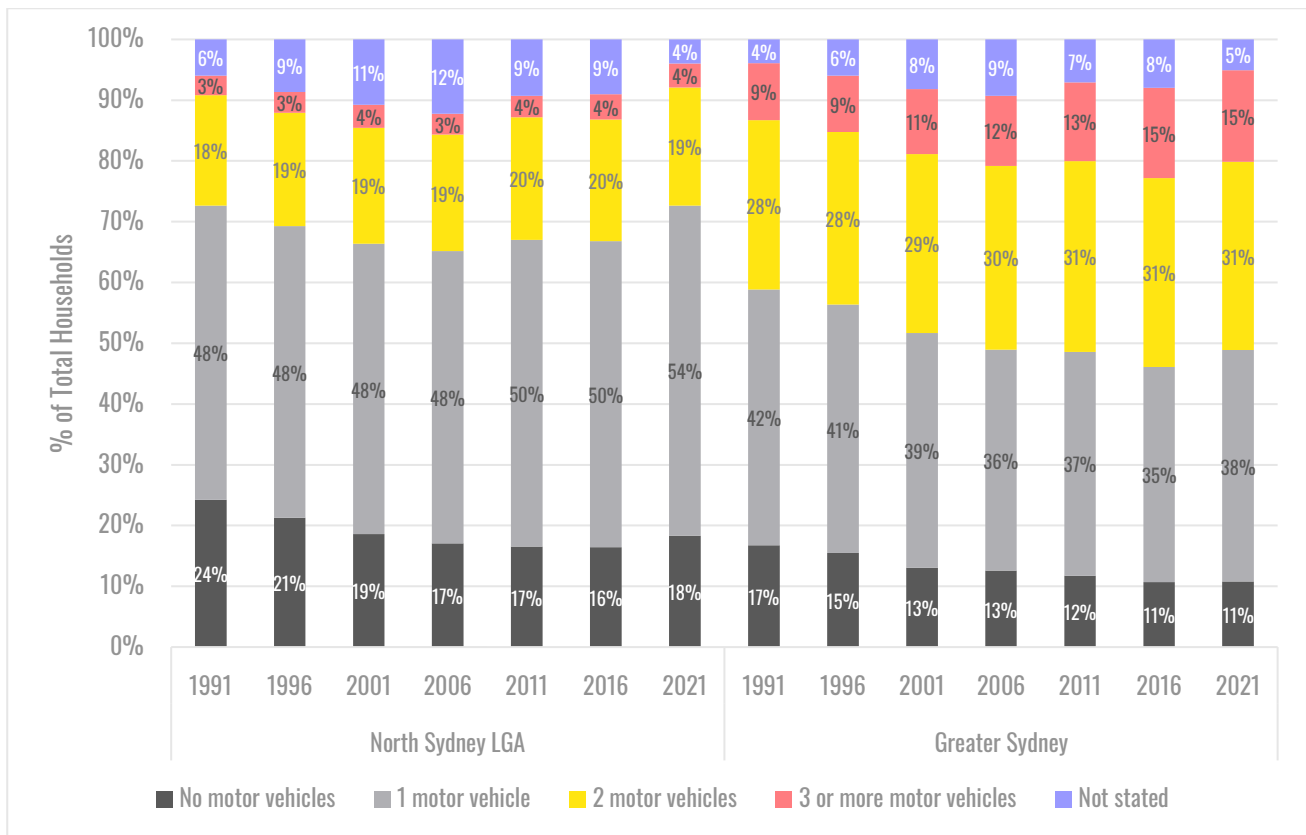
As at the 2021 Census, approximately 78% of households in the North Sydney LGA owned one or more private vehicles, with almost a quarter of households owning two or more private vehicles.

This level of car ownership is *higher* than that recorded in 1991, where only 70% of households owned one or more vehicles. The rate of growth in private vehicle ownership in North Sydney LGA also outpaced that in Greater Sydney over this period.

Notably, the number of households in North Sydney which do not own a private vehicle only grew marginally over the 1991-2021 period - rising from ~6,000 households to ~6,200 households. This represents growth of 3%. This contrasts against household growth recorded in the North Sydney LGA over the same period (37%).

Figure 2-3 illustrates car ownership patterns in the North Sydney LGA and Greater Sydney over 1991-2021.

Figure 2-3: Car Ownership Rates (1991-2021), North Sydney LGA



Source: ABS (2022), sourced from .id

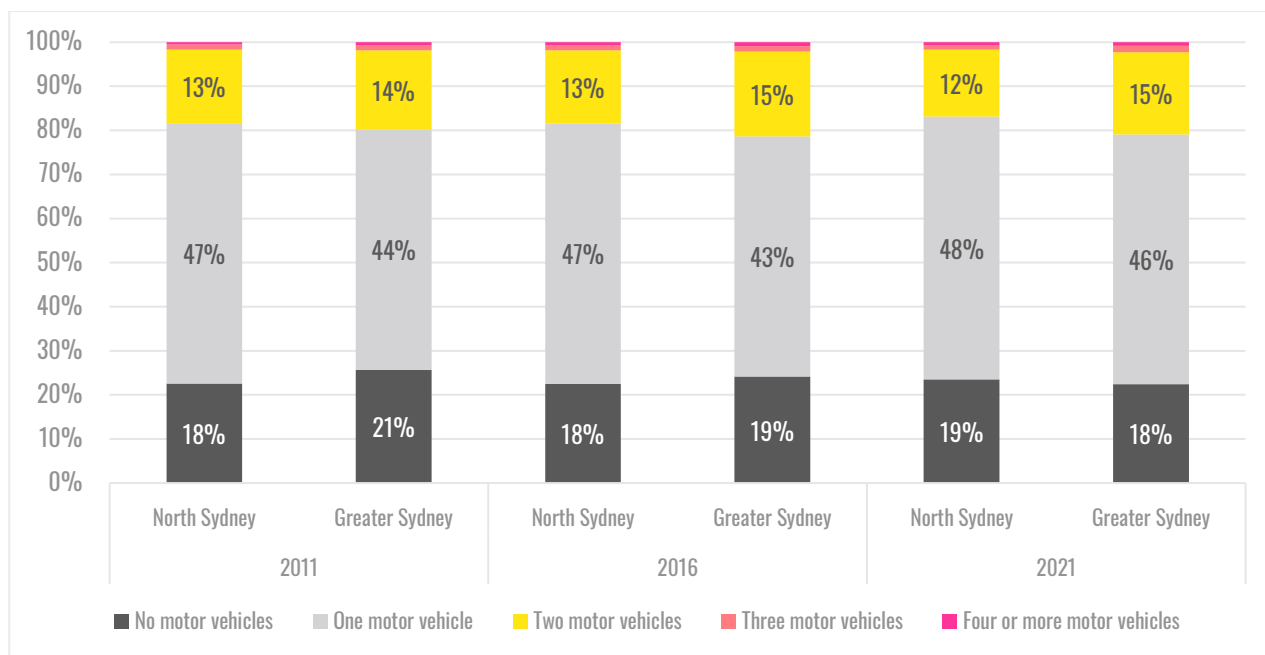
Car Ownership in Apartment Buildings

Understanding historical car ownership patterns of apartment-living households across North Sydney is also relevant.

In 2021, 68% of households in 3+ storey apartment buildings owned one or more private vehicles. This pattern has remained largely unchanged over the past decade. Whilst this is lower than the broader North Sydney average (78%), this lower level of car ownership is attributed to smaller dwelling sizes (i.e. number of bedrooms). As at 2021, 70% of apartments across the North Sydney LGA comprised two or fewer bedrooms.

Figure 2-4 summarises car ownership rates in apartments in the North Sydney LGA and Greater Sydney over 1991-2021.

Figure 2-4: Car Ownership Rates in Apartment Buildings (2011-2021), North Sydney



Source: ABS (2022, 2017, 2012)

2.3.2 Household Composition

As at 2021, the largest household type in the North Sydney LGA was lone person households at 37%, followed by couples with children at 29%. Since 2011, both these cohorts have been the fastest growing household type in the North Sydney LGA, rising by ~1,800 and ~1,300 households respectively.

Table 2-2: Household Composition (2011-2021), North Sydney LGA

Household Type	2011	2016	2021	Change (2011-2021)
Couples with children	4,820	5,910	6,086	1,266
Couples without children	8,807	9,348	9,769	962
One parent families	1,490	1,752	2,047	557
Other families	440	400	372	-68
Group household	2,175	2,018	1,630	-545
Lone person	10,689	10,629	12,496	1,807
Other not classifiable household	2,281	2,215	1,020	-1,261
Visitor only households	663	573	377	-286
Total	31,365	32,845	33,797	2,432

Source: ABS (2022, 2017, 2012)

Car Ownership in by Household Type

Couples with children were the largest motor vehicle-owning households – 95% of households owning one or more motor vehicles whilst 43% owned two or more motor vehicles.

Couples without children also predominantly owned motor vehicles – 88% of households owning at least one with 34% owning two or more. Similarly high rates of vehicle ownership were observed in the single parent household cohort.

Lone person households – the largest household type in North Sydney – are also predominantly motor vehicle owners with 66% of households owning at least one vehicle.

Table 2-3: Car Ownership by Household Type (2021), North Sydney LGA

No. Motor Vehicles	Couple family -no children	Couple family with children	Single parent	Lone person	Group	Total
Nil	12%	4%	12%	32%	19%	30%
One	54%	52%	64%	61%	40%	48%
Two	30%	34%	19%	4%	30%	14%
Three	3%	7%	3%	0%	9%	3%
Four or more	1%	2%	0%	1%	2%	0%
Not stated	1%	0%	1%	1%	1%	7%
Not applicable	0%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%

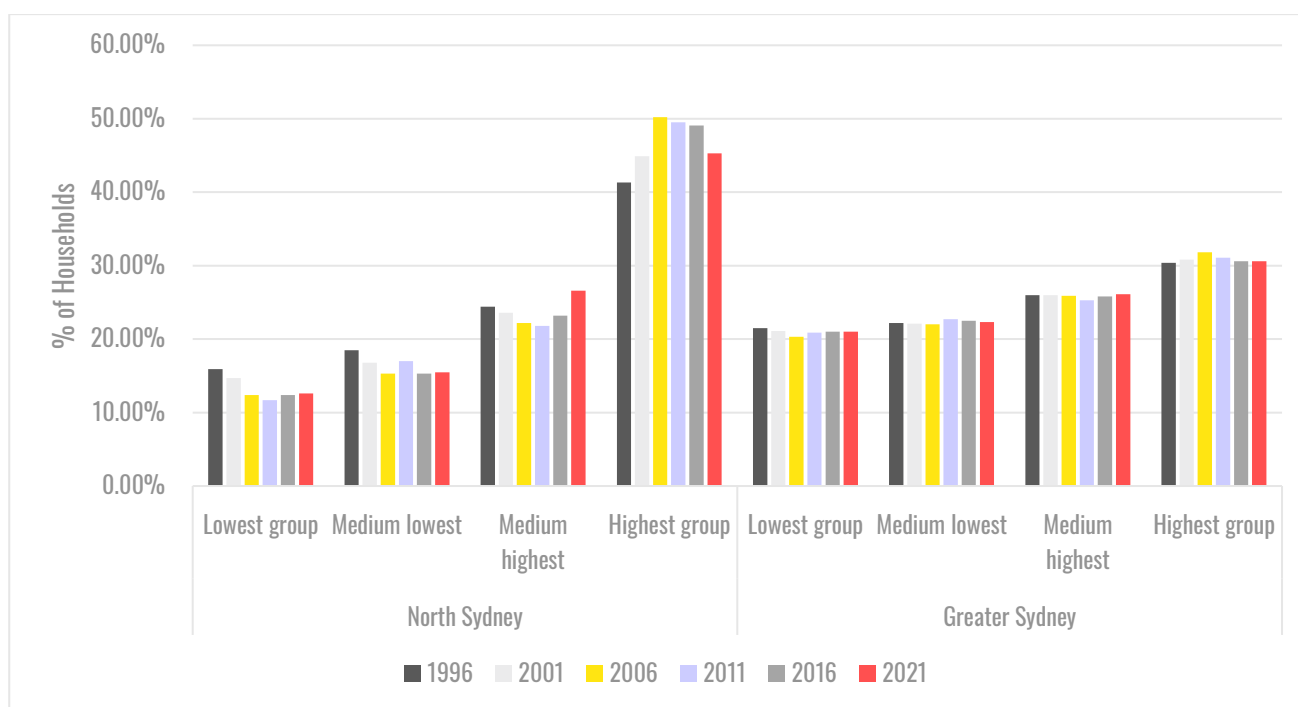
Source: ABS (2022)

2.3.3 Income Levels

The North Sydney LGA is amongst the most affluent areas in Australia. As at 2021, approximately 40% of local households recorded incomes in the highest income quintile group (i.e. households earning \$3,100 or more per week). This compares to 30% in Greater Sydney and just 28% across Australia.

Income levels in the North Sydney LGA have historically been amongst the highest across the country and well above those of broader Sydney, as illustrated in **Figure 2-5**.

Figure 2-5: Income Levels by Quintile (1996-2021), North Sydney LGA



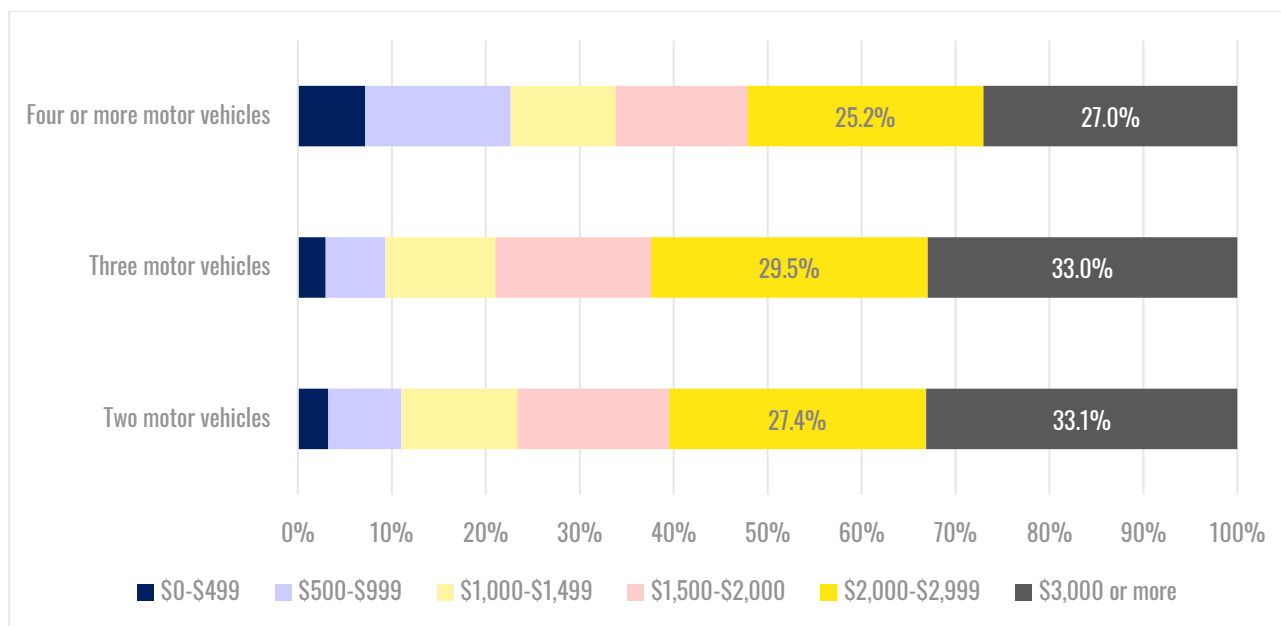
Source: ABS (1992, 1997, 2002, 2007, 2012, 2017, 2022)

Car Ownership Rates by Household Income

Households on high incomes across North Sydney are also much more likely to own two or more private vehicles. As at the 2021 Census, the majority of vehicles which own two or more vehicles earn weekly incomes of \$2,000 or more. This aligns with historical Census periods and previous literature findings.

Figure 2-6 illustrates the proportion of households that own two or more vehicles and their average household incomes.

Figure 2-6: Vehicle Ownership (2 or more) by Income Levels (2021), North Sydney LGA



Source: ABS (2022)

2.3.4 Workers

The North Sydney LGA is both a major employment hub and large source of labour. Accordingly, this section analyses:

- Where **local residents** from the North Sydney LGA go to work, and how they travel there.
- Where **local workers** in North Sydney LGA come from, and how to they travel to work.

Where Local Residents Work

As at 2021, approximately 40,700 residents in the North Sydney were employed. The majority of these working residents – around 74% - work *outside* the North Sydney LGA. Key locations of employment include the neighbouring LGAs of Sydney, Willoughby and Ryde. Approximately a quarter of local residents work beyond these immediately surrounding areas.

Table 2.4 highlights the four main LGAs that working residents of North Sydney work in over the 2011 to 2021 period.

Table 2.4: Where Residents Work (2011-2021), North Sydney LGA

Place of Work	2011		2016		2021	
	No.	%	No.	%	No.	%
Sydney	13,908	37.7%	16,098	40.0%	15,914	39.1%
North Sydney	9,657	26.2%	10,109	25.1%	10,707	26.3%
Willoughby	2,546	6.9%	2,910	7.2%	2,822	6.9%
Ryde	1,608	4.4%	1,810	4.5%	1,563	3.8%
Other LGAs	9,200	24.9%	9,296	23.1%	9,730	23.9%
Total	36,919	100.0%	40,223	100.0%	40,746	100.0%

Source: ABS (2022, 2017, 2012)

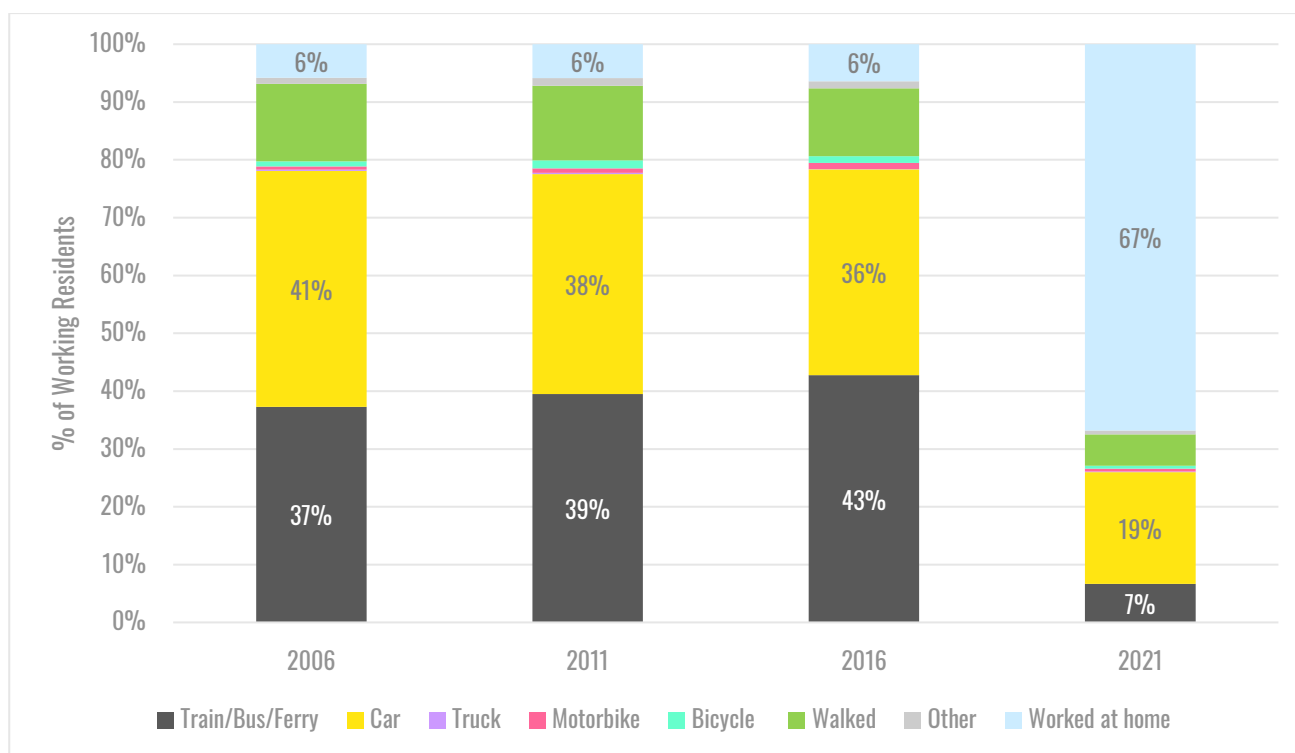
Resident's Method of Travel

As at 2021, approximately 19% of working residents in the North Sydney LGA commuted to work via private car. This is well below the historical average observed over 2006-2016, and reflects the significant number of residents recorded as working from home (~70%) as at the 2021 Census due to COVID-19 lockdowns.

Historically, between 35% and 40% of working residents in the North Sydney LGA have commuted to work via private car.

Figure 2.7 illustrates resident's method of commute over 2006-2021 period.

Figure 2.7: Resident's Method of Travel to Work (2006-2021), North Sydney LGA



Source: ABS (2022, 2017, 2012, 2007)

Where Local Workers Live

As at 2021, the North Sydney LGA comprised a total of ~78,100 workers. This workforce is sourced from across Greater Sydney, though the largest source of workers (13.7%) comes within the North Sydney LGA itself. Other key sources of labour are sourced from a mix of areas – Inner West LGA (4.7%), Blacktown LGA (4.6%), Ku-ring-gai (4.6%), Hornsby (4.3%) and Canterbury-Bankstown (2.8%).

Table 2.4 highlights the four main LGAs that working residents of North Sydney work in over the 2011 to 2021 period.

Table 2.5: Where Workers Live (2021), North Sydney LGA

Place of Work	No.	% of Total
North Sydney	10,707	13.7%
Inner West	3,656	4.7%
Blacktown	3,598	4.6%
Ku-ring-gai	3,576	4.6%
Hornsby	3,383	4.3%
Other LGAs	53,212	68.1%
Total	78,132	100.0%

Source: ABS (2022)

Worker's Method of Travel

As at 2021, approximately 14% of workers in the North Sydney LGA commuted to work via private car. As previously noted, this is likely to be heavily skewed by the COVID-19 lockdowns which were in place as at the 2021 Census date.

In 2016, approximately 31% of workers commuted to the North Sydney LGA via private vehicle. This was the second most preferred method of commuting to work for local workers, with 37% of workers travelling via train.

2.4 Future Demand for Passenger Vehicles

Future demand for private passenger vehicles is closely linked to the advancement of new transport technologies. Autonomous vehicles (AVs) capable of operating on road networks with minimal or zero human attention (known as Level 4 and Level 5 AVs respectively) have been identified as having the capacity to significantly disrupt the passenger vehicle market and limit the need for private vehicle ownership.

Vehicle automation technology is advancing rapidly. Forms of automation are already being incorporated into new passenger vehicles, such as assisted parking. However, vehicles that are capable of operating fully autonomously (Level 4-5 AVs) are not yet available commercially anywhere in the world.

To date, the arrival and uptake of AVs has been widely overestimated in previous forecasts (Global Data, 2020). For instance, the NRMA projected in *The Future of Car Ownership* (NRMA, 2017) that Level 4-5 AVs would be commercially available in Australia in the early 2020s.

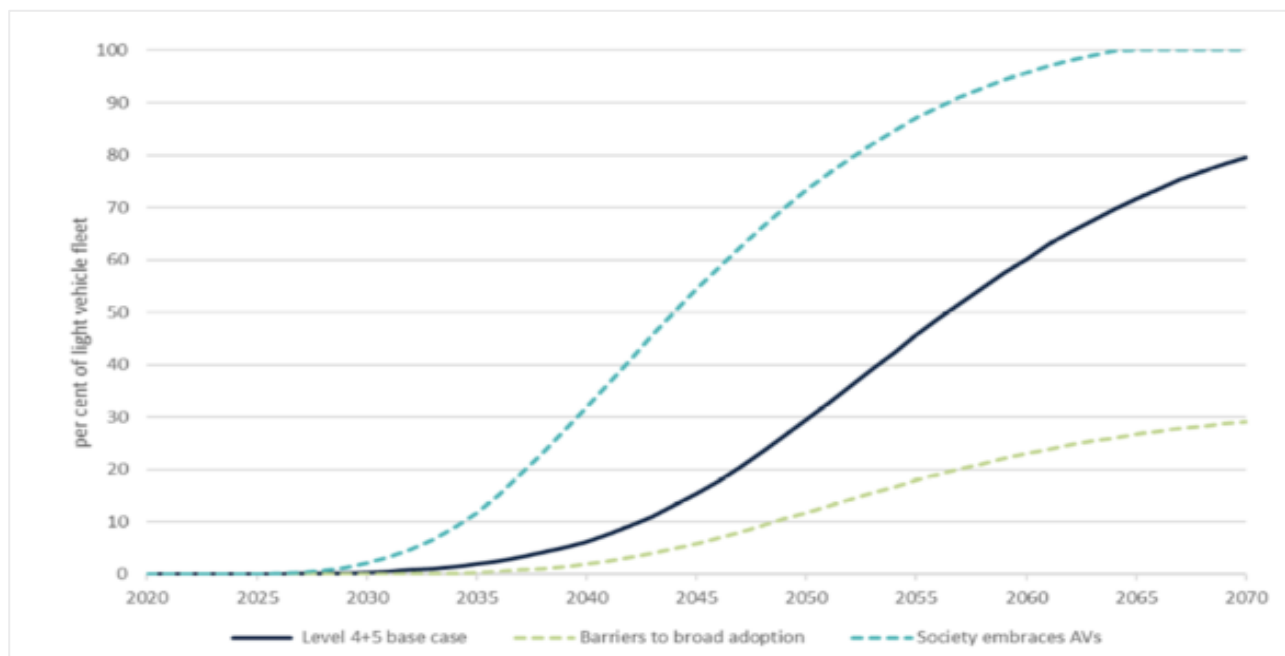
The Commonwealth Government's Bureau of Infrastructure, Transport and Regional Economics (BITRE) recently prepared an extensive series of forecasts on likely take-up of Level 4-5 AVs across Australia. The base case forecast scenario suggests:

- Around half of new light vehicles sold in Australia by 2047 will have at least Level 4 automation. This will reach around 65% by 2050 and 85% by 2070.
- Around 10%-15% of new light vehicles sold in Australia by 2050 will have Level 5 automation. This will reach around 50% by 2062 and 75% by 2070.
- Around 80% of Australia's light vehicles would be Level 4-5 AVs by 2070.

The base case forecasts are premised on Level 4 and 5 AVs becoming available from 2026 and 2031 respectively, and assume there is a high willingness to pay for AVs. Two alternative scenarios were also modelled to test the sensitivity of key factors that drive uptake of new technology, including prices, consumer sentiment, supply availability and other enablers. In a lower take-up scenario, AV penetration rates would only reach 30% of the passenger vehicle fleet by 2070.

Figure 2-8 depicts Australian AV penetration rate forecasts over 2020-2070 as per recent BITRE (2021) projections.

Figure 2-8: Autonomous Vehicle Penetration Rates (2020-2070), Australia



Source: BITRE (2021)

Despite the uncertainty around the arrival of AVs, continued investment, trials and technological progress in AVs and supporting technology indicate that commercial availability is a matter of when and not if. It is clear however that it is a much more longer term proposition than has been recently conceived and demand for private passenger vehicles is going to remain strong for the several upcoming decades at least. It is also unclear what impact, if any, the availability and uptake of AVs will have upon vehicle ownership trends.

2.5 Summary of Findings

Demand for private carparking is intrinsically linked to private vehicle ownership levels. The demand drivers for car ownership itself are broad, including a mix of locational, socio-economic and cultural factors.

At a national level, Australia has amongst the highest levels of private passenger vehicle ownership in the world. On a per household basis, Census data shows that vehicle ownership rates across Australia have remained largely unchanged over the past decades, declining marginally from 1.8 vehicles per household in 1991 to 1.7 vehicles per household in 2021. That said, the proportion of households which own two or more vehicles has *risen*.

Analysis undertaken in this Chapter suggests that households and workers in the North Sydney LGA are highly car-dependant. Key findings at the local level show:

- 78% of households in North Sydney owned one or more private vehicles, with ~25% owning two or more.
- Car ownership rates are higher than that recorded in 1991 with ownership growth outpacing that of Greater Sydney.
- 68% of households in 3+ storey apartment buildings owned one or more private vehicles. This pattern has remained largely unchanged over the past decade.
- Couples with children were the largest motor vehicle-owning households – 95% of households owning one or more motor vehicles whilst 43% owned two or more motor vehicles. Couples without children also predominantly owned motor vehicles – 88% of households owning at least one with 34% owning two or more.
- The North Sydney LGA is amongst the most affluent areas in Australia, with household income levels being a well-established driver for private vehicle ownership.
- Historically, between 35% and 40% of working residents in the North Sydney LGA have commuted to work via private car, whilst around a third of local workers commuting to North Sydney via private vehicle.

The uptake of autonomous vehicles has long been forecasted to potentially replace the need for private vehicle ownership. To date, the arrival and uptake of AVs has been widely overestimated in previous forecasts (Global Data, 2020). Forecasts by BITRE suggest that AV take-up is likely to be a much longer-term prospect than initially expected. This suggests that need for private vehicles will remain robust over the coming 20-30 years.

The next Chapter considers the demand for private car parking in new residential and commercial developments across the North Sydney LGA.

3. Market Appraisal

This Chapter examines market demand for private car parking spaces in new residential developments and commercial office buildings proximate the Site.

3.1 Residential Land Uses

There are several residential developments in close proximity to the Site which have been marketed 'off-the-plan' or have been recently completed.

Some of these developments are of comparable size and scale to the Proposal at the Site and some are notably smaller, however all provide insight into the current market trends for car parking demand within the North Sydney area.

A summary of market investigations into each of these developments is provided in turn.

Delano - 33 Falcon Street, Crows Nest

'Delano' at 33 Falcon Street is located a single block from the Site (70m to the east) and comprises a mix of 74 apartments and 9 townhouses. The apartments are a mix of 1-, 2-, and 3-bedrooms. It is understood that all 2-bedrooms comprise 1 car space, whilst 3-bedroom units comprise between 1 or 2 car spaces.



Discussions with the marketing agent suggest there is strong demand for units with 2 spaces. One bedroom units with a car space are achieving premiums of almost \$200,000 to those without a space. Similar premiums are attributed to 3-bedroom units with two car spaces.

It is understood that couples with children and couple only downsizers are the primary buyer cohorts seeking apartments with multiple car spaces. Overall, there is a clear market expectation that all two and three bedrooms would at least include 1 car space. Larger apartments (2-3 bedrooms) without car spaces were noted as likely being difficult to market given North Sydney's buyer profile.

The Landmark Quarter - 500 Pacific Way, St Leonards

The Landmark Quarter is a recently completed residential development located some 670m from the Site. The development comprises a total of 205 units with mix of 1- and 2-bedroom apartments and 3- and 4-bedroom penthouses.



Market investigations indicate that all two bedroom apartments comprise 1 car space with three bedroom units comprising 2 car spaces. Despite the development's proximity to St Leonards train station, it is understood that the availability of car parking was an important demand driver for most buyer cohorts. Couples with children and downsizers were particularly focused on car parking, with many of these buyers owning two vehicles despite commuting to work via train.

Informal discussions with the marketing agent indicate that whilst demand for private parking could temper following the completion of the Crows Nest Metro Station, a core cohort of buyers in North Sydney's apartment market will continue to require car parking for one or two vehicles.

3.2 Commercial Land Uses

The Site is also surrounded by multiple established commercial office buildings. These range from a mix of modern, investment grade office buildings (mostly located in St Leonards) and older, low rise commercial buildings. A significant number of office towers are located further south of the Site in the North Sydney CBD.

Some of these commercial buildings which are currently being offered for sale and considered below.

88 Chandos Street, Crows Nest

88 Chandos Street is a low rise commercial office building located some 715m from the Site. Comprising 689sqm in floor area, the building comprises 11 car spaces. This is equivalent to 1 space per 63sqm of floor area.

Informal discussions with the market agent indicate that the ample car parking provided on the site has historically been a key attractor for tenants and investors.

Whilst the future Crows Nest Metro Station will likely alleviate some demand for on-site carparking across the Crows Nest office market, sufficient provision of car parking has become an expected feature for non-investment grade office stock.



110 Pacific Highway, St Leonards



110 Pacific Hwy is a commercial office building located some 1.2km from the Site. Comprising a total of 3,439sqm of commercial floorspace, the building also includes 75 car parking spaces. This is equivalent to 1 space per 45sqm.

Currently being marketed for sale as a going concern, the building is currently tenanted by Indira – a digital infrastructure company.

It is understood that the availability of car parking on-site has been a critical feature in retaining the firm in recent years, given much of their workforce drives to work from various parts of Greater Sydney.

174 Willoughby Road, Crows Nest

174 Willoughby Road is improved with a 3-storey, strata-titled commercial office building approximately 650m north of the Site. A small, 60sqm office suite (Suite 14) is currently vacant and being offered for sale or lease.

Market investigations indicate that interest thus far has been limited, primarily due to the buildings distance from the future Crows Nest Metro Station and retail amenity along Willoughby Road. Feedback from the marketing agent suggests that the availability of one parking space has been critical to attracting interest thus far, as small office suites must provide the equivalent amenity and offering as 'working from home' in a post COVID-19 market.



3.3 Implications for the Proposal

Crows Nest is a well-established mixed-use precinct. Comprising one of Greater Sydney's largest and oldest office markets, it has emerged as focal point for new high-density development activity over the past decade. Much of this new investment and development interest has been driven by the impending completion of the Crows Nest Metro Station as part of the Sydney Metro and South West metro line.

Provision of private car parking has historically been an expected feature of commercial offices and apartments within Crows Nest. Whilst market investigations suggest that increased public transport accessibility provided by the future Crows Nest Metro Station will soften these market expectations somewhat, adequate provision of car parking will still be required. This is attributed to a mix of factors in both sectors:

- Couple families with children and older downsizers form the largest buyer cohorts for new apartments in Crows Nest and neighbouring St Leonards. This buyer cohort generally requires a minimum of one car space and will pay significant premiums (circa \$200,000) for additional spaces.
- Downsizers in particular are becoming an increasingly important buyer group for apartments, with features such as ample parking an important drawcard in facilitating their transition from larger dwelling formats.
- As a secondary office market, Crows Nest/St Leonards has traditionally attracted commercial occupiers seeking better 'value for money' compared to traditional CBD markets (e.g. Sydney CBD, North Sydney). The provision of ample car parking has been an important feature of this offering.
- The Crows Nest/St Leonards office market is currently the worst performing major office market in Greater Sydney, recording a vacancy rate of ~24% in July 2023 (PCA, 2023). Market investigations indicate that one of the markets core strengths is the ample provision of car parking provided in most office buildings.

Given the market dynamics outlined above, market feedback on the maximum residential and non-residential car parking rates outlined in the North Sydney DCP has been largely negative, particularly in the case of commercial office. The capacity of future development to effectively attract demand for new residential and commercial uses with limited car parking provision is uncertain and presents significant market risk moving forward.

The next Chapter summarises the key matters for consideration in the provision of car parking within the Proposal, including the recent draft Housing State Environmental Planning Policy 2023.

4. Matters for Consideration

4.1 Viability of Reduced Parking Rates

Socio-demographic analysis carried out in Chapter 2 identified that North Sydney residents are highly car reliant, with high private vehicle ownership levels coinciding with good accessibility to public transport and employment opportunities.

Future demand for private passenger vehicles has the capacity to significantly disrupt and reduce private vehicle ownership in the future, though recent projections this is likely several decades away.

Chapter 3 illustrated that demand for private car parking in high density residential and commercial developments in Crows Nest and surrounds remains robust. Whilst the future Crows Nest Metro Station will soften some of this demand, there will remain a large segment of the market who will continue to require ample car parking provision.

Under the maximum car parking rates outlined in the North Sydney DCP, a maximum of 110 car spaces would be permitted based on the residential development yields proposed in the Revised Scheme. This would effectively mean:

- 60% of one bedroom apartments (26 dwellings) would have zero car spaces.
- 30% of two bedroom apartments (37 dwellings) would have zero car spaces.

For the non-residential uses proposed in the Revised Scheme, the maximum number of car spaces permitted would be 20 car spaces (for a total of 8,002sqm of commercial GFA).

Based on a generic workspace ratio of 1 worker per 30sqm of GFA, this would mean just 20 workers out of a potential 267 workers would be entitled to a car space.

Table 4-1 summarises the maximum car parking rates applicable to the Revised Scheme under the North Sydney DCP.

Table 4-1: Maximum Car Parking Provision Applicable to the Revised Scheme

Apartments	No.	North Sydney DCP Maximum Parking Rates	Maximum Car Spaces	Households/Workers without a Car Space
Residential	191		110	81
1-bedroom	40	0.4 / dwelling	16	24
2-bedroom	114	0.6 / dwelling	68	46
3-bedroom	37	0.7 / dwelling	26	-11
Non-Residential (GFA)	8,002sqm	1 space/ 400sqm GFA	20	
Total			130	

Source: Atlas Economics/North Sydney DCP

Overall, and notwithstanding the upcoming improvement in public transport accessibility to be generated by completion of the Sydney Metro CBD and South West metro line, the maximum car parking rates which would apply to the Revised Scheme are ***considered unviable*** in meeting the socio-demographic and property market realities of the local area.

There is risk that if development of the Revised Scheme were to be progressed based on this maximum parking rates that they would face significant market resistance.

4.2 Draft Housing SEPP 2023

The NSW Department of Planning and Environment (DPE) are currently in the process of revising the State Environmental Planning Policy (Housing) 2021 (the Housing SEPP). The draft legislation, to be known as the State Environmental Planning Policy (Housing) 2023, has been provided the property industry for review and comment prior to public exhibition.

The draft Clause 19 outlines the non-discretionary development standards applicable to development seeking additional floorspace through the provision of a minimum of 15% affordable housing. Under the draft Clause 19, the following *minimum* residential car parking rates are to be provided:

- One bedroom dwellings – at least 0.5 parking spaces
- Two bedroom dwellings - at least 1.0 parking space
- Three bedroom dwellings - at least 1.5 parking spaces.

Based on these minimum parking rates, and assuming the Revised Scheme included the required affordable housing component of 15% of total gross floor area, a minimum of 187.5 car spaces would be required. This aligns with the number of car spaces proposed in the Revised Scheme.

Table 4-2: Minimum Car Parking Provision under draft Housing SEPP 2023, Revised Scheme

Apartments	No.	Proposed Housing SEPP 2023 Parking Rates	Minimum Car Spaces
Residential	191		187.5
1-bedroom	40	0.5 / dwelling	21.5
2-bedroom	114	1.0 / dwelling	124.0
3-bedroom	37	1.5 / dwelling	42.0
		1 space / 60sqm (Proposed)	
Total			207.5

Source: Atlas Economics/Deicorp

4.3 Recommendations

The maximum car parking rates which would apply to the Revised Scheme are ***considered unviable*** in meeting the socio-demographic and property market realities of the local Crows Nest area. This has been demonstrated from:

- Historical and current socio-demographic characteristics of the local North Sydney resident catchment (Chapter 2).
- Forecast take-up of autonomous vehicles across Australia (Chapter 2).
- Market expectations for new residential and commercial floorspace in Crows Nest (Chapter 3).

There is real market risk that if development of the Revised Scheme were to be progressed based on the maximum parking rates identified in the North Sydney DCP, newly constructed floorspace would face significant market resistance.

Accordingly, it is recommended that the Revised Scheme adopt higher car parking rates in order to meet the requirements of the market. Should the Revised Scheme being progressed through the draft Housing SEPP 2023 and meet its specified requirements, the Revised Scheme should adopt the minimum car parking rates proposed therein. These rates are considered adequate to meet current and future socio-demographic and market demand.

It is recommended that in order to ensure the viability of the non-residential floorspace (8,002sqm) in the Revised Scheme, higher parking rates to those outlined in the North Sydney DCP be provided. The number of non-residential car spaces proposed in the Revised Scheme (134) are considered appropriate to meet contemporary occupier demands.

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