



143-145 Highland Ave, Yagoona Proposed Co-Living Housing Development

Traffic and Parking Assessment



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1 Introduction

MLA Transport Planning (MLA) prepares this traffic impact assessment (TIA) report on behalf of Hongson 5 Pty Ltd. It presents the findings of a traffic and parking assessment into a proposed co-living housing development at 143-145 Highland Avenue, Yagoona.

The proposed development involves the demolition of two existing low density dwellings on the site and the construction in their place a new 6-storey building accommodating 43 co-living rooms with retail/commercial uses on the ground floor. The proposed development includes an at-grade car park containing 14 car parking spaces and a loading bay to be accessed directly from The Crescent.

This report accompanies a development application (DA) to be lodged with Willoughby City Council seeking approval for the proposed development.

The remainder of the report is set out as follows:

- Chapter 2 discusses the existing conditions including a description of the subject site
- Chapter 3 provides a brief description of the proposed development
- Chapter 4 assesses the proposed on-site parking provision and the internal car park layout
- Chapter 5 examines the traffic generation of the proposed development and its impact, and
- Chapter 6 presents the conclusions of the assessment.



2 Existing Conditions

2.1 Site Description

The subject site is located at 143-145 Highland Avenue, Yagoona and is situated at the north-eastern corner of the Highland Avenue intersection with The Crescent. The site falls within Canterbury Bankstown Council local government area. The site comprises two properties with the following legal descriptions:

- 143 Highland Avenue, Yagoona Lot 5 of DP18310, and
- 145 Highland Avenue, Yagoona Lot 4 of DP18310.

The site has frontage to Highland Avenue as well as The Crescent. It is currently occupied by two low density residential dwellings. No. 143 Highland Avenue has its access located off The Crescent, while No. 145 Highland Avenue's access is located Highland Avenue.

Land use in the immediate vicinity of the subject site is generally categorised as low density housing with some medium density housing provided nearby along The Crescent, Dutton Street and Willian Street. In addition, a retail strip along the Hume Highway is located in the immediate vicinity of the subject site.

Furthermore, the subject site is also located approximately 190m walking distance (or three minute walk) to the Yagoona Railway Station with additional bus stops along both sides of Hume Highway and Glassop Street.

The site location and its surrounds are shown in Figure 2.1.



Figure 2.1: Site Locality Plan



2.2 Road Network

The road network in the vicinity of the subject site includes Hume Highway, Highland Avenue and The Crescent. Below is a description of the local road network.

2.2.1 Hume Highway

Hume Highway is a declared State Road under the jurisdiction of Transport for New South Wales (TfNSW). It forms part of the arterial major road network linking western Sydney including Liverpool CBD to the inner west Sydney suburbs of Burwood, Ashfield and Summer Hill.

In the vicinity of the site, Hume Highway is generally aligned in an east-west direction and is generally configured as a six-lane, divided two-way road. Auxiliary turning lanes are provided at select intersections along Hume Highway including at Highland Avenue where a right turn lane is available.

Clearway restrictions are in place from 6:00am to 10:00am Mondays to Fridays in the eastbound carriageway and from 3:00pm to 7:00pm Mondays to Fridays in the westbound carriageway. Kerbside parking is available on both sides of Hume Highway outside of the clearway period. Kerbside parking is restricted to 1/2P from 10:00am to 6:00pm Mondays to Fridays and from 8:30am to 12:30pm Saturdays. Unrestricted parking is available outside of the clearway and 1/2P parking periods.



In the vicinity of the site, Hume Highway has a sign posted speed limit of 60km/hr.

2.2.2 Highland Avenue

Highland Avenue is a local road under the jurisdiction of Canterbury Bankstown Council. It is aligned in a north-south direction connecting to Hume Highway in the north and to Marion Street in the south. It also connects the local streets in the area to Hume Highway as well as providing access to properties abutting it. It is configured as a two-lane, two-way road with kerbside parking permitted on both sides of the road.

Highland Avenue provides unrestricted kerbside parking on both sides of the road except for the section between Hume Highway and Yagoona Lane where is it is restricted to 1P parking on the eastern side and 15-minute parking on the western side with NO STOPPING parking restriction enforced during peak periods.

Highland Avenue forms a signalised T-junction with Hume Highway at its northern end and a priority T-junction with Marion Street in the south. It also forms 4-way single-lane roundabout at its intersections with The Crescent and Glassop Street.

Highland Avenue is sign posted as a 50km/hr speed limit area.

2.2.3 The Crescent

The Crescent is a two-lane, two-way local road under the administration of Canterbury Bankstown Council. Unrestricted kerbside parking is permitted on both sides of the road. It is located within a 50km/hr speed limit area.

2.3 Public Transport

At present, the subject site can be accessed using public transport, namely train services at Yagoona Railway Station and regular scheduled bus services along Hume Highway and Glassop Street. As noted previously, Yagoona Railway Station is located within a 3-minute walk. Similarly, bus stops are located within a short stroll near the railway station. The railway station and bus stops are located within 800m and 400m walking catchment of a railway station and bus stop respectively as stated in the *Integrated Public Transport Service Planning Guidelines (Sydney Metropolitan Area*) published by TfNSW.

Yagoona Railway Station is located on the T3 Bankstown Line. It provides train services into the City (City Circle Stations) in the east and to Liverpool in the west. Regular scheduled bus services are available at bus stops located along Hume Highway and Glassop Street. The bus services connect the site to other destinations across Sydney including Auburn, Bankstown, Hurstville and Parramatta. These destinations are also located adjacent to railway stations.



A review of public transport availability in the vicinity of the site is summarised in Table 2.1 for train services and Table 2.2 for bus services.

Table 2.1: Available Train Services

Line	Line Description	Weekday Peak Period Frequency			
T3 Bankstown Line	Liverpool or Lidcombe to City via Bankstown	Every 15 minutes			

Table 2.2: Available Bus Services

Route No.	Route Description	Weekday Peak Period Frequency	
907 (Bus Stop on Hume Hwy)	Bankstown to Parramatta via Bass Hill	20-30 minutes	
911 (Bus Stop on Glassop St)	Auburn to Bankstown via Georges Hall	30 minutes	
M91 (Bus Stop on Hume Hwy)	Hurstville to Parramatta via Padstow & Chester Hill	10 minutes	

Figure 2.2 shows a map of the existing available bus services in the vicinity of the subject site.

Figure 2.2: Bus Network





3 Proposed Development

3.1 Development Description

The proposed development is for a co-living housing development with ground floor retail/commercial uses. It involves the demolition of two existing low density dwellings on the subject site and construct in their place a new 6-storey building. The proposed building will accommodate 43 co-living rooms on the higher levels (Level One and higher). The co-living rooms are proposed as a studio/1-bedroom type units for sole occupancy. In addition, all co-living rooms will be available fully furnished. The proposed development also includes two retail/commercial tenancies on the ground floor with a combined floor area of some 152m².

The proposed development will be served by an at-grade car park containing 14 car parking spaces including one accessible car parking space, nine motorcycle parking spaces and one loading bay. The car park will be accessed from The Crescent. It is noted bicycle parking will be accommodated within the balcony of each room (where available).

The architectural car park plan is contained in Appendix A.

3.2 Proposed Access Arrangement

Vehicular access to the car park will be provided via a new driveway/access off The Crescent. The access is proposed to be located near the site's eastern boundary, approximately 3.5m west of the existing access to No. 143 Highland Avenue and approximately 27m away from the nearest intersection.

All existing redundant driveways and vehicle crossovers will be re-instated with kerb and gutter to Council's requirements.

3.3 Loading Facility

The proposed development includes an on-site loading facility located inside the car park. The on-site loading facility will be shared by all service vehicles including waste collection and deliveries to the retail/commercial tenancies.



4 Parking Assessment

4.1 Car Parking Requirements

The parking requirements for the co-living component of the proposed development have been assessed against the *State Environmental Planning Policy (Housing)* 2021 (Housing SEPP), specifically Chapter 3 Diverse Housing Part 3 Co-Living Housing. Parking requirements for the retail/commercial component have been assessed against Council's Canterbury-Bankstown Development Control Plan 2023 (DCP), namely Chapter 3.2 Parking.

Clause 68 (2) (e) in the Housing SEPP states that parking for co-living housing developments are to be as follows:

(2) The following are non-discretionary development standards in relation to development for the purposes of co-living housing—

(e) unless a relevant planning instrument specifies a lower number—

(i) for development on land in an accessible area—0.2 parking spaces for each private room, or

(ii) otherwise—0.5 parking spaces for each private room

The Housing SEPP defines an accessible area as follows:

accessible area means land within-

- (a) 800m walking distance of—
 - (i) a public entrance to a railway, metro or light rail station, or

(ii) for a light rail station with no entrance—a platform of the light rail station, or

(iii) a public entrance to a wharf from which a Sydney Ferries ferry service operates, or

(b) (Repealed)

(c) 400m walking distance of a bus stop used by a regular bus service, within the meaning of the Passenger Transport Act 1990, that has at least 1 bus per hour servicing the bus stop between—



(i) 6am and 9pm each day from Monday to Friday, both days inclusive, and

(ii) 8am and 6pm on each Saturday and Sunday.

Given the subject site is located within 190m of walking distance to Yagoona Railway Station as noted previously, the site is deemed to be accessible. Thus, a parking rate of 0.2 car parking spaces per room is applicable to the co-living housing component of the proposed development.

In relation to the retail/commercial component of the proposed development, the DCP requires parking to be provided at a rate of one car space per 40m².

This parking assessment is presented in Table 4.1.

Table 4.1: Car Parking Assessment

Proposed Land Use	No. of Rooms/Floor Area (GFA)	Parking Rates	Parking Requirement
Co-Living Housing			
- Rooms	43	0.2 spaces per room	8.6
Non-Residential Uses			
- Retail/Commercial	152m ²	1.0 space per 40m ²	3.8
Total (Say)	-	-	13

Based on the parking requirements presented in Table 4.1, the proposed development is required to provide a total of 13 car parking spaces comprising:

- 9 x co-living car parking spaces, and
- 4 x retail/commercial car parking spaces.

4.2 Adequacy of Car Parking Spaces

The proposed development proposes to provide a total of 14 car parking spaces comprising:

- 10 x co-living car parking spaces (including one accessible car parking space), and
- 4 x retail/commercial car parking spaces (for shopper owners/staff).

As can be seen from the above, the proposed car parking provision satisfies the minimum parking requirements stipulated in the Housing SEPP as well as in compliance with the DCP requirements.



On this basis, the proposed car parking provision for the proposed development is considered to be satisfactory.

4.3 Accessible Car Parking Spaces

The DCP has the following accessible car parking requirements:

- places of shared accommodation 1 space per 50 spaces, and
- commercial premises 1 space per 50 spaces (where 10 or more parking spaces are provided).

Based on the above DCP requirements, the proposed development is required to provide zero accessible car parking spaces.

Notwithstanding the above, accessible car parking requirements have been assessed against the Building Code of Australia (BCA). The proposed development has the following BCA building classifications and accessible car parking requirement:

- co-living housing BCA Class 3 where accessible car parking to be calculated by multiplying the total number of car parking spaces by the percentage of accessible bedrooms to the total number of bedrooms, and
- retail/commercial uses BCA Class 5 where accessible car parking to be provided at a rate of one space for every 100 car parking spaces or part thereof.

The percentage accessible room in the proposed development is approximately seven per cent. Therefore, the required accessible parking spaces is one accessible car parking space for the co-living housing component.

In relation to the retail/commercial uses, BCA does not require any accessible car parking spaces to be provided.

The architectural car park plans indicate one accessible car parking space has been provided. Therefore, the number of proposed accessible car parking spaces is satisfactory.

4.4 Bicycle Parking

In relation to bicycle parking spaces, Clause 69 (1) (h) states that "the co-living housing will include adequate bicycle and motorcycle parking spaces".

Bicycle parking is proposed to be accommodated within the balcony within each room (where available). A review of the architectural plans indicates that of the proposed 43 rooms, only seven rooms do not have a balcony i.e. 36 bicycle parking spaces are available. Each balcony has dimensions to comply with the Australian



Standard AS2890.3 requirement for a Class 1 bicycle parking space. In some cases, the balcony can accommodate more than one bicycle.

In addition, it is noted that the DCP has no specific requirement for the provision of bicycle parking for retail/commercial uses less than 300m².

On this basis, bicycle parking provision for the proposed development is considered to be adequate.

4.5 Motorcycle Parking

In relation to motorcycle parking spaces, Clause 69 (1) (h) states that "the co-living housing will include adequate bicycle and motorcycle parking spaces".

The DCP has no specific requirement for the provision of motorcycle parking for any land use type.

The proposed development includes nine motorcycle parking spaces.

The proposed provision of nine motorcycle parking spaces is considered to be adequate.

4.6 Loading Facility

The DCP has no specific requirement for the provision of on-site loading facility for the proposed development.

Notwithstanding, it is proposed to provide an on-site loading facility. The on-site loading facility includes a loading bay with dimensions 6.4m long by 3.5m wide. Due to site constraints, available headroom inside the car park including the loading bay is restricted to 2.6m. As such, the loading facility can only be serviced by vehicles having a height less than 2.6m. This is considered to be acceptable for the reasons explained below.

The proposed retail/commercial uses have a total floor area of 152m² across two tenancies. As such, the proposed retail/commercial tenancies are small in scale and are likely to be occupied by small scale local businesses similar to a take-way shop, real estate agent, medical centre etc. Under circumstances, servicing of the retail/commercial uses can be conducted using light commercial vans with dimensions consistent with an Australian Standard B99 vehicle including a headroom requirement of 2.2m. On this basis, servicing of the retail/commercial uses can occur within the site satisfactorily.

In relation to waste collection, it is proposed to engage a private waste contractor to service the proposed development. The private contractor will be required to use a



waste collection vehicle with appropriate headroom to enable them to service the proposed development within the site. Appendix B provides an example of a small waste collection vehicle that can be used to service the proposed development. It has a vehicle and operating height of 2.1m.

In relation to furniture and other large bulky items deliveries, it is noted that the co-living rooms will be provided fully furnished. As such, it is not necessary for the occupants to move their furniture with them to the proposed development. In addition, these rooms are configured for sole occupants, and they are unlikely to have a need for large bulky furniture. Typically, their belongings will be packed in bags and small boxes that can be moved using passenger vehicles and/or light commercial vans.

In the light of the above discussion, it is considered that the proposed on-site loading facility with the identified headroom will be satisfactory.

4.7 Car Park Layout Design

The proposed development includes an at-grade car park containing 14 car parking spaces to be accessed via a two-lane, two-way driveway/access from The Crescent. It is noted that the proposed car parking spaces will be allocated to occupants and tenants of the proposed development i.e. resident and staff parking only. As the car park is located at-grade with direct access from the street, a ramp is not required.

The driveway/access on The Crescent is proposed to be located near the site's eastern boundary with the access from the driveway into the car park proposed with a straight alignment.

The proposed access has a wall to wall width of 7.06m but locally constricted to 5.5m at the security gate.

Inside the car park, an L-shaped aisle connects to the access from which access to car parking spaces can be gained. The car parking spaces are proposed to be configured as 90 degrees car spaces on both sides of the aisle.

In relation to the design of the parking spaces, it is noted that the proposed car parking spaces have minimum dimensions of 2.4m wide (plus an additional 0.3m if adjacent to a wall) by 5.4m long with minimum aisle width of 5.8m. The dimensions of the car parking spaces comply with Australian Standard for a Class 1A parking facility which is suitable as a residential and employee car park.

The accessible car spaces have been designed to comply either with AS2890.6. The design requirement in AS2890.6 requires an accessible car parking space and associated shared area to have dimensions of 2.4m wide by 5.4m long. Headroom above the accessible car parking spaces has been provided at 2.5m. The proposed accessible car spaces comply with the above design requirements.



Swept path analysis of an Australian Standard 5.2m long B99 vehicle accessing the loading bay has been conducted. The analysis found that the vehicle can access the loading bay satisfactory. In addition, swept path analysis has also been conducted for an Australian Standard 6.4m long small rigid vehicle. The vehicle can also access the loading bay satisfactorily. The swept path diagrams are provided in Appendix C.

From the above, the design of the car park generally complies with the design requirements and/or meets design intents set out in the relevant Australian Standard for car parking facilities, namely AS2890.1:2004 and AS2890.6:2009.



5 Traffic Assessment

Traffic generation potential of a given proposed development is typically assessed using suggested traffic generation rates sourced from guidelines produced by Transport for New South Wales (TfNSW) for the relevant land use. However, the guidelines do not provide any rates for a land use similar to a proposed co-living development.

In the absence of a specific traffic generation rate for co-living development, the traffic generation potential of the proposed development has been estimated based on the turnover of the car parking spaces.

In relation to development traffic arising from the proposed retail/commercial uses, it is expected that they would generate negligible traffic as the proposed retail/ commercial tenancies are small scale in nature and are expected to only service the local area. The retail/commercial tenancies are expected to draw their customs from walk in pedestrians in the immediate surrounding area. Any development traffic arising from these uses would be predominantly related to shop owners and staff arriving and departing which would be likely to occur outside of the peak periods.

In the light of the above, conservatively assuming all car spaces would turn over in the same hour during the peak periods, the revised proposed development with 14 proposed car parking spaces is expected to generate 14 two-way vehicle trips per peak hour. This appears to provide a very conversative traffic estimate for the proposed development.

Accounting for the traffic generation of the existing dwellings, which has been estimated to be two two-way vehicle trips per peak hour, the net increase in traffic generation therefore is 12 two-way vehicle trips per peak hour.

An estimated net development traffic of 12 two-way vehicle trips per peak hour is considered to be low. This equates to approximately one vehicle every five minutes. At this low level of development traffic, the estimated development traffic would be within the day to day fluctuations in traffic volumes on the surrounding road network. Thus, it is not expected to create any noticeable traffic effects. The local road network would continue to operate as it does under existing traffic conditions.

In light of the above, traffic effects of the revised proposed development would be satisfactory.



6 Summary and Conclusion

This report examines the traffic and parking implications of a proposed co-living development at 143-145 Highland Avenue, Yagoona. The salient findings of this assessment are presented below.

- The proposed development involves the demolition of two existing low density dwellings on site and construct in their place new 6-storey building to accommodate 43 sole occupancy co-living rooms with two retail/commercial tenancies with a total floor area of 152m².
- Vehicular access to the site is proposed to be provided from The Crescent and is proposed to be configured as a two-lane, two-way flat driveway.
- Based on the Housing SEPP and DCP parking requirements, the proposed development is required to provide a total of 13 car parking spaces.
- The proposed development provides a total of 14 car parking spaces including one accessible car parking space. Therefore, the proposed car parking provision meets the minimum parking requirement stipulated in the Housing SEPP and also complies with the DCP requirements.
- The design of the car park complies and/or meets the design intents stipulated in the relevant Australian Standard for car parking facilities, namely AS2890.1:2004 and AS2890.6:2022.
- The proposed development has been estimated to generate a total of 14 two-way vehicle trips per peak hour (or a net additional of 12 two-way vehicle trips per peak hour). This level of development traffic is considered to be low and is unlikely to create any noticeable traffic impacts.

Overall, from a traffic and parking perspective the proposed development is considered to be satisfactory.



Appendix A

Architectural Car Park Layout Plan



SITE SUMMARY		SITE ARE/
LOCATION	143-145 HIGHLAND AVE YAGONNA	TOTAL PR
COMBINED FRONTAGE	25m	COMMERC
EXISTING BUILDING	2 x RESIDENTIAL DWELLINGS	RESIDENT
ZONING	B2	TOTAL FLO
МАХ НЕІGHT	NO 143 - 19m NO 145 - 20m	FSR

	973.8m²	
TE ROOMS	43	
L FLOOR AREA m ²	152m ²	
. FLOOR AREA m ²	2167m²	1
r area	2319m²	1
	2.38:1	

FE ROOM AND 1 REA	3.8 SPACES	8.6 SPACES	12.4 SPACES	13 SPACES
PARKING- 0.2 SPACES PER PRIVAT SPACE PER 40m ² COMMERCIAL AF	COMMERCIAL AREA 152m ²	43 PRIVATE ROOMS	TOTAL PARKING NEEDED	PROPOSED PARKING

REA	194.76m²	197.3m²	104m ²	109.2m ²
MUNAL OPEN SPACE 20% OF SITE A	UM COMMUNAL OPEN SPACE m ²	SED COMMUNAL OPEN SPACE m^2	UM INTERNAL COMMUNAL AREA	SED INTERNAL COMMUNAL AREA

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	Site & Ground Floor Plan			143 -145 Highland Ave Yagoona		Pronosed Co-l iving Development		
NOTES	 NOTES. This drawing is protected under copyright. It must not be copied. modified or used in any form without consent from the author. All dimensions are to be verified prior to 		commencement of work. Boundary dimensions	and all levels are subject to survey. Use figure dimensions only do not scale. All discrepancies	are to be brought to the attention of the author.	1 All building work shall be in accordance with the BCA & all relevant codes. Allow tolerance for	window and sliding door openings.	_
Date 29/07/2024		29/07/2024						
	Description	DA Submission						
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Appendix B

Small Waste Collection Vehicle Dimensions



Introducing the WASTE WISE MINI



REAR LOADER

Waste Wise Environmental introduced the first MINI rear loader vehicle into Australia in September 2011.

The success of the MINI rear loader has been well documented over the first 12 months of service. The ability to manoeuvre in confined areas within basement car parks, where bin rooms are located, and laneways where other vehicles find difficulty in reversing is unique, but achievable for this compact unit.

With an overall height of just 2.08 metres and length of 6.40 metres, this vehicle can enter most car parks, going down three (3) basement levels or climbing up eight (8) car park levels to empty MGB 240 litre & MGB 660 litre bins within its own height capacity.

MGB 1100 litre bins will be lifted higher than the vehicle and generally find a spot within the complex to do so. The MINI rear loader is valuable to all: architects, developers, owners corporations (space saving and cost saving) and councils (no bins at kerbside affecting the streetscape).



The Waste Wise Environmental fleet of MINI'S has successfully demonstrated its ability as the most valuable & versatile MINI rear loader on the road today. Not only in confined areas, but also under standard rear loader conditions at street level.

1300 550 408



Vehicle Dimensions



Truck Bin Lift Capabilities



PO Box 117 Reservoir VIC 3073 **T** 03 9359 1555 **F** 03 9359 2544 info@wastewise.com.au www.wastewise.com.au









Appendix C

Swept Path Diagrams





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