

RYDE EASTWOOD LEAGUES CUB

PLANNING PROPOSAL
TRANSPORT REPORT FOR
PROPOSED SENIORS LIVING
DEVELOPMENT,
CORNER RYEDALE ROAD AND
TERRY ROAD, WEST RYDE

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COLSTON BUDD ROGERS & KAFES PTY LTD
ACN 002 334 296
Level 18 Tower A
Zenith Centre
821 Pacific Highway
CHATSWOOD NSW 2067

Telephone: (02) 9411 2411
Facsimile: (02) 9411 2422
Email: cbrk@cbrk.com.au

REF: 10635

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I. INTRODUCTION

- I.1 Pier Property, on behalf of Ryde Eastwood Leagues Club engaged Colston Budd Rogers and Kafes Pty Ltd to prepare a report examining the traffic, transport and parking implications of a planning proposal for a seniors living development located at 127-135 Ryedale Road and 4-14 Terry Road, West Ryde. The site of the proposed development is shown in Figure 1.
- I.2 The site is currently occupied by eight low density residential dwellings and has its primary frontage along Terry Road to the east.
- I.3 The planning proposal would provide for a scale of development comprising 85 independent living units and 30 high dependency care beds. Vehicular access would be provided via Terry Road.
- I.4 Consultation with City of Ryde Council has included a letter from Council dated 21 March 2017 plus email correspondence; the most recent dated 6 September 2017 and sent by Council's Senior Traffic and Development Engineer. The email correspondence is included as Appendix A. Overall, the agreed key transport related aspects have been addressed as part of the report, and include the following:
- pedestrian access and movement;
 - extent of traffic surveys and agreed locations;
 - agreed applicable traffic generation rates;
 - on-site loading facilities; and
 - ambulance access and parking.
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1.5 This report assesses the traffic, transport and parking implications of the proposed development through the following chapters:

- Chapter 2 - describing the existing conditions; and
- Chapter 3 - assessing the traffic and parking implications of the planning proposal.

2. EXISTING CONDITIONS

Site Location and Road Network

- 2.1 The site of the proposed development is at 127-135 Ryedale Road and 4-14 Terry Road, West Ryde, as shown in Figure 1. It is occupied by detached residential dwellings with frontages to Ryedale Road to the west and Terry Road to the east.
- 2.2 Surrounding land use is primarily a mix of low density residential dwellings and high density residential apartments. Ryde Eastwood Leagues Club is located immediately to the south and West Ryde Town Centre, comprising a mix of retail, commercial and high density residential uses located further to the south and south-west.
- 2.3 The road network in the vicinity of the site includes Terry Road, Ryedale Road Orchard Street and Marlow Avenue. Terry Road and Ryedale Road combine to form a north-south link through the local area east of the T1 Northern Line rail corridor and an optional connection between Victoria Road in the south and Blaxland Road in the north. Ryedale Road intersects with Terry Road at a roundabout controlled intersection in the south-west corner of the site. In the vicinity of the site each road generally provides for one traffic lane and one parking lane in each direction, clear of intersections. There are bus stops on Ryedale Road adjacent to the western boundary of the site and a marked pedestrian crossing at Ryde Eastwood Leagues Club south of the site.
- 2.4 Orchard Street travels in a north-south direction to the south of the site and intersects with Hermitage Road and Parkes Street at roundabout controlled intersections to provide a connection with Devlin Street at Top Ryde Shopping
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Centre further to the south-east. It provides for one traffic lane and one parking lane in each direction, clear of intersections. Orchard Street provides access to residential properties along its length. The intersection of Terry Road and Orchard Street is a priority controlled T-intersection with Terry Road the major road.

- 2.5 Marlow Avenue is located north of the site and connects with Ryedale Road at a signalised intersection north of the site. It provides local access over the rail corridor and links with West Parade to form a north-south route along the western side of the rail corridor. Marlow Avenue generally provides for one traffic lane and one parking lane in each direction east of the rail corridor.

Traffic Flows

- 2.6 Traffic generated by the proposed development will have its greatest effects during weekday morning and afternoon periods when it combines with other traffic on the surrounding road network.
- 2.7 In order to gauge traffic conditions, traffic surveys were completed on Wednesday 13 September 2017 during the typical AM and PM peak periods. The surveys included the following intersections:
- Terry Road/ Ryedale Road (including Forster Lane)
 - Terry Road/ Orchard Street.
- 2.8 The results of the surveys are shown in Figures 2 and 3, and summarised in Table 2.1. Overall, Terry Road carried traffic volumes of between 350 and 770 vehicles per hour two-way during the surveyed peak hours. Ryedale Road carried traffic volumes between approximately 630 and 1100. Traffic flows along Orchard Street
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were lower, with between 220 and 400 vehicles per hour two-way during the respective peak periods.

Table 2.1: Existing two-way (sum of both directions) peak hour traffic flows

Road	Location	AM peak hour	PM peak hour
Terry Road	East of Orchard Street	190	420
	West of Orchard Street	350	770
Ryedale Road	North of Terry Road	630	1100
	South of Terry Road	410	485
Orchard Street	South of Terry Road	220	400
Forster Lane	South of Terry Road	10	5

Intersection Operations

- 2.9 The capacity of the road network is largely determined by the capacity of its intersections to cater for peak period traffic flows. The surveyed intersections have been analysed using the SIDRA program for the traffic flows shown in Figures 2 and 3.
- 2.10 SIDRA simulates the operations of intersections to provide a number of performance measures. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. Based on average delay per vehicle, SIDRA estimates the following levels of service (LOS):
- ρ For traffic signals, the average delay per vehicle in seconds is calculated as $\text{delay} / (\text{all vehicles})$, for roundabouts the average delay per vehicle in seconds is selected for the movement with the highest average delay per vehicle, equivalent to the following LOS:

0 to 14	=	“A”	Good
15 to 28	=	“B”	Good with minimal delays and spare capacity
29 to 42	=	“C”	Satisfactory with spare capacity
43 to 56	=	“D”	Satisfactory but operating near capacity
57 to 70	=	“E”	At capacity and incidents will cause excessive delays. Roundabouts require other control mode.
>70	=	“F”	Unsatisfactory and requires additional capacity

ρ For give way and stop signs, the average delay per vehicle in seconds is selected from the movement with the highest average delay per vehicle, equivalent to following LOS:

0 to 14	=	“A”	Good
15 to 28	=	“B”	Acceptable delays and spare capacity
29 to 42	=	“C”	Satisfactory but accident study required
43 to 56	=	“D”	Near capacity and accident study required
57 to 70	=	“E”	At capacity and requires other control mode
>70	=	“F”	Unsatisfactory and requires other control mode

2.11 It should be noted that for roundabouts, give way and stop signs, in some circumstances, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service A, except one which is at level of service E, may not necessarily define the intersection level of service as E if that movement is very small. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue was also involved.

- 2.12 The analysis found that the roundabout controlled intersection of Terry Road and Ryedale Road is operating with average delays for all movements of approximately 10 seconds per vehicle during weekday peak periods. This represents level of service A, a good level of service.
- 2.13 The priority controlled intersection of Terry Road and Orchard Street is also operating well, with average delays for all movements of less than 10 seconds per vehicle during peak periods. This represents level of service A, a good level of service.

Pedestrian and Cycle Infrastructure

- 2.14 Pedestrian footpaths are generally provided along both sides (or at least one side) of the surrounding local streets. Such provision facilitates good connections to and from key public transport facilities and other local area destinations, including Ryde Eastwood Leagues Club and West Ryde Town Centre. Overall, West Ryde is regarded as a 'very walkable' suburb with a Walk Score of 73.
- 2.15 The local area intersections provide a mix of pedestrian facilities including marked pedestrian crossings, kerb blisters, central medians and mid-block crossings. There is a marked pedestrian crossing of Ryedale Road south of the site and adjacent to Ryde Eastwood Leagues Club with another further to the south at West Ryde Railway station.
- 2.16 There are also a number of well-established formal cycling facilities surrounding the site, with dedicated cycling paths provided along Blaxland Road to the east, throughout Denistone to the north of the site and along the Parramatta River further to the south. These facilities connect to various informal on-road cycling routes in the surrounding local areas, including along Ryedale Road, Marlow
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Avenue and Herbert Street. The general local road network is also cycle friendly due to moderate to low traffic volumes and wide road widths.

Public Transport

- 2.17 The site is well connected to a variety of public transport services. West Ryde Railway Station is located approximately 400 metres south of the site and serviced by the T1 Northern Line within the Sydney Trains network. Services generally run at 15 minute headways and directly link the area with key destinations on the Sydney Trains network, including Hornsby, Strathfield, Epping, all Sydney CBD Stations, North Sydney and Chatswood.
- 2.18 Local bus services are provided by Sydney Buses. As previously discussed, buses operate along Ryedale Road with bus stops conveniently located adjacent to the western boundary of the site and further south, close to Ryde Eastwood Leagues Club. These services are generally associated with those services that access the West Ryde Interchange and use West Parade and Ryedale Road to circulate over the rail corridor to link back to Victoria Road. The services include the following:
- route 501: West Ryde to city (Pitt Street) via Pyrmont and Ultimo
 - route 513: Carlingford to Meadowbank Wharf via West Ryde;
 - route 520: Parramatta to city (Circular Quay) via West Ryde
 - route 524: Ryde to Parramatta via West Ryde
 - route 534: West Ryde to Chatswood via North Ryde.
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3. IMPLICATIONS OF PLANNING PROPOSAL

3.1 The planning proposal would provide for a scale of development comprising 85 independent living units (146 beds) and 30 high dependency care beds. Vehicular access to on-site parking would be provided via Terry Road along the eastern boundary of the site. This chapter assesses the implications of the proposed development through the following sections:

- pedestrian accessibility;
- public transport;
- parking provision;
- access, servicing and internal layout;
- traffic generation and effects; and
- summary.

Pedestrian Accessibility

3.2 The two main entries along Terry Road will be connected to the site via 2.5 metre wide pedestrian paths. A new pedestrian path along Terry Road and adjacent to the sites boundary will also conveniently connect the site with key destinations, including Ryde Eastwood Leagues Club, local area bus stops, West Ryde Railway Station and West Ryde Town Centre more broadly.

3.3 These facilities, together with the intended internal connections will ensure good permeability and ease of access for all users. A pedestrian accessibility plan has been completed to illustrate the extent of both existing and likely future pedestrian paths and the overall high level of connectivity throughout the local area. The formal crossing facilities and level nature of the town centre also contribute to the pedestrian amenity throughout.

Public Transport

- 3.4 As previously discussed in Chapter 2, T1 Northern Line rail services travel through West Ryde Station within 400m of the site and Sydney Buses currently use Ryedale Road, close to the site.
- 3.5 The proposed development will provide increased residential densities close to public transport services and will strengthen the demand for these services.
- 3.6 The proposed development is therefore consistent with government objectives and the planning principles of:
- (a) improving accessibility to employment and services by walking, cycling, and public transport;
 - (b) improving the choice of transport and reducing dependence solely on cars for travel purposes;
 - (c) moderating growth in the demand for travel and the distances travelled, especially by car; and
 - (d) supporting the efficient and viable operation of public transport services.
- 3.7 The proposed development satisfies the Housing for Seniors or People with a Disability SEPP 2004 requirements in terms of its accessibility to a range of services and facilities identified in the SEPP. This includes access to shops, banks, retail and commercial facilities, recreation facilities and medical practices.
- 3.8 Notwithstanding, the availability of regular public transport services within 400 metres of the site would also serve to provide transport for residents to such services and facilities as required. Overall, the proposal meets the transport
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aspects to ensure it is able to be granted a site compatibility certificate, when required.

Parking Provision

3.9 City of Ryde Development Control Plan 2014 (DCP 2014) states that parking must be provided in accordance with SEPP 2004 and includes the following parking requirements for aged care facilities:

Self-contained dwellings

- 0.5 spaces per bedroom, or

Residential Care Facility

- one visitor space per 10 dwellings
- one space per two employees
- one ambulance space.

3.10 On this basis, the proposed development would need to provide:

- 73 residential spaces for the independent living units
- three spaces for the high dependency care beds
- 10 staff spaces
- one ambulance space.

3.11 The development will provide parking in accordance with the above requirement for a total of 86 on-site spaces, plus loading and ambulance spaces.

3.12 The final parking provision will be determined in association with any future development applications. Disabled, bicycle and motorcycle parking will also be provided in accordance with the requirements of DCP 2014.

Access, Servicing and Internal Layout

- 3.13 Vehicular access would be provided via Terry Road along the eastern boundary of the site. The driveways would provide access to the on-site parking area for use by residents, staff and service vehicles.
- 3.14 Residential parking spaces will be a minimum of 5.4 metres long by 2.4 metres wide, with a 2.4 metre wide adjacent area for wheelchairs. Non-residential spaces will be a minimum of 2.5 metres wide. Spaces with adjacent obstructions will be 0.3 metres wider to provide for doors to open. Circulation aisles will be a minimum 5.8 metres wide. Columns will be set back 750mm from the front of spaces. Height clearance will be 2.5 metres above residential spaces, and 2.2 metres elsewhere. These dimensions are considered appropriate, being in accordance with the Australian Standard for Parking Facilities (Part 1: Off-street car parking and Part 6: Off-street parking for people with disabilities), AS 2890.1:2004 and AS 2890.6:2009.
- 3.15 Provision for vans and courier sized vehicles will be included in the development. These will comprise the majority of service vehicles to the site, including maintenance vehicles and typical deliveries associated with the residential care facility.
- 3.16 Garbage collection will also occur on-site and within the designated loading area. The loading area will be designed to accommodate all service vehicles up to a 10 metre long rigid truck. This would allow access by Council's garbage truck.
- 3.17 SEPP 2004 also specifies that a minimum of one ambulance bay is required. This requirement will be met with provision of a single dedicated space within the on-site car park.
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- 3.18 Aged care facilities also typically require space for a minibus to park on-site or along the sites frontage and close to the entry points to allow for an accessible path of travel. As such, a minibus would be able to make use of the loading bay and/or the internal car park. Council may also be agreeable to modifying on-street parking arrangements along Terry Road to facilitate a no parking zone for use by a minibus and for set-down/ pick-up purposes. Such details will be assessed as part of any future development application.
- 3.19 A minimum four metre height clearance will be required for areas accessed by rigid trucks servicing the site and Council's garbage truck, with a minimum of 3.8 metres for areas accessed by an ambulance.

Traffic Generation and Effects

- 3.20 Traffic generated by the proposed aged care facility will have its greatest effects during weekday peak periods when it combines with other traffic on the surrounding road network.
- 3.21 Surveys completed by RMS have found typical traffic generation of between 0.1 and 0.2 vehicles per seniors living dwelling per hour during weekday peak hours. Consultation with City of Ryde Council engineers has also confirmed agreed applicable vehicle trip rates of between 0.16 and 0.19 trips per dwelling.
- 3.22 On the basis of the rates agreed with Council, the proposed development would have a traffic generation of between 18 and 22 vehicles per hour two-way during any weekday peak period. Accounting for a discount attributed to the eight existing residential dwellings, the net increase would be approximately 10 to 15 vehicles per hour two-way.
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3.23 Such a low generation would not have noticeable effects on the operation of the surrounding road network. Intersections would continue to operate at their existing good levels of service, with similar average delays per vehicle.

Summary

3.24 In summary, the main points relating to the traffic implications of the proposed development are as follows:

- i) the planning proposal would provide for a scale of development comprising 85 independent living units and 30 high dependency care beds
 - ii) the proposed development will be readily accessible by established public transport services and pedestrian facilities in and around West Ryde Town Centre
 - iii) pedestrian paths of travel and safety are key to ensuring a high level of accessibility and this is maintained by provision of footpaths that link with existing facilities
 - iv) parking provision will be appropriate and in accordance with SEPP 2004 and Council's parking rates amounting to a total of 86 on-site car spaces
 - v) vehicular access, internal circulation and car parking and loading area layouts will be provided in accordance with AS 2890.1:2004, AS 2890.2:2002 and AS 2890.6:2009
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- vi) the surrounding road network will be able to cater for the nominal traffic generation associated with the proposal

- vii) the traffic effects of the proposed seniors living development being sought in the planning proposal would not be noticeable on the surrounding road network.