



Traffic Engineers and Transport Planners

Our Reference: 22270L#2

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ABN 32 100 481 570

18th January, 2019

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Attention: Ms Amanda Haycox

Dear Madam,

Amendment C223 – 81-95 Burnley Street, Richmond
Proposed Rezoning
Traffic Engineering Review

Introduction

Further to your instructions, please find following our review of the proposal to rezone the above site from an Industrial 3 Zone to Mixed Use Zone and indicative development proposal. Our instructions are specifically to review and provide advice in relation to:

- *Description and currency of the existing conditions; car parking, road safety review; alternative transport modes*
- *Assessment of the Traffic generation rates and impacts – access to the site and implications for Appleton St and Doonside St*
- *Assessment of Car parking; bike parking; loading and unloading rates*
- *Trigger for traffic lights.*

For this assessment, we have reviewed the following documents:

- The revised Traffic Report, prepared by Ratio Consultants (dated 19th December, 2018)
- Proposed DPO 15 (Revision 00)
- An exert from the Access Plan in the Town Planning report submitted by Tract

Traffix Group earlier reviewed this application on the site and provided comments to Council on the same (principally in letter 22270L#1, dated 28th February, 2017).

Proposal

The proposal is to rezone 81-95 Burnley Street, Richmond to a Mixed Use Zone. An indicative development scheme has been prepared which will allow (sourced from the Ratio Traffic Report):

- 557 dwellings
- 15,410m² of commercial floor area
- 519m² of retail space

Primary vehicle access to the subject site is proposed via Doonside Street. Limited vehicle access is proposed to Appleton Street.

When Traffix Group previously assessed this proposal in detail, the development scale included:

- 580 dwellings
- 3,891m² of commercial floor area
- 541m² of retail space
- 300m² of café space
- A 75-place childcare centre

Based on the above, the key changes are the removal of the childcare centre and increased commercial floor space.

Existing Conditions

Subject Site

The subject site is 81-95 Burnley Street, Richmond and is also known as 'Harry the Hirer'. The site is located on the east side of Burnley Street, between Doonside Street and Appleton Street in Richmond.

The site is located within an Industrial 1 Zone and within the Victoria Street East Precinct of the Richmond UDF. Nearby land uses in the immediate vicinity of the site are a mixture of industrial and residential uses. Victoria Gardens Shopping Centre is located 200m to the north of the site.

Within the immediate area, there are a number of large-scale developments that are either proposed or approved including:

- 36-44 Doonside and 27-41 Appleton Street,
- 9-15 David Street, and
- 171 Buckingham Street.

Transport Network

Burnley Street is a VicRoads Arterial Road and Road Zone Category 1 aligned in a north south direction. In the vicinity of the site, Burnley Street provides a traffic lane and shared bicycle/parking lane in each direction. A 60km/h speed limit applies to Burnley Street, with a 40km/h school zone applying to the south of the site.

Doonside Street is a Local Road aligned in an east-west direction between Burnley Street and David Street. Doonside Street has a pavement width of approximately 10m, which provides for a traffic lane in each direction and parking on both sides of the road. A 'Stop' sign facing Doonside Street controls its intersection with Burnley Street. A 40km/h area speed limit applies to Doonside Street.

Appleton Street is a Local Road aligned in an east-west direction between Burnley Street and Clarke Street. Appleton Street has a pavement width of approximately 8m, which provides for kerbside parking on both sides of the road and a single traffic lane for two-way traffic. The intersection of Appleton Street and Burnley Street is controlled by a 'Stop' sign facing Appleton Street and only left-in/left-out traffic movements are permitted. A 40km/h area speed limit applies to Appleton Street.

Buckingham Street is a Local Road aligned in an east-west direction between Burnley Street and Church Street. Buckingham Street provides for a traffic lane in each direction and parking on both sides of the road. The intersection of Buckingham Street and Burnley Street is controlled by a 'Give-Way' sign facing Buckingham Street. Right turns into Buckingham Street are prohibited between 7-9am (7 days) and left turns into Buckingham Street are prohibited between 7:30-9am Mon-Fri). A 40km/h area speed limit applies to Buckingham Street.

Ratio undertook extensive traffic counts along the length of Burnley Street, including:

- Burnley Street/Victoria Street/Walmer Street
- Burnley Street/Doonside Street
- Burnley Street/Buckingham Street
- Burnley Street/Appleton Street
- Burnley Street/Bridge Road

The surveys were undertaken on Thursday 14th April, 2016 between 7:30am-9:30am and 4:30pm-6:30pm.

The following analysis relies on the traffic data collected by Ratio in April, 2016 (approaching 3 years ago). Ratio checked the validity of the original data collection by reviewing traffic volumes recorded by VicRoads for three Thursdays in November/December 2018. This data found a marginal decrease in traffic volumes at the Burnley Street/Victoria Street intersection. We satisfied that Burnley Street traffic volumes have not changed substantially.

More commentary on this data is provided in the review of Traffic Impacts section below.

Ratio undertook detailed intersection analysis of all of these intersections during the AM and PM peak periods. Our assessment focuses on the intersection of Burnley Street/Doonside Street and Burnley Street/Buckingham Street as the critical intersections. Buckingham Street is important due to its staggered arrangement with Doonside Street.

Road Safety Review

The Ratio Report does not include a road safety review.

We have undertaken a road safety review of the casualty crash statistics in the nearby area using the VicRoads Crashstats database. There were no casualty crashes recorded at the Burnley Street/Doonside Street or Burnley Street/Buckingham Street intersections within the last 5 years of available data.

Car Parking Conditions

Ratio undertook extensive parking surveys in the nearby area at the following times:

- 11am-8pm on Thursday 14th April, 2016, and
- 11am-8pm on Saturday 16th April, 2016.

The survey encompassed a very wide area and over 350 car spaces. The survey results generally found:

- A high demand during the day on Thursday, with occupancy rates up to 88%. Lower demands were recorded during the evening, with occupancy rates 53% or lower after 6pm.
- Parking demands were generally lower on Saturday with occupancy rates of up to 72% during the day and with occupancy rates 41% or lower after 6pm.

Parking survey data generally becomes outdated faster than traffic count data. Local parking conditions generally change more quickly. As a result, parking survey data becomes less relevant after around 12-18 months. While the data is somewhat dated, we are satisfied that it is acceptable to rely on given the proposal is for a rezoning (i.e. instead of Planning Permit application).

Any new Traffic Report prepared at the planning application stage should collect new parking survey data to justify any parking shortfall.

Alternative Transport Modes

The site is well served by public transport services as it is located within the Principal Public Transport Network (PPTN¹). The following services are located within convenient walking distance:

- Tram Routes 12 and 109 on Victoria Street, approximately 350m north of the site,
- Tram Routes 48 and 75 on Bridge Road, approximately 500m south of the site, and
- Tram Route 78 on Church Street, approximately 850m west of the site/

The site is not located in close proximity to metropolitan rail services with the nearest station located 1.4km from the site.

The site enjoys a high level of access to bicycle infrastructure including formal and informal bicycle routes on many roads surrounding the site.

There are multiple car share vehicles within close proximity to the site. The nearest pods are located on Burnley Street, between Doonside Street and Victoria Street (2 pods).

¹ To be within the PPTN, any part of the site must be within the PPTN area.

The site is highly walkable. Walkscore² rates the site as scoring 92 out of 100 and classifies this location as a 'walker's paradise, daily errands do not require a car'.

Traffic Generation and Impacts

As set out previously, the analysis in the Ratio Report relies on data from April, 2016. Any future Traffic Report prepared at the town planning application stage for this site should collect new data for the Burnley Street/Doonside Street intersection. Since the 2016 data collection:

- 36-44 & 27-41 Appleton Street (at the site's eastern boundary) is currently under construction.
- 9-15 David Street (at the eastern end of Doonside Street) is almost completed.

These two developments provide in the order of 500 car spaces between them and will alter the traffic volumes in Doonside Street compared to 2016.

However, the estimated traffic generation of these sites was included in the analysis by Ratio and using 2016 data as a base is useful as it was from before construction commenced at these sites (and the consequential changes in traffic conditions). We are therefore satisfied with the fundamentals of the analysis.

For the purposes of a rezoning and given that a detailed Traffic Report will be prepared for any future application (which will need to include new data collection due to changes in the area), we are satisfied that the 2016 traffic counts remain relevant at this stage.

This analysis focuses on the intersection of Burnley Street and Doonside Street as the critical intersection.

Traffic Generation Rates

The Ratio Report provides a detailed analysis of the traffic generation and impacts of the development. The key assumptions are listed below:

- Residential traffic generation rates of 3 vehicle trips per dwelling per day and 0.3 vehicle trips per dwelling per peak hour, adopting 80% of dwellings have a car space.
- Commercial traffic generation of 50% of the commercial car spaces generating a trip per peak hour and conservatively adopting a commercial car parking rate of 2.5 spaces per 100m².
- Retail/cafe traffic generation of 50% of the car spaces generating a trip per peak hour, adopting a retail car parking rate of 1 space per 100m².

We are satisfied with the above rates. In particular, we support the analysis conservatively adopting the high end of the commercial car parking rate.

Ratio deducted the existing traffic generated by the site. Given extensive surveys conducted, the existing traffic generated by the site should have been collected during these surveys. Ratio made the following assumptions:

² <https://www.walkscore.com/score/81-burnley-st-richmond-vic-australia>

- 115 staff are employed at Harry the Hirer.
- 61% of workers drive to work within the City of Yarra, based on the 2011 ABS Census (this figure dropped to 55% in the 2016 Census).
- 50% of staff generate a trip in the AM and PM peak hours.
- 90% of staff arrive in the AM peak and depart in the PM peak.

This equates to a total of 35 vehicle trips per peak hour to be deducted from the future traffic volumes in the area. The subject site only provides vehicle access to Doonside Street and the traffic volumes have been deducted from this street. We are generally satisfied with these assumptions.

The proposal is forecast to generate 331 vehicle movements per peak hour under this assessment. In comparison, when this proposal was assessed by Traffix Group previously, it was forecast to generate 231 vehicle movements per peak hour. The primary cause of the increase is the commercial space and consequently car parking numbers, which will generate 193 vehicle trips per hour (up from 49 vehicle trips per peak hour previously)³.

Traffic Distribution

Ratio adopted the following assumptions regarding the traffic distribution of developments in the nearby area:

Direction of travel

- A 20/80 and 60/40 inbound/outbound split of residential traffic during the AM and PM peak hours, respectively.
- A 90/10 and 10/90 inbound/outbound split of commercial and retail traffic during the AM and PM peak hours, respectively.

Directional split to/from the site

- 50% of traffic is to/from the north, including:
 - 25% to/from the east on Victoria Street via Burnley Street; and
 - 25% to/from the west on Victoria Street via Burnley Street.
- 50% of traffic is to/from the south, including:
 - 10% to/from the east on Bridge Road via the local road network, with access to/from Bridge Road via River Street;
 - 20% to/from the south on Burnley Street past Bridge Road; and
 - 20% to/from the west on Bridge Road via Burnley Street.

We agree with the above assumptions.

³ While the increased commercial space will generate up to 144 more trips (193-49) compared to the previous assessment (i.e. more than the total of 100 new trips to be generated by the revised scheme), the removal of the childcare centre is the main factor in the difference.

Traffic Impacts

In our view, the critical traffic impacts of development in the nearby area are the intersections of Doonside Street and Buckley Street with Burnley Street. Therefore, the assessment focuses on these two intersections.

The key results of the traffic analysis are provided at Tables 7.6 and 7.7 of the report. These tables compare a Base Case scenario with a post-development scenario. The base case is reported to include the development traffic of:

- 36-44 Doonside and 27-41 Appleton Street,
- 9-15 David Street, and
- 171 Buckingham Street.

SIDRA was used to model the performance of the following intersections along Burnley Street:

- Victoria Street
- Doonside Street
- Buckingham Street
- Appleton Street
- Highett Street
- Bridge Road

The report includes no detail about the models or the specifics of how the models were built. The report does not indicate whether the intersections were linked in a network.

The SIDRA results in the Ratio Report indicate that most intersections experience negligible change as a result of the development, except the critical intersection of Burnley Street/Doonside Street. This is consistent with our earlier work reviewing this proposal, we are satisfied that the traffic impacts of the development can be accommodated at all other intersections.

The Ratio Report found that the Burnley Street/Doonside Street requires traffic signals in the post-development scenario and we agree. The report does not detail if Buckingham Street should be included in the new signals or excluded.

Based on this analysis and considering our earlier work on this site, we remain of the view that traffic signals are required at the Burnley Street/Doonside Street intersection as a result of this development.

The Ratio Report concludes that:

The preliminary analysis indicates that the intersection would need to be signalised following construction of approximately 50% of the proposed development plus full build-out of the nearby approved developments. This scenario would enable Lot 2 (the initial stage of the project to be developed) to be fully constructed without the intersection requiring to be signalised. It is suggested that more detailed traffic analysis be undertaken during the planning permit stages to determine precisely when the intersection is required to be signalised.

It is possible that there is a staged development scenario where part of the site could be developed before traffic signals are required. The current Traffic Report does not precisely define when that would be.

In our view, the appropriate time for this decision to be made is at the planning permit application stage when a detailed Traffic Report prepared for the proposed development has been prepared in accordance with DPO15. This report should also examine whether Buckingham Street should be included or excluded from the new signals at Doonside Street.

DPO15 includes the following requirements:

The TIAR is to include consideration of any development stages and approved/current development applications within the immediate area surrounding the site. The assessment is to:

- identify mitigating works required for each development stage in the Development Plan
- assess whether a two way or a four way signalised intersection between Burnley Street/Doonside Street/Buckingham Street is required and the trigger for providing the signalised intersection
- identify a new intersection layout and operation, if required, approved by VicRoads in consultation with the Responsible Authority.

We are of the view that these requirements are necessary and appropriate.

Car Parking Assessment

Compared to the original Traffic Report (April 2016), the new report recommends slightly lower car parking rates are adopted for the development of the site. A comparison between the two reports is set out in the table below.

Table 1: Car parking rates recommended by Ratio

Component	October 2016 Report	December 2018 Report
Residents	<ul style="list-style-type: none"> 0.7 car spaces to each one-bedroom dwelling 0.9 car spaces to each two-bedroom dwelling 1.5 car spaces to each three-bedroom dwelling 	<ul style="list-style-type: none"> 0.5-0.7 car spaces to each one-bedroom dwelling 0.7-0.9 car spaces to each two-bedroom dwelling 1.0-1.5 car spaces to each three-bedroom dwelling
Residential Visitors	0.1 spaces per dwelling	None
Retail	1 per 100m ² LFA for staff	1 per 100m ² LFA for staff
Commercial	2.5 per 100m ² LFA for staff	1-2.5 per 100m ² LFA for staff

Before reviewing each component below, it is important to note that since the original report, the Column B parking rates of Clause 52.06-5 have now been applied to the site. These generally adopt

lower car parking rates than previously applied to the site and in particular there is now no statutory requirement to provide any visitor car parking on the site.

Residents

The Ratio Report relies on the ABS 2016 Census data for 'flats, units or apartments' in Richmond to support lower car parking rates for residents than those outlined in Clause 52.06-5. Specifically, the ABS data revealed:

- 0.7 car spaces to each one-bedroom dwelling
- 1.0 car spaces to each two-bedroom dwelling
- 1.5 car spaces to each three-bedroom dwelling

The recommended rates in the Ratio report are slightly lower than the ABS rates (the ABS data effectively forms the upper limit of the proposed car parking rates). This is supported in this instance as it encourages sustainable travel options.

Residential Visitors

As discussed above, there is no statutory requirement to provide visitor car parking on the site. The proposal is therefore consistent with the requirements of Clause 52.06-5.

Retail and Café

Provided the retail tenancies and cafes proposed on the site remain relatively small (approximately 519m² for all tenancies), we are satisfied that a staff parking rate of 1 space per 100m² is acceptable and that no customer parking is required.

Commercial Parking

The commercial uses expected are either offices or restricted retail uses.

While below the statutory requirement of 3.5 car spaces per 100m², we are satisfied that an office rate of 2.5 car spaces per 100m² is acceptable for an office use in this location.

A rate of 2.5 car spaces per 100m² is also acceptable for a restricted retail use. However, a restricted retail use would have a substantially different car parking profile to an office, with a large proportion of the parking demand associated with short-term parking by customers, rather than long-term parking by staff.

The 2018 Traffic Report includes a recommended lower bound of 1 space per 100m² for these uses. This rate is consistent with recent City of Yarra approvals for large office developments in the suburb of Richmond. This rate supports sustainable transport use and is acceptable in our view.

As part of any future town planning application, the associated Traffic Report will need to provide justification for the final commercial parking rate provided. This should include a strong Green Travel Plan (as required by the draft DPO15) outlining ways that this car parking rate can be supported through various sustainable transport initiatives.

Bicycle Parking Assessment

The Ratio Report recommends that bicycle parking is provided at a high level for resident and staff and in accordance with the statutory requirements of Clause 52.34 for other uses. For residents and staff, the following rates are proposed:

- 1 bicycle space per dwelling for residents.
- 1 bicycle space per 150m² for office staff (double the statutory requirement).

We agree and support these rates.

Loading and Waste Collection

DPO15 requires the following:

- *Details regarding loading arrangements, with loading to be undertaken on site and conflict between the loading bay(s) and car parking areas and non-motorised transport to be minimised.*
- *Access to the site by trucks is to be via Doonside Street.*
- *Details regarding on-site waste collection, with waste vehicles accessing the site from Doonside Street.*

The Ratio Report recommends off-site loading for the small retail and café tenancies given that these will be served by on-street parking. On-site loading for restricted retail tenancies is recommended to be on-site. We agree with these recommendations.

Given the size of the development site, all waste collection activities should occur on-site within suitable loading facilities. The draft DPO15 requires trucks to access the site via Doonside Street and we agree with this requirement.

Conclusions

Based on our various investigations, we are of the opinion that:

- a) The Ratio Report traffic analysis is generally satisfactory for the purposes of the rezoning, however it has some limitations that would need to be addressed in a new Traffic Report prepared for any future planning permit application, specifically:
 - i) New data collection would be required, including both traffic counts and car parking data, to account for new developments being completed in the nearby area, and
 - ii) the lack of detail around the SIDRA modelling.
- b) We agree with the Ratio Report that the intersection of Burnley Street and Doonside Street should be signalised as a result of the cumulative traffic impacts of development in the nearby area, including the subject site. The timing (staging) of when this is required should be dealt with by a Traffic Report submitted at the time of the Planning Permit application – as set out in the draft DPO15.
- c) The provision of car parking proposed in the Ratio Report is satisfactory, however any future planning permit application will need strongly support sustainable transport modes, particular if commercial car parking is provided at the lower end of the recommended range (1.0-2.5 car spaces per 100m²).
- d) We support an increased bicycle parking provision for this site, specifically:
 - i) 1 bicycle space per dwelling for residents
 - ii) 1 bicycle space per 150m² for office staff
 - iii) Bicycle parking for all other uses in accordance with Clause 52.34
- e) On-site loading facilities should be provided, however on-street loading would be acceptable for small retail tenancies (only).
- f) The waste collection should occur on-site, with trucks accessing the site via Doonside Street.
- g) The transport engineering requirements of DPO15 are appropriate.

We trust this information meets with your requirements. If you require further information, please contact Leigh Furness at Traffix Group on 9822 2888.

Yours faithfully,

TRAFFIX GROUP PTY LTD



LEIGH FURNESS
Senior Associate