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Our Reference: 24706L#1

4th May, 2018

Yarra City Council
Statutory Planning Branch
PO Box 168
RICHMOND VIC 3121

Attention: Ms Amy Hodgen

Dear Madam,

The Village Alphington, Lot 2B 626 Heidelberg Road, Alphington - Proposed Mixed Use Development
Traffic Engineering Review

Introduction

Further to your instructions, please find following our review of the proposed mixed-use development at The Village Alphington – Alphington Paper Mill. For this assessment, we have reviewed the following documents:

- Traffic Impact Assessment by GTA (TIA), dated 25th August, 2017
- Green Travel Plan, prepared by GTA (GTP), attached as an Appendix to the TIA
- RFI Letter response by GTA, dated 16th February, 2018
- Section 55 Referral by VicRoads, dated 12th April, 2018
- Alphington Paper Mill Site Development Plan – Traffic Management Plan (TMP), prepared by GTA, dated 19th August, 2015
- Alphington Paper Mill Integrated Transport Plan (ITP), prepared by GTA, dated 19th August, 2015
- Endorsed Development Plan for Alphington Paper Mill, stamped 27th May, 2016
- Development plans for the Village Alphington by NH Architecture, generally dated February, 2018

Proposal

This assessment relates to 'The Village Alphington' at the Alphington Paper Mill site.

The proposal is for a mixed-use development on the site. A development summary is provided below (based on the development in the RFI plans by NH Architecture, Rev 3, dated 23rd February, 2018):

- 6,065m^2 of supermarket floor space, over two tenancies (4,518m^2 and 1,547m^2)
- 4,134m^2 shop floor space (multiple tenancies)
- 2,286m^2 food and drink floor space (multiple tenancies)
- 15 practitioner medical centre
- 300 student primary school
- 120 place childcare centre
- 1,700m^2 community centre
- 281 dwellings:
  - 34 x one-bedroom apartments
  - 163 x two-bedroom apartments (including two-bed plus study apartments)
  - 84 x three-bedroom apartments
- 901 car spaces
- 484 bicycle spaces

A number of the two-bed plus study apartments (Type H and Type J in particular) include enclosed studies that could count as three-bedroom dwellings for car parking purposes (enclosed studies, close to sufficient size to be counted as additional bedrooms).

Car parking is proposed within multiple building levels as follows:

- 63 car spaces nominated for staff (no use specified) on Basement and Lower Ground levels. This includes 2 parallel car spaces that are not specifically nominated as staff spaces but located within the secure staff carpark area.
- 451 'public' car spaces on Basement and Lower Ground levels.
- 387 'private' car spaces on Level 1 and Level 2.

Access to the basement and lower ground carparks is via:

- Left-in/left-out access to Heidelberg Road
- Full access to the 'Access Lane' along the site's southern boundary, connecting into Latrobe Avenue.

Access to the Level 1 and Level 2 carparks is via the same 'Access Lane'.

Car Parking Assessment

It is important as a matter of principle that the development proposed is self sufficient in car parking terms, particularly for short-term car parking. While there is some on-street car parking being created in Latrobe Avenue, there are limited alternative car parking opportunities in the nearby area, including along Chandler Highway and Heidelberg Road.

Statutory Car Parking Assessment

The statutory car parking assessment of the development is set out in the table below.

Table 1: Statutory Car Parking Assessment – Clause 52.06-5

Use	Size/No.	Statutory Parking Rate	Car Parking Requirement (Note 1)
Commercial/Public Uses			
Supermarket	6,065m^2	5 spaces per 100m^2 LFA	303
Shop	4,134m^2	4spaces per 100m^2 LFA	165
Food and Drink	2,286m^2	4 spaces per 100m^2 LFA	24
Office(Note 2)	3,412m^2	3.5 spaces per 100m^2 NFA	116
Childcare Centre	120	0.22 spaces per child	26
Gymnasium	1,928m^2	To the satisfaction of the RA	
Medical Centre	15	5 spaces for the first practitioner 3 spaces for every additional practitioner	47
Primary School	12 staff (300 students)	1 space per employee that is part of the maximum number of employees on the site at any time	12
Community Centre	2,882m^2	To the satisfaction of the RA	
Dwellings			
One-bedroom	34	1 car space per one or two-bedroom dwelling	34
Two-bedroom	163		163
Three-bedroom	84	2 car spaces per three or more-bedroom dwelling	168
Residential visitors	281	1 space per 5 dwellings	56
TOTAL			1,114

Notes:

1. Clause 52.06-5 specifies that where a car parking calculation results in a requirement that is not a whole number, the number of spaces should be rounded down to the nearest whole number.
2. There is a minor error in the GTA report in adopting a statutory parking rate of 4 spaces per 100m^2 LFA instead of 3.5 spaces per 100m^2 NFA.

Based on the above assessment, the proposed application has a statutory car parking requirement to provide 1,114 car spaces, plus any parking requirement by the Responsible Authority for the Gym and Community Centre.

The provision of 900 car spaces results in a shortfall of at least 214 car spaces, plus any car parking required for the Gym and Community Centre. Accordingly, the development requires a car parking reduction under the decision guidelines of Clause 52.06-7.

Car Parking Demand Assessment

The following table compares the parking proposed and approved under the Traffic Management Plan (TMP) and the empirical rates adopted in the Traffic Impact Assessment (TIA) for Alphington Village.

Table 2: Review of GTA empirical parking rates

Use	Approved TMP	Empirical TIA rates	Comment
Supermarket	4.5 / 100m^2	4.5 / 100m^2	Same as approved TMP
Shop	2.3 / 100m^2	2.3 / 100m^2	Same as approved TMP
Food and Drink	Not included	4 / 100m^2	Same as statutory rate
Office	3.5 / 100m^2	2.5 /100m^2	Lower than TMP
Childcare Centre	0.19 / childcare place	0.19 / childcare place	Same as approved TMP
Gymnasium	Not included	3 / 100m^2	Based on RTA Guide
Medical Centre	Not included	5 spaces for the first practitioner 3 spaces for every additional practitioner	Statutory rate is equivalent to empirical rate
Primary School	Not included	0.25 spaces / student	Based on specified empirical data
Community Centre	Not included	Adopted a flat 20 spaces	Assumption
Dwellings			
One-bedroom	1 / dwelling	0.5 / dwelling	Lower than TMP
Two-bedroom	1 / dwelling	0.7 / dwelling	Lower than TMP
Three-bedroom	2 / dwelling	1 / dwelling	Lower than TMP
Residential visitors	0.12 / dwelling (high density)	0.1 / dwelling	Lower than TMP

Supermarket

The empirical parking rate for the supermarket is the same as that specified in the TMP and is accepted.

In the TMP, the overall rate of 4.5 spaces/100m^2, split between customers (3.6 spaces/100m^2) and employees (0.9 spaces/100m^2). This equates to a demand for 273 car spaces.

However, the TIA states that Coles have only leased 11 car spaces for staff (0.25 spaces/100m^2). Additional staff will not have car parking. The TIA then extends this rate to the second supermarket, resulting in a total staff demand of 15 spaces and a customer demand of 258 spaces.

This is acceptable, provided that the public carpark is suitably time controlled to prevent all-day parking. We agree that many supermarket staff are not driving age and have reduced parking demands. This requirement should be included in a requirement for a Car Parking Management Plan as a condition of permit.

Shops (Specialty retail)

The empirical parking rate for the shops is the same as that specified in the TMP and is accepted. The split between staff (0.5 spaces per 100m^2) and customers (1.8 spaces per 100m^2) is accepted, resulting in a peak demand for 95 spaces (21 staff and 74 customer spaces).

Food and Drink

GTA adopted the statutory requirement of 4 spaces per 100m^2 for these uses and 25% of the demand associated with staff. This equates to a total demand of 91 car spaces (18 staff and 73 customers).

We would be satisfied with adopting a rate of 2.3 spaces per 100m^2 – which is consistent with the speciality retail rate already accepted. Shops and Food and drink premises generally have similar parking characteristics (which is reflected in both use having the same statutory requirement).

We note that GTA have confirmed that none of the food and drink premises are to be restaurants.

Office

The TMP recommend office is provided with parking at 3.5 car spaces per 100m^2.

The TIA adopts an empirical office parking rate of 2.5 car spaces per 100m^2. In our view, this is on the low side for an office in this location. However, in the context of the City of Yarra's sustainable transport objectives, this rate is accepted.

In our view, office parking should be allocated only to staff – resulting in a demand for 85 employee spaces. The number of office visitor spaces is not significant.

Childcare Centre

The empirical parking rate for the childcare centre of 0.19 spaces per childcare place is the same as that specified in the TMP and is accepted.

The split between staff and parents is not accepted. Staffing ratios for childcare centres can be as low as 1 staff member per 4 children (depending on the children's ages) to comply with government regulations (not 1 per 25 children as estimated in the GTA report).

It is our experience that childcare centre parking at peak times is split 50/50 between staff and parents. However, during the middle of the day, most of the demand is associated with staff and the parking rate for staff is not significantly lower than the peak demand.

In our view, the 120 place childcare centre should be allocated 10 staff spaces and 13 parent spaces.

Gym

A gym was not part of the original TMP. GTA has adopted the RTA rate of 3 spaces per 100m^2 for the gym, which equates to a peak demand of 58 car spaces. This rate was broken down into staff 10 spaces (0.5 spaces/100m^2) and customers (48 spaces).

This rate is likely to be conservative, given that the Alphington Paper Mill will ultimately accommodate 2,500 dwellings, we would expect local residents to form a significant proportion of gym patrons.

We expect the peak demand for customers to be approximately half the rate estimated by GTA or 24 car spaces.

Medical Centre

A medical centre was not part of the original TMP. We agree with the TIA analysis that the statutory requirements for a medical centre are appropriate as the empirical rates. It is accepted that the 15 practitioners will generate a demand for 47 car spaces, including 15 employee spaces.

Primary School

A Primary School was not part of the original TMP. GTA has adopted a peak rate of 0.25 car spaces per student based on unspecified data. This data should be supplied. This was further split into 15 staff spaces (0.05 spaces per student) and 60 parent spaces (0.2 spaces per student).

There is a disconnect between the maximum of 12 staff specified in the statutory assessment and 15 car space demand estimated in the empirical assessment.

We are satisfied with the provision of 15 staff spaces for 300 students, as we would expect more than 12 staff for 300 students (including teachers, specialist staff, administration, etc.).

Community Centre

We understand that the use of this space has not been determined and it may become a Council facility. How it is used by the community is unknown.

The TIA adopted a flat parking demand of 20 spaces for the community centre.

Further information in the GTA Letter treated this space as a 'place of assembly' and applied a car parking rate of 0.3 car spaces per person and a patron limit of 300 patrons. This equates to a peak demand for 90 car spaces and would be a worst-case scenario.

Residential Visitors

The TMP recommended for high density residential development a parking rate of 0.12 car spaces dwelling. The TIA adopts a lower empirical parking rate of 0.1 car spaces per dwelling.

It is recommended that the parking rate adopted under the TMP is used in a revised assessment. For the 281 dwellings proposed, this equates to a peak of 34 visitor spaces.

Dwellings

The TMP recommended adoption of the statutory parking rates for dwellings – 1 space per one/two-bedroom dwelling and 2 spaces per three-bedroom dwelling. This was on the basis of an examination of the 2011 ABS Census data for the statistical areas closest to the site.

The TIA has adopted significantly lower parking rates (approximately half of the previously recommended rate at the Development Plan Stage) on the basis of the Clause 37.06 requirements for Victoria Street East Precinct. Specifically:

- 0.5 spaces per one-bedroom dwelling,
- 0.7 spaces per two-bedroom dwelling, and
- 1 space per three-bedroom dwelling.

No empirical data is provided to support this.

The 2016 ABS Census data (and 2011 data) is a poor guide to the likely resident parking demand. The sample size for high density apartments in Alphington is too small to undertake an assessment of likely resident parking demand. However, surrounding suburbs generally do exhibit a proportion of households within smaller apartments that do not require vehicle.

Based on the mix of dwellings proposed (34 x one-bed, 163 x two-bed and 84 x three-bed dwellings). If car parking was provided at these rates, this would result in 215 resident car spaces or 0.77 car spaces per dwelling).

It is evidence from the TIA that the rate of resident car parking will be higher than this rate as there are 'surplus' private car spaces that will be sold to dwellings as second car spaces (or dwellings that do not have a car space).

The issue of resident parking provision is discussed further in the following section.

Appropriateness of the Car Parking Provision

There is a total of 450 resident/employee car spaces and 451 public/visitor car spaces nominated on the plans. This are reviewed separately below.

Private Parking

The plans allocate a total of 450 resident/employee spaces.

The empirical demand for employee car parking 189 car spaces, calculated as follows:

- Supermarkets – 15 spaces
- Shop – 21 spaces
- Food and drink premises – 18 spaces
- Office – 85 spaces
- Childcare Centre – 10 spaces
- Gym – 10 spaces
- Medical Centre – 15 spaces
- Primary School – 15 spaces

Allocating staff parking at these empirical rates leaves 261 car spaces for 281 dwellings, an overall car parking rate of 0.93 car spaces per dwelling. We are satisfied this rate is acceptable.

We are fundamentally satisfied that a modest reduction of car parking for the one-bedroom dwellings is appropriate given the locational characteristics of the site, access to alternative transport modes and

the available everyday services being provided within the Alphington Paper Mill site (particular the supermarkets and other 'everyday' commercial uses).

The current plans only nominate 63 staff car spaces – well short of the 189 staff spaces required under an empirical assessment. It is recommended that the plans be updated to specifically allocate a minimum of 189 staff car spaces. The remaining spaces can be allocated to residents based on market demand.

The exact allocation of car parking to the various commercial uses should be determined under a Car Parking Management Plan required as a condition of permit.

Public Car Parking

The plans allocate a total of 451 public/visitor spaces.

The total demand for customer/visitor/public car spaces is 568, calculated as follows:

- Supermarkets - 258 spaces
- Shop - 74 spaces
- Food and drink premises - 73 spaces
- Office - negligible
- Childcare Centre - 13 spaces
- Gym - 24 spaces
- Medical Centre - 32 spaces
- Primary School - 60 spaces
- Residential visitors - 34 spaces

Accordingly, there is an empirical shortfall of car parking.

The above assessment *does not* include the community centre due to the uncertainty surrounding its final use. This assessment does not take into account the variations in peak parking demands of these uses and the efficiencies of shared car parking.

We have reviewed the GTA profile of demand provided at Attachment 2 of the Letter. We disagree with profile of demand, in particular the supermarket profile. It is not clear what data GTA relied upon for their demand profile, we could not find a North Melbourne Woolworths store. A review of the Google activity data for Ivanhoe Woolworths (as a comparable full line supermarket proximate to the site) found a peak demand that generally occurs in the early evening, instead of in the late morning and this is consistent with our experience of full line supermarkets.

We have completed our own assessment of the variation in parking demand based on our experience and a review of the Google activity data for similar land uses in Fairfield, Ivanhoe and Alphington. The graph below summarises our assessment.

We are satisfied that this graph generally indicates capacity to accommodate the proposed uses – a conclusion generally consistent with the GTA assessment.

However, our graph does not include the community centre. We have been instructed to consider a community centre with up to 300 patrons as a 'worst case' scenario. We are satisfied that the

community centre can generally be accommodated on the site with up to 300 patrons (demand for 90 car spaces), with some notable exceptions.

Around Saturday at midday and in the early evening (5-6pm) on a weekday, there is limited capacity to accommodate large gatherings at the community centre. There are no issues with accommodating large gatherings during the evening on any day (after 6pm).

There are two options to address this issue:

- Review whether more car parking is required for this use. A car parking rate of 0.3 car spaces per patron permitted is the appropriate rate to apply in this analysis.
- Review maximum patron numbers at the community centre during the day (only). There is no issue with 300 patrons at the centre after 6pm.

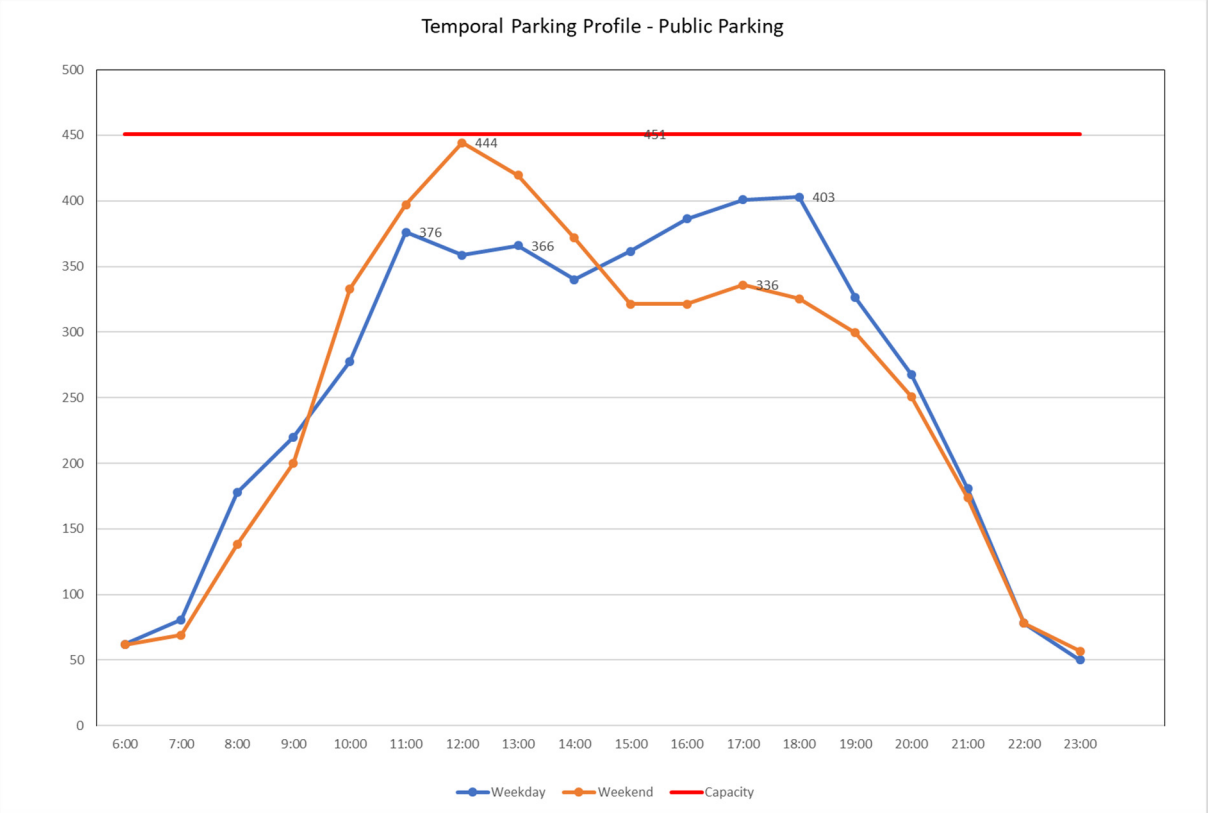

Figure 1: Parking Demand Profile

Overall, we are generally satisfied that the provision of 900 car spaces (452 public and 448 private spaces) is generally acceptable, subject to resolving the community centre car parking issue. We recommend the following;

- The applicant specifies the split between employee and resident car parking provision on the plans, in particular raising the number of employee spaces to a minimum of 189 employee spaces.
- Either car parking provision or patron numbers to the community centre needs to be reviewed.
- A Car Parking Management Plan specifying the allocation of car parking is included as a condition of any Planning Permit issued.

Electric Vehicles and Share Cars

The development plans include two 'share car' space and two 'EV' (electric vehicle) spaces. Neither of these spaces are discussed in the TIA.

We support the provision of two share car vehicles. There is nothing precluding the provision of additional vehicles if demand warrants them in the future. We support their location in the public parking areas (as opposed to secure resident or employee areas) as this allows more users access to these spaces and increases their viability.

We support the two EV car spaces and recommend that all car parking levels are designed to be EV ready (i.e. for but not with, the ability to support more charging stations).

Bicycle Parking Assessment

Clause 52.34 of the Planning Scheme specifies bicycle parking requirements for new developments and changes in use. The table below sets out the statutory bicycle parking assessment.

Table 3: Statutory Bicycle Parking Assessment – Clause 52.34/Development Plan

Proposed Use	Size/No.	Bicycle Parking Rate		No. of spaces required
		Employee/Resident	Customer/ Visitor	
Supermarket (shop)	6,065m^2	1 space per 600m^2 LFA, if LFA >1,000m^2	1 space per 500m^2 LFA, if LFA >1,000m^2	10 employee 12 customer
Shop	4,134m^2	1 space per 600m^2 LFA, if LFA >1,000m^2	1 space per 500m^2 LFA, if LFA >1,000m^2	7 employee 8 customer
Food and Drink (Retail other than specified)	2,286m^2	1 space per 300m^2 LFA	1 space per 500m^2 LFA	8 employee 9 customer
Office	3,412m^2	1 space per 300m^2 NFA, if NFA >1,000m^2	1 space per 1,000m^2 NFA, if NFA >1,000m^2	11 employee 3 customer
Childcare Centre	120	None	None	-
Gymnasium	1,928m^2	None	None	-
Medical Centre	15	1 per 8 practitioners	1 per 4 practitioners	2 employee 4 customer
Primary School	12 staff (300 students)	1 per 20 employees	1 to each 5 pupils over year 4	1 employee 17 student(Note 1)
Community Centre (Place of Assembly)	2,882m^2	1 per 1,500m^2 NFA	2 plus 1 per 1,500m^2 NFA	2 employee 4 visitor
Dwellings	281	1 per dwelling	1 per 10 dwellings	281 resident 28 visitor
Total				**406 spaces** 41 employee 281 resident 85 customer/ visitor

Notes: Assuming an even split of student numbers from prep to year 6

The development requires 406 bicycle spaces to be provided on the site under Clause 52.34 and the Development Plan. A total of 484 bicycle spaces are provided, including 282 resident spaces, 62 school spaces, 60 employee spaces and 80 customer/visitor spaces.

Under the Development Plan approved by Council, the ITP requires that "*At a minimum, statutory provisions for bicycle parking will be met. In instances where a waiver of car parking is being sought, it*

is recommended that an increased provision of bicycle facilities be provided, in the order of one space per dwelling."[1]

A total of 282 secure bicycle spaces are provided for residents of levels 1 and 2. This provides at least 1 bicycle space per dwelling in accordance with the approved ITP and is acceptable.

There are 62 secure bicycle spaces proposed for staff and students of the primary school, located on level 1 adjacent to the school. The provision of bicycle parking for the school is acceptable. There is a level difference of approximately 8m between this area and Latrobe Avenue. The applicant needs to clarify how students are expected to transport their bicycles to this location.

Employees are provided with 60 secure spaces on Lower Ground, exceeding the minimum requirement of 41 spaces and this supply is satisfactory.

Customers and visitors have access to 80 bicycle spaces, including 42 open bicycle spaces on Lower Ground and 38 open bicycle rails within public footpath areas around the ground. This is short of the minimum requirement for 85 customer/visitor spaces and needs to be addressed, particularly given the sustainable transport objectives for this precinct.

It is recommended that the applicant review providing more bicycle spaces than the minimum requirements for customers/visitors, in accordance with the sustainable transport objectives of the precinct.

End of Trip Facilities

The 60 staff bicycle spaces are served by 6 showers in two change rooms (male and female). This provision accords with Clause 52.34, which generally requires 1 shower/change from for every 10 employee spaces. This is acceptable.

Design of Bicycle Spaces

Bicycle space dimensions accord with AS2890.3-2015 and are acceptable[2].

Over 20% of bicycle spaces are floor mounted rails in accordance with Clause 2.1 of AS2890.3-2015.

We are satisfied with the design of the bicycle parking facilities.

Summary

The provision and design of the bicycle parking facilities is acceptable, subject to the following being addressed:

- The travel path(s) to the primary school bicycle store are clarified and/reviewed.
- The provision of at least 5 more bicycle spaces for customers/visitors, as required by Clause 52.34. It is recommended that a higher level of public bicycle parking is provided given the sustainable transport objectives of the precinct.

[1] Arguably this requirement may relate only to dwellings without a car space (rather than all dwellings).

[2] The requirements of the Australian Standard are more current then the requirements of Clause 52.34.

Loading

Around the time of the TIA, Clause 52.07 of the Planning Scheme was deleted. Loading requirements of new developments were changed to Clause 65.01.

Clause 65.01 of the Planning Scheme specifies that:

> *Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate:*
>
> - *The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.*

Loading provisions are summarised as follows:

- Loading for the supermarkets is possible for vehicles up to 19m semi-trailers.
- Loading for the other retail tenancies is facilitated by trucks up to the 8.8m MRV.
- Waste areas can be serviced trucks up to either the 8.8m MRV or 12.5m HRV.
- Loading for residents is limited to the 6.4m long SRV.

All of these truck sizes are appropriate.

We have received the swept path diagrams presented at Appendix G of the TIA and are satisfied that they are acceptable.

It is recommended that a Loading Management Plan and Waste Management Plan are prepared as conditions of any permit issued.

Carpark Layout

The parking layout and access arrangements have been assessed under Clause 52.06-9 of the Planning Scheme and the relevant clauses of the Australian Standard (AS2890.1-2004 and AS2890.6-2009). We are satisfied that the carpark layouts are generally satisfactory. We have the following minor comments:

- As noted previously, there appears to be a minor error on the Lower Ground plan where two secure car spaces are not nominated as staff parking, even though they are located in a secure area.
- The bicycle path access ramp to the Access Lane at the sight's southern boundary introduces a number of conflict points for cyclists. It is recommended that its location be reviewed, or alternatively more design detail is provided in this area, with the view to providing additional protection to cyclists where they enter Access Lane.

Vehicle Access Arrangements

The proposal modifies the vehicle access arrangements originally proposed in the Development Plan by modifying the approved left-in/left-out access to Heidelberg Road to cater for loading and traffic

from the public car parking levels. This change was implemented to mitigate the loss of left-turn slip lanes at the intersections of Latrobe Avenue with Heidelberg Road and Main Street/Chandler Highway.

We support the proposed changes as they sensibly increase the capacity of traffic to enter and exit the site while taking this traffic out of the internal road network.

We note that VicRoads are also supportive of this change.

Aside from this, we are satisfied that the proposal is consistent with the approved development plan.

Internal Street Layout

Latrobe Avenue

Figure 4.1 of the report provides a concept plan of the design Latrobe Avenue carriageway. We are generally supportive of the move to separated bicycle lanes. The one potential issue with the plan as proposed is that vehicles exiting the Access Lane will straddle the bicycle lane as they exit onto Latrobe Avenue. It is preferable that the bicycle lane is maintained directly adjacent to the traffic lanes past the Access Lane. This is shown in the following diagram. The appropriateness of either option should be reviewed by a Road Safety Audit of the design.

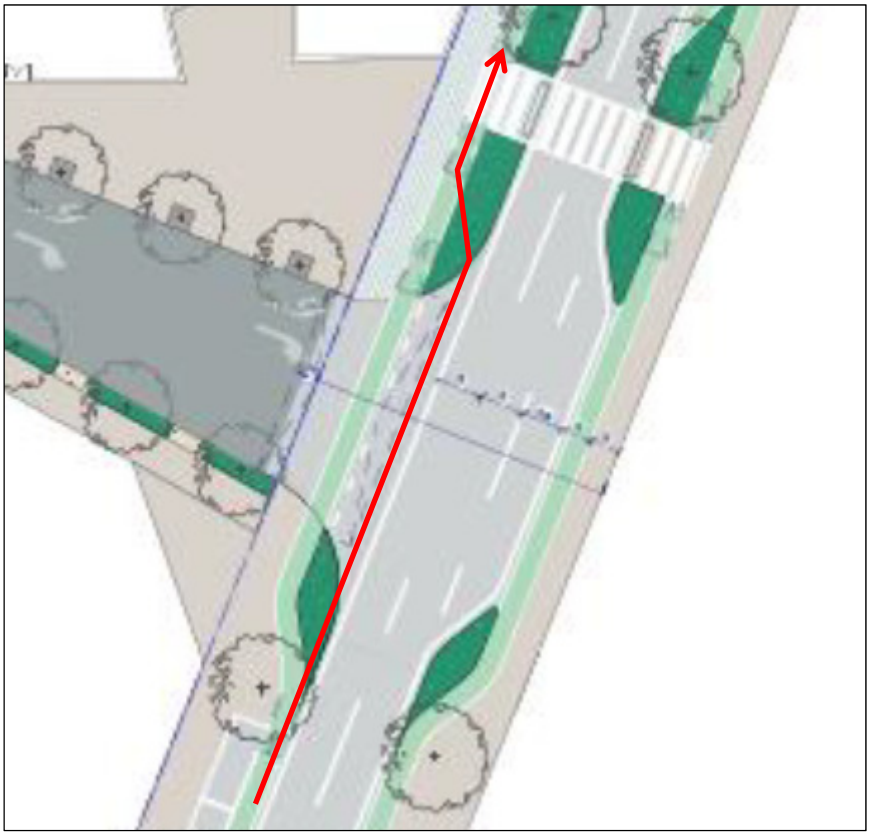

Figure 2: Relocation of bicycle lane adjacent to traffic lane to avoid vehicles exiting Access Lane blocking the bicycle lane

The functional layout plan for the Access Lane attached at Appendix F shows a pedestrian crossing south of Access lane, instead of north of Access Lane.

This concept plan also shows two pedestrian crossings of Latrobe Avenue between Heidelberg Road and the Access Lane. The need for two crossings is questionable, one crossing may be more appropriate, noting that there is already a crossing at Heidelberg Road.

In particular, the northern crossing is approximately 50m from the vehicle stop line at Heidelberg Road. The SIDRA analysis provided indicates queues that are well over 50m long on Latrobe Avenue (under multiple scenarios analysed). As a result, there is the potential for vehicles to block the pedestrian crossing or the pedestrian crossing to reduce the efficiency of the Latrobe Avenue/Heidelberg Road intersection (vehicles cannot exit to Heidelberg Road during their allocated green time due to pedestrians at the crossing).

It is recommended that this issue be investigated further before the final layout for Latrobe Avenue is approved.

Traffic Generation and Impacts

The GTA report reaches the following conclusion to its analysis on traffic generation:

> *While there is a proposed slight increase in the number of places at the childcare centre, along with the addition of a primary school and community area, the additional traffic these land uses will generate is not expected to be as high as the reduction in traffic from the reduced yields of the retail and commercial land uses that were previously assessed in the microsimulation modelling for the Development Plan.*

No figures or comparison tables were provided assessing the actual traffic volumes of the proposal against the Development Plan forecast volumes. We would prefer that this exercise was completed to cover this issue satisfactorily for the following reasons:

- The Primary School in particular is likely to increase the level of traffic generated by the site in the AM peak, while the reduction in traffic in the PM peak might result in a lower traffic generation rate.
- The traffic generated by the dwellings may be lower than forecast given the proposed reduction in car parking rates compared to the TMP.
- The 'commercial' component was originally assessed only as office under the TMP. Now the commercial component, while smaller, includes a medical centre and gym – all of which have different traffic generation characteristics.

It may well be correct that traffic volumes are lower than assessed and approved under the TMP, but this is not possible to determine from the information available. It is recommended that the applicant provide a table outline the traffic generation forecasts for the weekday AM and PM peak hours for the development considered under the Development Plan and what is proposed under the Planning Permit to confirm that this is the case.

Review of Green Travel Plan

The Green Travel Plan (GTP) is generally satisfactory, subject to the following comments:

- Action 5.5 includes the following two Actions:
  - 'reduce the number of car parking permits allocated to employees'.
  - 'introduce an exclusion zone restricting car parking permits for staff living in close proximity to the site.'

  This is the first mention of car parking permits in the documentation provided. It is recommended that these two actions are reviewed or deleted.
- There is no welcome pack for residents or employees
- No reference to the promotion of the two share cars proposed on-site
- There are no actions in relation to encouraging carpooling (as proposed in the ITP).

The GTP also calls for a working group and Green Travel Plan co-ordinator. It is recommended that more details are provided regarding who is in the working group and where will the co-ordinator be appointed from and what their accountability is. Are they required to report to Council?

Conclusions

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

a) Based on the above assessment, the proposed application has a statutory car parking requirement to provide 1,114 car spaces, plus any parking requirement by the Responsible Authority for the Gym and Community Centre.

b) The provision of 900 car spaces results in a shortfall of at least 214 car spaces, plus any car parking required for the Gym and Community Centre. Accordingly, the development requires a car parking reduction under the decision guidelines of Clause 52.06-7.

c) The proposed provision of car parking is generally supported based on an empirical assessment and the temporal profile of parking demand, with the exception of the community centre demands. Council needs to review whether the number of car spaces is appropriate to accommodate a 300 patron community centre at all times or whether the number of patrons should be reduced during the day (there is no issue at night).

d) The provision of a minimum of 189 staff car spaces (in accordance with the empirical assessment) needs to be identified on the plans.

e) A Car Parking Management Plan specifying the allocation of car parking is included as a condition of any Planning Permit issued.

f) The travel path(s) to the primary school bicycle store are to be clarified and/reviewed as they may not be particularly convenient.

g) The provision and design of bicycle parking facilities is generally acceptable. However, the provision of at least 5 more bicycle spaces for customers/visitors, as required by Clause 52.34. It

is recommended that more public bicycle parking should be considered given the sustainable transport objectives of the development.

h) The provision of two car share vehicles is supported.

i) Provision should be made for additional vehicle charging stations (fitted for, but not with additional charging points).

j) The design of the carparking areas is generally in accordance with Clause 52.06-9 and AS2890.1-2004 and is acceptable.

k) The inclusion of a left-in/left-out access to Heidelberg Road for the pubic carpark is supported.

l) The proposed changes to the bicycle lane on Latrobe Avenue is generally supported, however the practical impact of cars propped across the bicycle lane while exiting the Access Lane should be reviewed.

m) It is questionable whether two formal pedestrian crossings are necessary between Heidelberg Road and the Access Lane, in particularly the impact of the northern crossing, which is only 50m from Heidelberg Road.

n) The loading and waste collection arrangements proposed are acceptable.

o) Not enough detail is provided to confirm that the level of traffic generated by the proposal is consistent with (or less than) the traffic expected under the Development Plan.

p) The Green Travel Plan should be reviewed in a number of aspects including:

   i) Support for car pooling

   ii) Support for the car share vehicles proposed

   iii) The references to employee permit parking need clarification

   iv) There is no welcome pack

   v) It is not clear who the Green Travel Plan Co-ordinator will be and what is their accountability

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