

Our Reference: 24706L#3

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5<sup>th</sup> March, 2019

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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:

- Planning Permit No. PLN17/0703, dated 5<sup>th</sup> June, 2018
- Traffic Impact Assessment by GTA (TIA), dated 6<sup>th</sup> December, 2018
- Green Travel Plan, prepared by GTA (GTP), dated 6<sup>th</sup> December, 2018
- Car Parking Management Plan, prepared by GTA (GTP), dated 6<sup>th</sup> December, 2018
- RFI Letter response by GTA, dated 9<sup>th</sup> January, 2019
- Alphington Paper Mill Site Development Plan Traffic Management Plan (TMP), prepared by GTA, dated 19<sup>th</sup> August, 2015
- Alphington Paper Mill Integrated Transport Plan (ITP), prepared by GTA, dated 19<sup>th</sup> August, 2015
- Endorsed Development Plan for Alphington Paper Mill, stamped 27<sup>th</sup> May, 2016
- Development plans for the Village Alphington by NH Architecture, Revision 5, dated 30<sup>th</sup>
   November, 2018



## **Proposal**

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

The proposal is for an amendment to the approved mixed-use development on the site. The development summary below compares the amendment plans to the previous set of plans reviewed by Traffix Group.

**Table 1: Development Summary** 

Land Use	NH Architecture, Rev 3, dated 23 <sup>rd</sup> February, 2018 (Last reviewed by Traffix Group)	NH Architecture, Rev 5, dated 30 <sup>th</sup> November, 2018
Supermarket	6,065m <sup>2</sup>	5,797m <sup>2</sup>
Retail	4,134m²	4,063m <sup>2</sup>
Food and Drink	2,286m <sup>2</sup>	337m²
Office	3,412m <sup>2</sup>	9,875m <sup>2</sup>
Childcare Centre	120 places	120 places
Gymnasium	1,928m²	892m²
Community Centre	1,700m² (300 patrons)	2,282m² (300 patrons)
Primary School	300 students & 12 staff	300 students & 12 staff
Medical Centre	15 practitioners	None
Serviced Apartments	None	40 (various sizes)
Residential	281 Apartments	313 Apartments
One-bedroom apartment	34	83
Two-bedroom apartment	163	257
Three-bedroom apartment	84	13
Car spaces	901 450 resident/employee 451 public/visitor	1,018 557 resident/employee 461 public/visitor
Bicycle spaces	484	627



Car parking is proposed within multiple building levels as follows:

- Basement 112 spaces
- Lower Ground 402 spaces
- Level 1 275 spaces
- Level 2 229 spaces

The public spaces are located at Lower Level (all 402 spaces) and Basement level (59 spaces). All other spaces are allocated to private parking (resident or staff parking).

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'.

The only significant change in regards to these arrangements is that the two carpark entrances to the rear Access Lane have been separated, which we believe is an improved design outcome.

## **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 2: Statutory Car Parking Assessment – Clause 52.06-5 (Column A)

Use	Size/No.	Statutory Parking Rate (Column A)	Car Parking Re		
Commercial/Public Use	Commercial/Public Uses				
Supermarket	5,797m²	5 spaces per 100m <sup>2</sup> LFA	289	)	
Shop	4,063m²	4spaces per 100m <sup>2</sup> LFA	162	2	
Food and Drink	337m²	4 spaces per 100m <sup>2</sup> LFA	13		
Office	9,875m²	3.5 spaces per 100m <sup>2</sup> NFA	345	5	
Childcare Centre	120	0.22 spaces per child	26		
Gymnasium	892m²	To the satisfaction	action of the RA		
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	300 patrons	0.3 car spaces per patron permitted	90		
Serviced apartments (Residential Hotel)	40	To the satisfaction of the RA			
Dwellings					
One-bedroom	43	1 car space per one or two-	43		
Two-bedroom	257	bedroom dwelling	257	326	
Three-bedroom	13	2 car spaces per three or more- bedroom dwelling	26	320	
Residential visitors	313	1 space per 5 dwellings	62		
TOTAL			1,32	5	

#### Notes:

Based on the above assessment, the proposed application has a statutory car parking requirement to provide 1,325 car spaces, plus any parking requirement by the Responsible Authority for the Gym and serviced apartments.

The GTA assessment makes no distinction between serviced apartments and 'standard' apartments, with the number of serviced apartments included in the total one-bedroom apartments.

The provision of 1,018 car spaces results in a shortfall of at least 307 car spaces, plus any car parking required for the Gym or serviced apartments. Accordingly, the development requires a car parking reduction under the decision guidelines of Clause 52.06-7.

<sup>1.</sup> 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.



## **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 3: Review of GTA empirical parking rates

Use	Approved TMP	Empirical TIA rates	Comment
Supermarket	4.5 / 100m²	4.5 / 100m <sup>2</sup>	Same as approved TMP - accepted
Shop	2.3 / 100m <sup>2</sup>	2.3 / 100m <sup>2</sup>	Same as approved TMP - accepted
Food and Drink	Not included	4 / 100m²	Same as statutory rate - accepted
Office	3.5 / 100m²	2.5 /100m²	Lower than TMP - accepted
Childcare Centre	0.19 / childcare place	0.19 / childcare place	Same as approved TMP - accepted
Gymnasium	Not included	3 / 100m²	Based on RTA Guide - accepted
Primary School	Not included	0.25 spaces / student	Based on unspecified empirical data
Community Centre	Not included	0.3 / patron permitted	Same as statutory rate - accepted
Serviced Apartments	Not included	Not assessed	See more detail below
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<sup>2</sup>, split between customers (3.6 spaces/100m<sup>2</sup>) and employees (0.9 spaces/100m<sup>2</sup>). 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<sup>2</sup>). Additional staff will not have car parking. The TIA then extends this rate to the second supermarket, resulting in a total staff demand of 14 spaces and a customer demand of 261 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 of driving age and have reduced parking demands.

#### **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<sup>2</sup>) and customers (1.8 spaces per 100m<sup>2</sup>) is accepted, resulting in a peak demand for 93 spaces (20 staff and 73 customer spaces).

#### **Food and Drink**

GTA adopted the statutory requirement of 4 spaces per 100m<sup>2</sup> for these uses and 25% of the demand associated with staff. This equates to a total demand of 13 car spaces (3 staff and 10 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). This results in a peak demand for 7 spaces.

#### Office

The TMP recommend office is provided with parking at 3.5 car spaces per 100m<sup>2</sup>.

The TIA adopts an empirical office parking rate of 2.5 car spaces per 100m<sup>2</sup>, which accords with Condition 66a(ii) of the current Planning Permit and this rate is accepted.

In our view, office parking should be allocated only to staff – resulting in a demand for 247 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, the GTA assessment determines an empirical peak demand for 28 car spaces. 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 has a peak demand for 23 spaces and should be allocated 10 staff spaces and 13 parent spaces, as per Condition 66a(iii).

#### Gym

GTA has adopted the RTA rate of 3 spaces per 100m<sup>2</sup> for the gym, which equates to a peak demand of 26 car spaces. This rate was broken down into staff 4 spaces (0.5 spaces/100m<sup>2</sup>) and customers (22 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 11 car spaces.

## **Primary School**

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).

We are satisfied with the provision of 15 staff spaces for 300 students, as per Condition 66a(iv) of the Planning Permit.

#### **Community Centre**

This use has been classified as a 'place of assembly' and GTA applied the statutory car parking requirement of 0.3 car spaces per person and a patron limit of 300 patrons. This equates to a demand for 90 car spaces. This was split between staff (10% or 9 spaces) and patrons (90% or 81 spaces). In the absence of more precise information as to the exact nature of the community centre, this assessment is accepted.

#### **Service Apartments**

The GTA report does not discuss the serviced apartments specifically, rather they appear to have been counted as one-bedroom dwellings in the TIA. Serviced apartments fall under the land-use category of 'Residential Hotel' and are a distinct use from 'Dwellings'. The TIA and CPMP counts the serviced apartments as one-bedroom apartments and therefore allocates car parking at a rate of 0.5 spaces/serviced apartment. This equates to 20 spaces for 40 apartments.

The rate of parking required for a serviced apartment use depends on location, with lower rates down to zero acceptable in the CBD and rates of up to 1 per apartment necessary in outer suburban and rural areas. We are satisfied with a rate of 0.5 car spaces per serviced apartment. This rate is inclusive of staff and guests.

#### **Residential Visitors**

The TMP recommended for high density residential development a parking rate of 0.12 car spaces per 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 313 dwellings proposed (i.e. excluding serviced apartments), this equates to a peak of 38 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 and the extensive traffic analysis at the time supported car parking at this level. Condition 66a(i) specifically requires a minimum of 1 car space per dwelling.



The TIA has adopted significantly lower parking rates 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.

Based on the mix of dwellings proposed (43 x one-bed, 257 x two-bed and 13 x three-bed dwellings) and if car parking was provided at these rates, this would result in 215 resident car spaces or 0.69 car spaces per dwelling overall.

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. Surrounding suburbs generally do exhibit a proportion of households within smaller apartments that do not require vehicle, but not as low as the rates detailed above.

Consistent with our previous review of the application, a lower parking rate for the smaller one-bedroom apartments is supportable. In our experience, the rates proposed would be lower than what is typically supported in similar urban areas. In transport/access terms, it is our view Alphington shares more in common with middle suburbs, than inner suburbs such as Richmond or Collingwood. In particular, the overall rate of car parking is low and in particular providing less than 1 car space per dwelling for the two-bedroom apartments.

The lower parking rates proposed by the applicant have been supported by Council in the past in inner areas of Yarra where access to local services, Activity Centres and the CBD is high, limited alternative public parking is available and the road network is highly congested (areas such as Richmond and Collingwood). The Paper Mill site does not have the same issues with traffic congestion and notwithstanding the mix of uses proposed on the site, has lower access to nearby services, Activity Centres and the CBD compared to inner areas of Yarra. By way of example, the transit score for the subject site is 55 (classified as 'Good') and the transit score for 600 Victoria Street, Richmond is 72 ('Excellent'). In our view, the Victoria Street East precinct is not directly comparable to Alphington.

There isn't a strong traffic engineering need to reduce the level of resident parking proposed by the applicant. The original Development Plan and Traffic Assessment for Paper Mill assumed that car parking was provided at the statutory rates and the associated traffic impacts were taken into account.

Whether the lower car parking rates proposed by the applicant are supported is ultimately a strategic decision for Council to make. The proposed parking rates are low in the context of the nearby area and there isn't a strong traffic impact reason to require lower car parking rates, however they are not necessarily unacceptably low. Additionally, residents without car parking would not have alternative parking opportunities as the nearby public parking is/will be highly restricted, which supports a low parking provision.

It is noted that Council's Internal Traffic referral supported the lower residential parking rates.



It should be noted that we would not support a future amendment that reduced the supply of public or employee car parking to facilitate additional resident car parking at a later date (with a change in intensity of these other uses).

## **Appropriateness of the Car Parking Provision**

There is a total of 557 resident/employee car spaces and 461 public/visitor car spaces nominated on the plans. This two allocations reviewed separately below.

## **Private Parking**

The plans allocate a total of 557 resident/employee spaces. The empirical demand for employee car parking totals 342 car spaces, calculated as follows:

- Supermarkets 14 spaces
- Shop 20 spaces
- Food and drink premises 3 spaces
- Office 247 spaces
- Childcare Centre 10 spaces
- Gym 4 spaces
- Primary School 15 spaces
- Community Centre 9 spaces
- Serviced apartments 20 spaces

Allocating staff parking at these empirical rates leaves 215 car spaces for 313 dwellings, an overall car parking rate of 0.69 car spaces per dwelling.

As previously noted, the key issue is the treatment of the serviced apartments car parking provision. Both the TIA and CPMP treat the serviced apartments as dwellings and in our view they should be treated separately as they are different land uses.

## **Public Car Parking**

The plans allocate a total of 461 public/visitor spaces. The total demand for customer/visitor/public car spaces is 533, calculated as follows:

- Supermarkets 261 spaces
- Shop 73 spaces
- Food and drink premises 4 spaces
- Office negligible
- Childcare Centre 13 spaces
- Gym 3 spaces
- Primary School 60 spaces
- Residential visitors 38 spaces
- Community Centre 81 spaces



Accordingly, there is an empirical shortfall of car parking, before any sharing of parking resources is taken into account. GTA provided an assessment of the sharing of car parking and found that adequate car parking is available on the site. We are generally satisfied with the assessment. Fundamentally, it is highly unlikely that all of these uses would peak at the same time, it is reasonable to assume that the overall car parking demand will reduce by at least the 16% required for the demand to be under the supply (533/461 = 16% under supply).

#### **Electric Vehicles and Share Cars**

The development plans include two 'share car' space and a large number of '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 number of EV car spaces proposed.

## **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.

It should be noted that the Development Plan approved for the site requires 1 bicycle space per dwelling and this has been adopted in the assessment below.



Table 4: Statutory Bicycle Parking Assessment – Clause 52.34/Development Plan

Proposed Use	Size/No.	Bicycle Parking Rate		No. of spaces
Proposed Use		Employee/Resident	Customer/ Visitor	required
Supermarket (shop)	5,797m²	1 per 600m² LFA, if LFA >1,000m²	1 per 500m² LFA, if LFA >1,000m²	10 employee 12 customer
Shop	4,063m²	1 per 600m <sup>2</sup> LFA, if LFA >1,000m <sup>2</sup>	1 per 500m² LFA, if LFA >1,000m²	7 employee 8 customer
Food and Drink (Retail other than specified)	337m²	1 per 300m² LFA	1 per 500m² LFA	1 employee 1 customer
Office <sup>(note 1)</sup>	9,875m²	1 per 300m <sup>2</sup> NFA, if NFA >1,000m <sup>2</sup>	1 per 1,000m <sup>2</sup> NFA, if NFA >1,000m <sup>2</sup>	33 employee 10 customer
Childcare Centre	120	None	None	-
Gymnasium (Minor sports and recreation facility)	892m <sup>2</sup> 8 employees (note 2)	1 per 4 employees	1 per 200m² NFA	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 <sup>(Note 3)</sup>
Community Centre (Place of Assembly)	2,282m²	1 per 1,500m² NFA	2 plus 1 per 1,500m² NFA	2 employee 4 visitor
Dwellings <sup>(note 4)</sup>	313	1 per dwelling	1 per 10 dwellings	353 resident 35 visitor
Service apartments (Residential Building, other than specified)	40	In developments of four or more storeys, 1 to each 10 lodging rooms	In developments of four or more storeys, 1 to each 10 lodging rooms	4 employee 4 visitor
Total		_		468 spaces 60 employee 313 resident 78 customer/ visitor 17 student

#### Notes:

- 1. There is an error in the GTA report for the office visitor parking rate
- 2. An assumption from the GTA report
- Assuming an even split of student numbers from prep to year 6 the GTA assessment applied the requirement to all 300 students.
- 4. Not including serviced apartments

The development requires 468 bicycle spaces to be provided on the site under Clause 52.34 and the Development Plan. A total of 627 bicycle spaces are provided, exceeding the statutory requirement.

The following table compares the allocation of bicycle parking to the statutory requirements.



**Table 5: Review of Bicycle Parking Allocation** 

Bicycle Parking Type	Bicycle Parking Required	Bicycle Parking Allocated	Surplus/Shortfall
Resident	313	313	-
Service apartment guests or staff	8	4	-4
Employee	56	56	-
Visitor/Customer	78	216	+142
Students	17	38	+21
Total	472	627	+159

The TIA allocates 4 bicycle spaces for the serviced apartments, instead of 8. This is considered reasonable in the context that guests are unlikely to cycle.

#### **End of Trip Facilities**

The 56 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 for for every 10 employee spaces. This is acceptable.

## **Design of Bicycle Spaces**

Bicycle space dimensions accord with AS2890.3-2015 and are acceptable<sup>1</sup>.

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.

## Loading

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 supermarket 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.

<sup>&</sup>lt;sup>1</sup> The requirements of the Australian Standard are more current then the requirements of Clause 52.34.



- Waste areas can be serviced trucks up to either the 8.8m MRV or 12.5m HRV.
- Loading for residents by the 8.8m MRV

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.

## **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 generally satisfied with the carpark layouts, subject to the following comments.

The key concern is the use of the Australian Standard car spaces for the employee and resident car spaces, specifically the 2.4m width. Australian Standard dimensions have been employed on the upper private parking levels.

Design Standard 2 of Clause 52.06-9 states the following:

Some dimensions in Table 2 vary from those shown in the Australian Standard AS2890.1-2004 (off street). The dimensions shown in Table 2 allocate more space to aisle widths and less to marked spaces to provide improved operation and access. The dimensions in Table 2 are to be used in preference to the Australian Standard AS2890.1-2004 (off street) except for disabled spaces which must achieve Australian Standard AS2890.6-2009 (disabled).

We do not generally support the use of 2.4m wide spaces unless they affect a small number of spaces and there are exceptional circumstances (such as only a small number of spaces being affected). A 2.4m wide space is very narrow and can be challenging for the end user as it only allows 560mm to open a car door from the B85 design car. There have been VCAT determinations in the past supporting 2.6m as the minimum width for car spaces as lesser dimensions are inconvenient for residents to use.

Carparks are commonly designed to Clause 52.06-9 in Victoria and citing structural requirements for large carpark such as this is not a sufficient reason to deviate from the Planning Scheme carpark dimensions in our view.

For the clear majority of car spaces throughout the upper parking levels, the spaces shown could easily have complied with Clause 52.06-9, in particular the 2.6m width. In most cases there are 3 x 2.4m spaces between columns, with an additional 300mm clearance to the columns. As a minimum, it is recommended that car spaces are reconfigured at 2.6m wide by removing the column clearances (while remaining at 5.4m long with a minimum 5.8m aisle), significantly improving pedestrian access to parked cars.

The majority of car spaces could also have fully complied with Clause 52.06-9, namely 2.6m wide x 4.9m long car spaces with 6.4m wide aisles, without shifting columns.



There are 19 'small car' spaces which are affected by structural walls within the 461 public car spaces (less than 2% of spaces). This is acceptable in the context of the supply of car parking, provided they are appropriately signed.

## **Vehicle Access Arrangements**

The amended proposal modifies the vehicle access arrangements to those previously approved by separating the private and public vehicle access points to Nelmoore Lane along the southern boundary of the site by shifting the public carpark access further east.

This arrangement is an improvement on the previous arrangement as separating the access points reduces the complexity of the previous arrangement and is an improve for both pedestrians and vehicles.

## **Traffic Generation and Impacts**

The following comments have not changed from our earlier advice on this site.

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 have preferred that this exercise was completed to cover this issue.

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**

We have reviewed the Green Travel Plan (GTP) and are satisfied with its contents.



## **Conclusions**

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

- a) The proposed application has a statutory car parking requirement to provide 1,325 car spaces, plus any parking requirement by the Responsible Authority for the Gym and serviced apartments.
- b) The provision of 1,018 car spaces results in a shortfall of at least 307 car spaces, plus any car parking required for the Gym or serviced apartments. Accordingly, the development requires a car parking reduction under the decision guidelines of Clause 52.06-7.
- c) Serviced apartments are a distinct use from residential apartments and should have been assessed separately.
- d) The proposed provision of private (staff and resident) car parking is supported based on an empirical assessment, however a decision of the adequacy of the resident parking supply is a strategic decision for Council to make (see pages 7-8 for more details).
- e) The proposed provision of public car parking is generally supported based on an empirical assessment and the temporal profile of parking demand.
- f) The provision and design of bicycle parking facilities is acceptable.
- g) The provision of two car share vehicles and electric vehicle charging stations is supported.
- h) The design of the carparking areas is generally in accordance with Clause 52.06-9, with the key exception that most car spaces on the upper parking levels are designed to AS2890.1-2004 instead of Clause 52.06-9. This is not supported as the dimensional requirements of Clause 52.06-5 take precedence over AS290.1-2004 and the justification for the variation is not accepted.
- i) The separation of the vehicle access points to the rear laneway is supported.
- j) The loading and waste collection arrangements proposed are acceptable.
- k) 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.
- I) The Green Travel Plan is satisfactory.

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