



Traffic Engineers and Transport Planners

Our Reference: G20975L1b

Traffix Group Pty Ltd
ABN 32 100 481 570

17 August 2016

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Attention: Mr Simon Gilbertson

Dear Simon,

The Glen Shopping Centre Redevelopment – Amended Residential Scheme Addendum to Traffic Engineering Assessment

Introduction

In August 2015, Monash City Council issued a permit (TPA/43692) for the redevelopment of The Glen shopping centre, allowing a retail expansion of 17,079 square metres and development of three (3) residential towers providing 515 residential apartments, subject to conditions.

Traffix Group has been providing ongoing traffic engineering advice as part of The Glen Redevelopment Project. Vicinity Centres, the owner of the shopping centre, submitted plans for endorsement in June 2016 which included amendments to the residential and retail components.

A Traffic Management Plan prepared by Traffix Group (Ref G16211R3B dated June 2016) was also prepared and submitted with the endorsed plans, intended to satisfy a number of the permit conditions.

The submitted plans for endorsement included a residential scheme comprised of 427 apartments. The original permit allowed for the development of the site for a total of 515 dwellings.

Frasers Property Australia will develop the residential component of the site – the three residential towers at the southern portion of the site. This application relates to a proposed amendment to the permitted scheme and substitution of plans for endorsement relating to the residential scheme. The amended plans propose a total of 539 dwellings, inclusive of 159 x one-bedroom, 353 x two-bedroom, 22 x three bedroom and 5 x four bedroom dwellings.

This is an increase of 24 dwellings from the approved development.

A Traffic Engineering Assessment of the proposed amendment is provided as follows.

Car Parking Considerations

The statutory car parking requirements for the proposal are set out in Clause 52.06 of the Planning Scheme. The residential parking requirements are provided within Table 1.

Table 1: Statutory Car Parking Requirements

Component	Use	Floor Area / No.	Rate	Requirement
Residential	1 & 2-bedroom	512 No.	1 space / apartment	512 spaces
	3-bedroom or more	27 No.	2 space / apartment	54 spaces
	Visitors	539 No.	0.2 spaces / apartment	107 spaces

Based on the above assessment, the residential component has a statutory requirement to provide a total of 566 resident spaces and 107 residential visitor parking spaces.

The proposed plans indicate the provision of 566 car parking spaces within the residential basement car park, exceeding the minimum statutory requirements for residents. The 26 tandem pairs will be allocated to the three and four bedroom apartments.

Consistent with the current approval for the site, it is the intention that residential visitor parking demands be accommodated by sharing the retail parking. The proposed commercial parking area continues to provide sufficient parking to exceed the combined requirement for residential visitors and the commercial component.

Bicycle Parking Assessment

Clause 52.34 of the Planning Scheme sets out the relevant statutory bicycle parking requirements for the proposed development. The required number of bicycle parking spaces for the residential component is summarised in Table 2.

Table 2: Statutory Bicycle Parking Requirement

Component	No. / Area	Statutory Bicycle Parking Rate	No. of Spaces Required
Residential	Residents	1 space to each 5 apartments	108 spaces
	Visitors	1 space to each 10 apartments	54 spaces

Based on the above assessment, the application has a statutory requirement to provide a minimum of 108 resident spaces and 54 visitor spaces.

Residential bicycle storage areas are located in the basement and provide for 110 bicycle spaces, therefore meeting the minimum requirements for residents.

Similar to the sharing of retail and residential visitor car parking, it is expected that visitors will make use of bicycle parking spaces which are being provided at ground level along O'Sullivan Road, and within the retail car parking areas which will ultimately meet the statutory requirements.

Car Park Layout Access Arrangements

We have reviewed the amended basement plans against the requirements of Clause 52.06 of the Planning Scheme and/or AS2890.1:2004 where appropriate. The following minimum requirements are noted:

- Standard parking spaces are proposed with a minimum width of 2.6 metres wide, 4.9 metres long and accessed via an aisle of 6.4 metres wide. Some circulation and parking aisles are provided with additional width to provide more comfort for circulating vehicles and accessibility to parking spaces.
- Column locations are to generally conform to the car parking envelope at Clause 52.06-8 and additional clearance is to be provided to bays adjacent walls or high obstructions which sit within door opening areas and/or access paths.
- It is noted that whilst some columns sit adjacent to the access aisle, in these areas, the access aisle exceeds the minimum 6.4 metres and therefore negates the need for the column to be setback from the aisle.
- No changes are proposed to the residential access or access ramp from the plans submitted for endorsement in June 2016. These plans indicate that ramp grades for the residential basement ramp do not exceed 1 in 5 and provide appropriate transitions of 1 in 8 for 2 metres at the top and base of the ramp
- A clear height of 2.2 metres is required in all parking areas for passenger vehicles as per AS2890.1:2004.
- Dead end aisle extensions are provided to assist with accessibility to end spaces.
- A roller door is proposed to be provided at the top of the residential car park ramp, set approximately one car length into the site. The boom gate will be operated via a remote control which will be provided to each resident. On arrival residents will press the remote activating the roller door. A single vehicle can wait on-site whilst the door opens and there will be a slight delay following that vehicle entering the site before the door closes.
- In this regard, if a second vehicle arrives immediately after, they will be able to pass through the boom gate. In effect, during peak periods the door will stay open for the majority of time and delays to entering vehicles will be minimal and vehicles will enter the site in free flow. That is, there will be minimal, if any, queues on approach to the roller door.
- Visitor parking is intended to be facilitated from within the retail car park and therefore no intercom access is required.
- It is noted that the eastern stair core is proposed to be shifted to the east to accommodate the expanded residential basement car park, which will reduce the width of the loading tunnel above. We have reviewed the proposed arrangements, and whilst it will restrict this section of the tunnel to one-way movements at any time, there is sufficient space in the remainder of this section of the tunnel to allow for trucks to pass.

Loading Considerations

Reference is made to the loading arrangements shown on the plans submitted for endorsement and the detail provided within the Traffix Group Traffic Management Plan (Ref G16211R3B) which was submitted with the plans for endorsement application.

Those arrangements have not changed as part of this application.

Traffic Generation and Impacts

As noted within the Traffix Group Traffic Management Plan (Ref G16211R3B) which was submitted with the plans for endorsement application, a microsimulation model has been prepared and the level of mitigating works has been agreed with VicRoads as part of the resolution of Condition 34 of the Permit.

The microsimulation analysis contemplated the provision of a total of 515 dwellings at an agreed peak hour traffic generation rate of 0.4 vehicle movements per dwelling.

The proposed amendment contemplates an increase in the number of dwellings by only 24, equal to an increase in peak hour traffic generation by only 10 vehicle movements. This level of additional traffic will have no discernible impact on the operation of the external road network and does not require additional microsimulation or intersection analysis as part of the overall application.

It is noted that this amended application does not include any further amendments to O'Sullivan Road or the site access arrangements, other than that shown within the plans originally submitted for endorsement.

Conclusions

Based on the preceding, it is concluded that:

- a) The proposal is meeting the statutory requirements under Clause 52.06 for resident car parking, and consistent with the permit, residential visitors will utilise The Glen's retail car park.
- b) the layout of the on-site parking areas is acceptable and accord with the relevant requirements of Clause 52.06-8, AS2890.1-2004 (where relevant),
- c) The proposed amendment plans include bicycle provisions which meet the statutory requirements of Clause 52.34 for resident bicycle parking;
- d) Loading arrangements re not changed from the plans submitted for endorsement; and
- e) The additional 10 vehicle movements generated by the increase in residential apartments from what was modelled as part of the VicRoads microsimulation will have a negligible impact on the operation of the road network and further traffic analyses for this increase are not warranted.

Overall, we are satisfied that there are no traffic engineering reasons why the proposed amendment to the residential scheme for The Glen Redevelopment, should not be approved subject to appropriate conditions.

Please contact myself at Traffix Group if you require any further information.

Yours faithfully,

TRAFFIX GROUP PTY LTD

A handwritten signature in black ink, appearing to read 'Carlo Morello'.

CARLO MORELLO

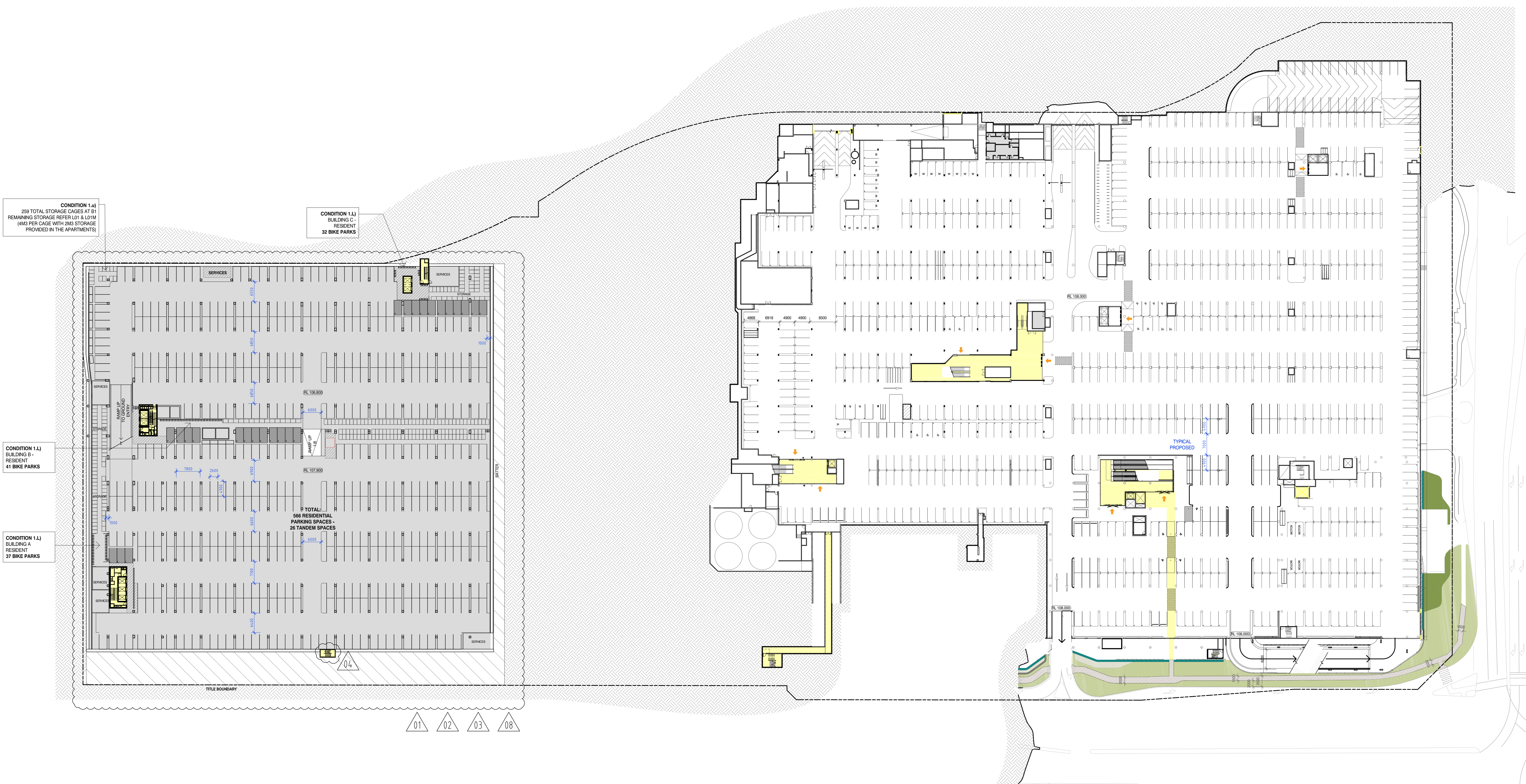
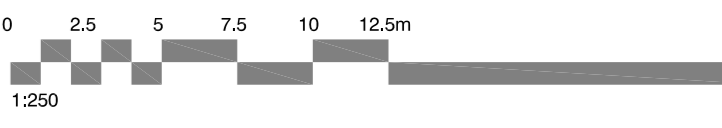
Associate



Amended Basement Plan

Rev	Date	Description
A	21/03/16	NO PD ISSUED FOR TOWN PLANNING
B	21/03/16	NO PD ISSUED FOR TOWN PLANNING - RESPONSE TO COUNCIL #11
C	24/06/16	TS IV ISSUED FOR TOWN PLANNING ENDORSEMENT
D	28/12/16	TS IV ISSUED FOR TOWN PLANNING AMENDMENT

Do not scale drawings. Use figure dimensions only. All dimensions must be verified on site before construction. This document is for informational purposes only. It is not intended to be used as a contract or to be used in any legal proceedings. The design is subject to change without notice. The client is responsible for obtaining all necessary approvals and permits. The design is based on the information provided by the client. The design is not intended to be used as a contract or to be used in any legal proceedings. The design is subject to change without notice. The client is responsible for obtaining all necessary approvals and permits. The design is based on the information provided by the client.



NOTE: EXISTING TREES NOT SHOWN FOR CLARITY

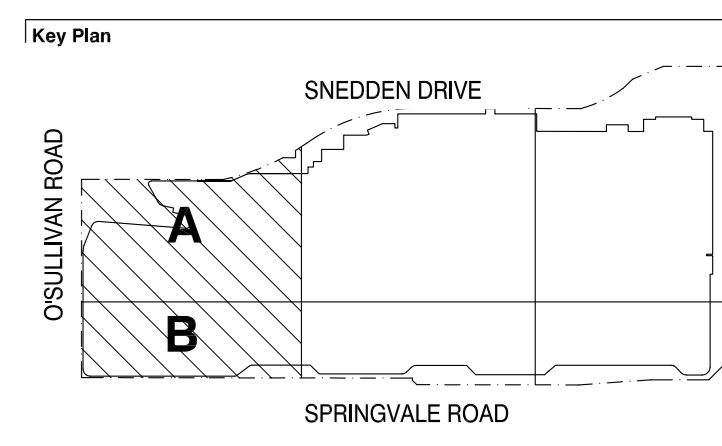
LEGEND	
TOWN PLANNING APPLICATION MARCH 2015	TOWN PLANNING ENDORSEMENT JUNE 2016
BASEMENT 03	BASEMENT 03
BASEMENT 02	BASEMENT 02
BASEMENT 01	BASEMENT 01
LEVEL 1	LOWER GROUND
LEVEL 1.5	LOWER GROUND MEZZANINE
LEVEL 2	GROUND LEVEL
LEVEL 3	LEVEL 1
LEVEL 4	LEVEL 2

GENERAL NOTES

ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD): THE DEVELOPMENT WILL INCORPORATE A RANGE OF ESD AND WATER SENSITIVE URBAN DESIGN (WSUD) INITIATIVES AND MEET OR EXCEED ALL RELEVANT FEDERAL AND STATE GOVERNMENT STATUTORY OBLIGATIONS WITH REGARD TO ENERGY AND WATER CONSERVATION, PASSIVE DESIGN OF BUILDINGS, WASTE MANAGEMENT, WATER SENSITIVE URBAN DESIGN AND MASTER PLANNING PROCESSES. THE PROJECT WILL ALSO BE ASSESSED AGAINST THE GREEN STAR COMMUNITIES AND GREEN STAR DESIGN AND AS BUILT SUSTAINABILITY TOOLS AND WILL TARGET A FOUR STAR BEST PRACTICE OUTCOME.

GREEN STAR COMMUNITIES MEETS AND EXCEEDS THE SUSTAINABILITY REQUIREMENTS AS OUTLINED IN THE MONASH PLANNING SCHEME.

BALCONY DIVISIONS: INTERFERENCE PRIVACY SCREENS, MINIMUM 1700MM HEIGHT ALUMINIUM FRAMED GLAZED OPaque PANEL.



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Project Name: THE GLEN SHOPPING CENTRE
 235 Springvale Road, Glen Waverley, 3150

Drawing Name: PROPOSED LEVEL B1

Architect	Drawn By	Scale @ A0
PD	TS	1:250
Project Number	Drawing Number	Revision
A120520	TP-21	D

1 BASEMENT LEVEL 01
 TP-21 1:500