

Flemington Estate Public Housing Renewal Program

Amendment C177 to the Moonee Valley Planning Scheme

Traffic Engineering Evidence Statement to Social Housing Renewal Standing Advisory Committee

Date of Statement: 4 September 2017

Date of Most Recent Inspection: 30 August 2017

Prepared For the Applicant: Department of Health and Human Services

Instructed By: Norton Rose Fulbright

Reference: G23312A1

IN THE MATTER OF AMENDMENT C177 TO THE MOONEE VALLEY PLANNING SCHEME RELATING TO
THE FLEMINGTON ESTATE PUBLIC HOUSING RENEWAL PROGRAM

STATEMENT TO THE ADVISORY COMMITTEE BY JASON LEE WALSH, TRAFFIC ENGINEER

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

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at

Flemington Estate Public Housing Renewal Program

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Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Table of Contents

1	Introduction.....	3
2	History of Amendment.....	4
3	Amendment C177	5
3.1	General.....	5
3.2	Potential Development Yield	5
3.3	Car Parking	5
3.4	Access and Internal Road Network.....	6
3.5	Pedestrian and Bicycle Accessibility.....	6
4	Existing Conditions.....	7
4.1	Location.....	7
4.2	Flemington Estate	7
4.3	Surrounding Land.....	8
5	Traffic Considerations.....	9
5.1	Road Network	9
5.2	Existing Traffic Volumes	10
5.3	Accident Review.....	13
5.4	Traffic Generation	14
5.5	Traffic Distribution	15
5.6	Traffic Analysis	16
6	Car Parking Considerations.....	18
6.1	Existing Parking Conditions.....	18
6.2	Proposed Parking Overlay.....	19
6.3	Adequacy of Proposed Car Parking Rates.....	20
6.3.1	Sustainable Modes of Transport.....	20
6.3.2	Anticipated Parking Demand	22
6.3.3	Planning Policy	24
6.4	Proposed Parking Provisions.....	25
7	Bicycle Considerations.....	26
8	Conclusions.....	27

List of Figures

Figure 1: Locality Plan.....	7
Figure 2: Flemington Estate Aerial	8

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Figure 3: Racecourse Road - View East	10
Figure 4: Racecourse Road - View West.....	10
Figure 5: Victoria Street - View North	10
Figure 6: Victoria Street - View South	10
Figure 7: Holland Court - View North.....	10
Figure 8: Holland Court - View South.....	10
Figure 9: Peak Hour Traffic Volumes.....	11
Figure 10: Additional Development Peak Hour Traffic	16
Figure 11: Post Development Peak Hour Traffic	16
Figure 12: Survey Area	18
Figure 13: Car Parking Demand Summary	19
Figure 14: Moonee Valley TravelSmart Map.....	21
Figure 15: PTV Public Transport Map – Moonee Valley.....	22

List of Tables

Table 1: SIDRA Intersection Analysis - Existing AM and PM Peak.....	13
Table 2: VicRoads Crashstats recorded accidents (2012-2017)	14
Table 3: SIDRA Intersection Analysis – AM Peak Comparison	17
Table 4: SIDRA Intersection Analysis – PM Peak Comparison.....	17
Table 5: Proposed Parking Overlay Rates.....	19
Table 6: Public Transport Services in the Vicinity of the Subject Site	22
Table 7: 2011 ABS Car Ownership Data – Public Housing Moonee Valley.....	23
Table 8: 2011 ABS Car Ownership Data – Flemington	23

List of Appendices

Appendix A Qualifications

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

1 Introduction

I have been instructed by Norton Rose Fulbright on behalf of the Department of Health and Human Services to undertake a traffic engineering assessment of Amendment C177 to the Moonee Valley Planning Scheme that proposes to amend the planning controls that apply to the Flemington Public Housing Estate and broader Debneys precinct.

In the course of preparing this statement, I inspected the subject site most recently on 30 August 2017, reviewed background material, and assessed the car parking and traffic impacts of the proposal.

My qualifications and experience to undertake the following assessment in accordance with VCAT Practice Note 2 are set out in Appendix A.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

2 History of Amendment

Message Consultants prepared a Structure Plan for the Debneys Precinct, including:

- 12-71 Holland Court, 120-130 Racecourse Road and 24-66 Victoria Street (known as the Flemington Estate).
- 25 & 75 Mt Alexander Road and 100 Victoria Street, Flemington (known as Debneys Park).
- 220 Racecourse Road, Flemington (Hopetoun Early Years Centre).

Message also prepared a strategic planning background report that was accompanied by a Traffic and Transport Assessment prepared by Beveridge Williams. The Amendment is also informed by a Design Framework prepared by Hayball.

The Amendment proposes to:

- Rezone Flemington Estate from GRZ1 to Mixed Use Zone Schedule 3.
- Apply Development Plan Overlay Schedule 8 to the Flemington Estate.
- Apply Parking Overlay Schedule 1 to the Flemington Estate.
- Rezone a portion of Debneys Park from Public Park and Recreation Zone to PUZ2.
- Amend Clause 21.06-8 to include the Debneys Precinct Structure Plan as a reference document and amend Clause 21.06-7 to include a policy intention that further strategic work will be undertaken by Council as part of the Structure Plan.
- Amend the Schedule to Clause 61.01 to make the Minister for Planning the responsible authority over Flemington Estate.

The Amendment was placed on public exhibition between 26 June and 21 July 2017. Submissions have been received, with a number raising concern with the proposed parking provisions and traffic.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

3 Amendment C177

3.1 General

The Amendment proposes to:

- Rezone Flemington Estate from GRZ1 to Mixed Use Zone Schedule 3.
- Apply Development Plan Overlay Schedule 8 to the Flemington Estate.
- Apply Parking Overlay Schedule 1 to the Flemington Estate.
- Rezone a portion of Debneys Park from Public Park and Recreation Zone to PUZ2.
- Amend Clause 21.06-8 to include the Debneys Precinct Structure Plan as a reference document and amend Clause 21.06-7 to include a policy intention that further strategic work will be undertaken by Council as part of the Structure Plan.
- Amend the Schedule to Clause 61.01 to make the Minister for Planning the responsible authority over Flemington Estate.

3.2 Potential Development Yield

The background reports for the proposed amendment indicate that the amendment could facilitate an overall development yield of 1,772 dwellings, comprising retention of the existing 718 high rise social housing dwellings, construction of 218 social housing walk-up dwellings (to replace the existing 198 walk-up dwellings), and 825 private dwellings.

The private dwellings are anticipated to comprise 425 x one-bedroom dwellings and 400 two-bedroom dwellings.

In effect, the amendment could facilitate 845 new dwellings, inclusive of 20 new social housing dwellings, and improvement of the existing social housing stock.

These numbers are indicative and have been prepared for the purposes of allowing a range of assessments, including car parking and traffic.

3.3 Car Parking

The amendment proposes the introduction of a parking overlay, with the following applicable rates:

- Public housing – 0.6 spaces per dwelling.
- Private housing – 0.7 spaces per one-bedroom dwelling and 0.9 spaces per two-bedroom dwelling.
- Visitor parking – 0.1 spaces per dwelling.

Parking is expected to be provided along the internal road network, at-grade and within podiums.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

The overlay will apply to new dwellings, including the replacement social housing. The existing high rise social housing will retain its existing parking supply.

3.4 Access and Internal Road Network

The Design Framework and associated documentation contemplates retention and improvement of the existing access arrangements. Specifically, access will comprise:

- Improvement of the existing signalised access to Racecourse Road through construction of a left turn lane on Racecourse Road.
- Retention of the access to Victoria Street.
- Conversion of the Holland Court / Racecourse Road intersection to left-in / left-out to / from Holland Court.

The Design Framework illustrates a connective internal road network largely via retention of the existing internal roads.

3.5 Pedestrian and Bicycle Accessibility

The Design Framework illustrates a permeable pedestrian and bicycle network to connect to the existing pedestrian and bicycle infrastructure surrounding the site.

Pedestrian connections will allow residents to walk to the north, through Debneys Park to connect to tram services on Mt Alexander Road, through Debneys Park to the east to connect to Flemington Bridge station, to the south to access Racecourse Road and the associated tram services, and to the west to access the local pedestrian network or Racecourse Road to access the Newmarket shopping area.

Bicycle connections will be provided through Debneys Park to access Mt Alexander Road and the Moonee Ponds Creek Trail, to the south to access Racecourse Road, and to the west via Hill Street to access the designated local bicycle routes.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

4 Existing Conditions

4.1 Location

The Flemington Estate is located west of the Tullamarine Freeway, and abuts Debneys Park in Flemington as shown in the locality plan depicting the site in Figure 1.

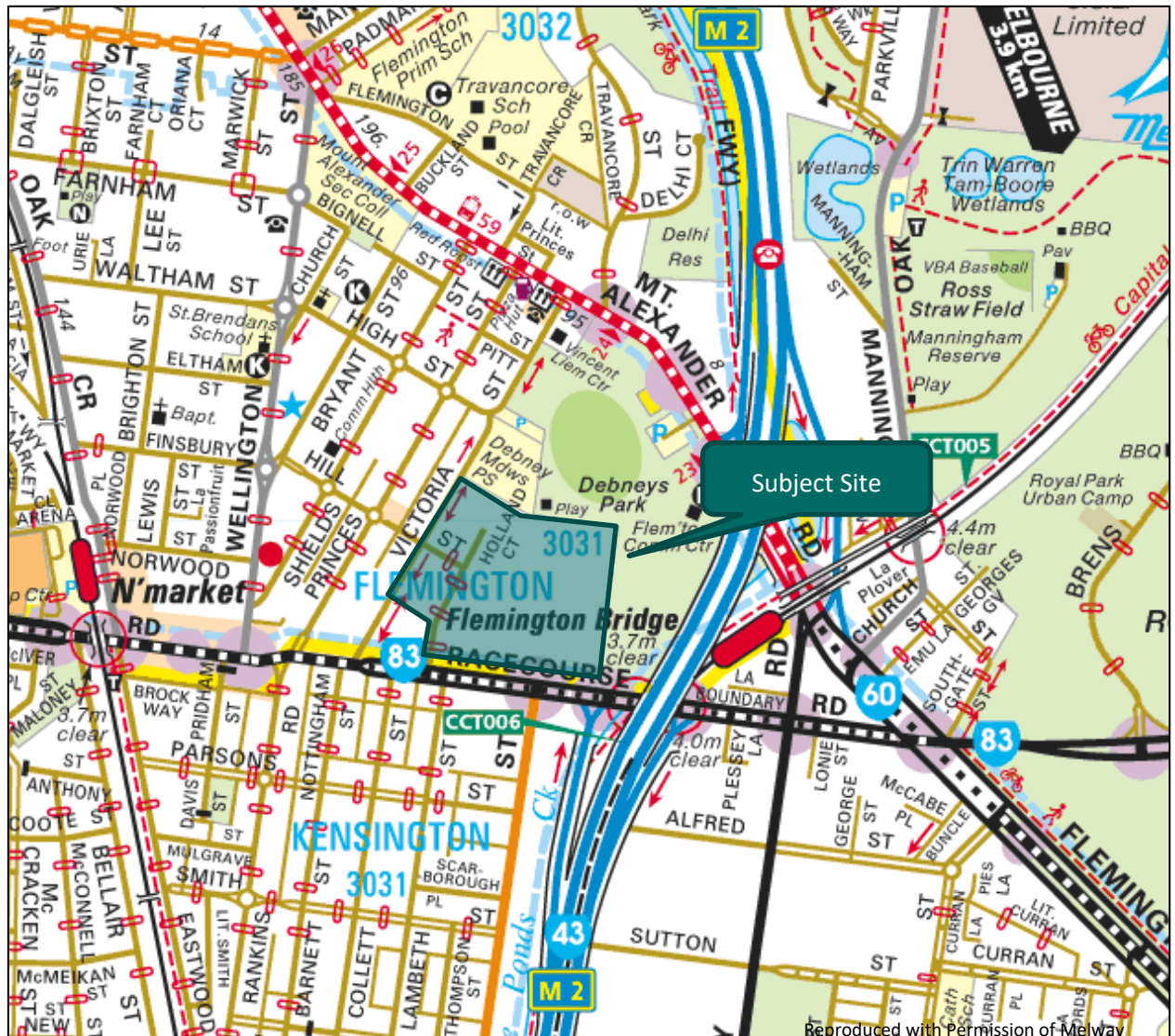


Figure 1: Locality Plan

4.2 Flemington Estate

The Flemington Estate is irregular in shape and has abutments to Victoria Street along its western boundary and Racecourse Road along its southern boundary. The estate currently has 916 dwellings across four high rise buildings and a number of walk-up buildings.

Victoria Street, Holland Court and Racecourse Road provide vehicular access to the site.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

A total of 726 on-site parking spaces, inclusive of about 10 contractor spaces, are provided in several at-grade parking areas. An additional 54 car spaces are provided kerbside along Holland Court, and there are 27 on-street spaces along the Victoria Street frontage of the estate.

An aerial photograph of the site, and depiction of the existing access arrangements is provided at Figure 2.



Figure 2: Flemington Estate Aerial

4.3 Surrounding Land

The subject site land is bound by Debneys Park to the north and east. Debney Meadows primary school is situated immediately north of the site on Victoria Street. Across Victoria Street are residential properties, whilst to the south across Racecourse Road is a mixture of commercial and industrial properties.

Flemington Bridge train station is situated a short distance to the east.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

5 Traffic Considerations

5.1 Road Network

Racecourse Road is an arterial road providing an important east-west connection for the inner north western suburbs of Melbourne. Racecourse Road provides a connection between Epsom Road in the west and Flemington Road in the east.

In the vicinity of the estate, Racecourse Road operates as a divided road providing for two traffic lanes in each direction. The central median is utilised as a tram reservation.

The posted speed limit is 60km/h, which reduces to 40km/h to the west through the Newmarket shopping strip.

Victoria Street is a local street that runs between Mt Alexander Road in the north and Racecourse Road in the south. It operates with a 10.5 metre pavement typically providing for two-way traffic and kerbside parking. Parking is typically unrestricted.

Victoria Street generally operates two-way but is restricted to one-way north bound at its intersection with Racecourse Road, and one-way north bound at its intersection with High Street.

Holland Court is a local road that is aligned in a northerly direction from Racecourse Road. It terminates to the north of Hill Street. It provides access to parking for the Flemington Estate. Holland Court has a 9.5 metre wide pavement that provides for two-way traffic and kerbside parking. Parking is typically unrestricted.

Primary access to the site is provided through the signalised intersection of Racecourse Road and Stubbs Street, with the estate access forming a northern leg of the signalised intersection. The intersection includes a left turn slip lane from the estate.

The intersection of Holland Court and Racecourse Road is arranged as a t-intersection, with priority afforded to Racecourse Road. There are no restrictions on movements to or from Holland Court, with right turns facilitated by breaks in the separator strips defining the median.

The intersection of Victoria Street and Racecourse Road is arranged as a t-intersection. There is a tram stop on Racecourse Road to the immediate east of the intersection, however there are no restrictions on turn movements to / from Victoria Street.

Figure 3 to Figure 8 show views of the surrounding road network.

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Figure 3: Racecourse Road - View East

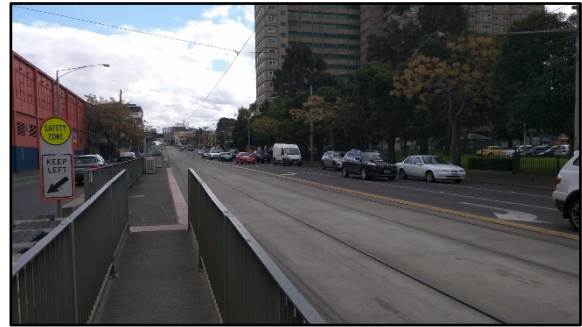


Figure 4: Racecourse Road - View West



Figure 5: Victoria Street - View North



Figure 6: Victoria Street - View South



Figure 7: Holland Court - View North



Figure 8: Holland Court - View South

5.2 Existing Traffic Volumes

The traffic report prepared to inform the amendment collected peak hour traffic volumes along Racecourse Road between Victoria Street and Boundary Road. The counts were undertaken on Thursday the 16th of February 2017, and covered 6-9am, and 2:30-7pm.

The peak hours were observed 7:15-8:15am, and 4-5pm.

The peak hour traffic volumes are illustrated in Figure 9.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

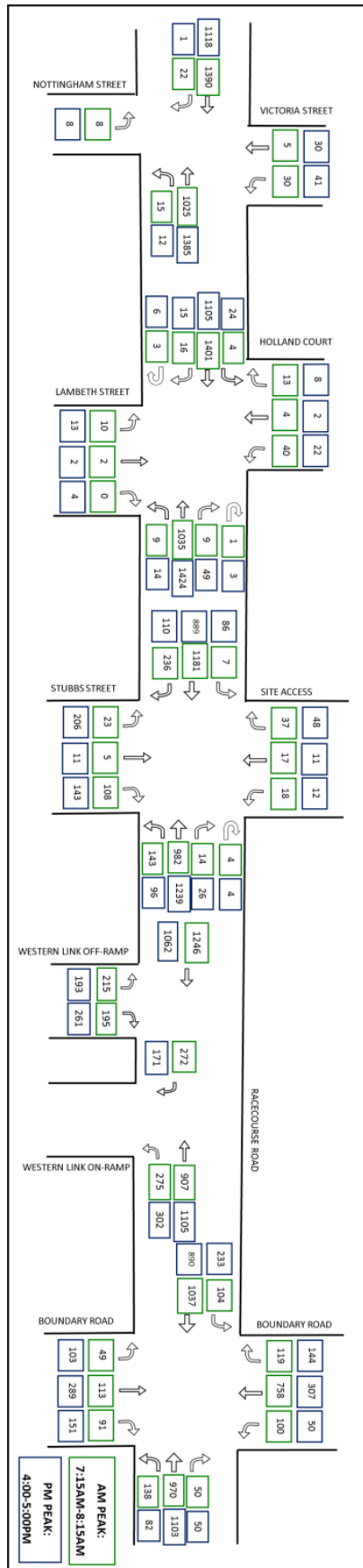


Figure 9: Peak Hour Traffic Volumes

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

The counts recorded two-way peak hour volumes, west of the site access, of 2,471 vehicles in the morning peak and 2,578 vehicles in the afternoon peak.

To sensitivity check the volumes, my firm sourced scats data for the intersection of Stubbs Street and Racecourse Road for Tuesday 15th August, 2017. The data revealed two-way peak hour volumes of 2,510 and 2,598 vehicles for the morning and afternoon peak hour respectively.

The volumes are consistent with the February traffic volumes, and therefore it is reasonable to use the February volumes for assessment purposes.

Beveridge Williams developed a network SIDRA model to assess the existing operation of Racecourse Road between Victoria Street and Boundary Road. The model suggests that Racecourse Road experiences congestion during peak periods, with queues propagating through the network, however side streets and individual traffic signals operate within capacity.

This is consistent with my observations of Racecourse Road in peak periods.

The primary intersection for analysis is the intersection of Racecourse Road with Stubbs Street and the site access.

I have undertaken an independent SIDRA assessment of this intersection to further test its operation, noting that it is an individual intersection assessment rather than a network assessment.

SIDRA is a computer program originally developed by the Australian Road Research Board, which can be used to analyse the operation of intersections. SIDRA provides information about the capacity of an intersection in terms of a range of parameters, as described below:

Degree of Saturation (D.O.S.) is the ratio of the volume of traffic observed making a particular movement compared to the maximum capacity for that movement. Various values of degree of saturation and their rating are shown below.

Level of Service		Intersection Degree of Saturation	
		Unsignalised Intersection	Signalised Intersection
A	Excellent	≤ 0.60	≤ 0.60
B	Very Good	0.60 – 0.70	0.60 – 0.70
C	Good	0.70 – 0.80	0.70 – 0.90
D	Acceptable	0.80 – 0.90	0.90 – 0.95
E	Poor	0.90 – 1.00	0.95 – 1.00
F	Very Poor	≥ 1.0	≥ 1.0

The **95th Percentile Queue** represents the maximum queue length, in metres, that can be expected in 95% of observed queue lengths in the peak hour.

Average Delay (seconds) is the average delay time that can be expected for all vehicles making a particular movement in the peak hour.

The results of the analysis are summarised in Table 1, and show that in relation to access to and from the site, the existing intersection is operating reasonably well in both peak periods, with manageable queues and delays experienced by residents entering and exiting the site access.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Table 1: SIDRA Intersection Analysis - Existing AM and PM Peak

Approach	Movement	AM Peak – Existing			PM Peak – Existing		
		DoS	Av. Delay (s)	95% Queue (m)	DoS	Av. Delay (s)	95% Queue (m)
Stubbs St (S)	L	0.04	32	7	0.34	32	61
	T	0.54	57	51	0.59	50	64
	R	0.54	62	51	0.59	55	64
Racecourse Rd (E)	L	0.61	28	187	0.76	31	242
	T	0.61	22	187	0.76	26	242
	R	0.45	81	9	0.52	73	14
Site Access (N)	L	0.04	9	2	0.02	8	1
	T	0.24	53	23	0.22	46	22
	R	0.24	59	23	0.22	51	22
Racecourse Rd (W)	L	0.54	14	150	0.47	17	120
	T	0.54	8	150	0.47	11	120
	R	0.92	65	102	0.63	39	33

5.3 Accident Review

My firm has reviewed the VicRoads Crashstats database for the last five years of available data (July 2012 – July 2017) for the intersections of Racecourse Road with Stubbs Street and Holland Court. I note I have not included the intersection of Victoria Street, as the conditions at this intersection have recently changed to operate one-way north bound at Racecourse Road.

The recorded accidents are summarised in Table 2.

The review highlights an accident pattern involving right turn motorists at the intersection of Holland Court and Racecourse Road.

In view of the accident history, Beveridge Williams recommended the conversion of the intersection to provide for left-in / left-out movements to and from Holland Court.

I agree that this is an appropriate treatment to address the accident pattern. Right turn movements will likely be transferred to the signalised intersection of the site access with Racecourse Road, and undertaken in a more controlled manner.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Table 2: VicRoads Crashstats recorded accidents (2012-2017)

Accident No.	Location	Severity	Date	DCA Code	DCA Description
T20160010400	Racecourse Rd at Holland Crt.	Other	12/05/2016	121	RIGHT THROUGH
T20150010588		Other	19/05/2015	121	RIGHT THROUGH
T20170006713		Serious	3/04/2017	121	RIGHT THROUGH
T20160002868		Other	9/02/2016	121	RIGHT THROUGH
T20140025727		Other	10/12/2014	121	RIGHT THROUGH
T20140012746	Racecourse Rd at Stubbs Street	Serious	21/06/2014	100	PED NEAR SIDE. PED HIT BY VEHICLE FROM THE RIGHT.
T20120016427		Other	18/07/2012	102	PED FAR SIDE. PED HIT BY VEHICLE FROM THE LEFT
T20130020041		Other	27/09/2013	137	LEFT TURN SIDESWIPE
T20150011111		Other	25/05/2015	102	PED FAR SIDE. PED HIT BY VEHICLE FROM THE LEFT

5.4 Traffic Generation

I have adopted a different approach to the traffic generation than Beveridge Williams.

Private Housing

I have previously adopted a traffic generation rate of 4 movements per dwelling with a car space, inclusive of peak hour volumes of 0.4 movements per dwelling, for residential developments in Moonee Valley.

The subject land has excellent access to public transport and alternate transport modes compared to the broader municipality, and consequently the adoption of 4 movements per dwelling is likely to be conservative.

The amendment contemplates a yield of 825 private dwellings, comprising 425 x one-bedroom apartments and 400 x two-bedroom apartments. The proposed Parking Overlay requires a provision of 0.7 spaces per one-bedroom apartment and 0.9 spaces per two-bedroom apartment, equating to 658 dwellings with a car space.

Application of the adopted traffic generation of 4 vehicle movements per dwelling with a car space results in a traffic projection of 2,632 movements per day, inclusive of 263 movements in peak hours.

This approach has led to a very similar traffic projection to that estimated by Beveridge Williams for the private housing component.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Social Housing

The amendment proposes to replace the existing walk-ups and provide an additional 20 dwellings. There is no change to the high rise component. The Parking Overlay proposes to require parking at a rate of 0.6 spaces per dwelling, meaning that of the 20 additional social housing dwellings 12 will have a car space.

For the purposes of this assessment and because the number of additional dwellings is relatively small, I will simply adopt the private dwelling traffic generation rate. It is therefore expected that the 12 additional social housing dwellings with a car space will generate a total of 48 movements per day, inclusive of five (5) vehicle movements in peak hours.

Total

The amendment as a whole is projected to generate 2,680 movements per day, inclusive of 268 movements in peak hours.

Assuming a typical AM peak traffic split of 20% arrivals and 80% departures, and a PM peak traffic split of 60% arrivals and 40% departures, it is projected the development yield could generate additional traffic comprising:

AM PEAK: 54 arrivals and 214 departures.

PM PEAK: 161 arrivals and 107 departures.

5.5 Traffic Distribution

Beveridge Williams has suggested conversion of Holland Court to left-in / left-out at its intersection with Racecourse Road to address an existing accident pattern.

I am of the view that this is appropriate, however it will consequentially redistribute existing right turn and through traffic. For the purposes of this assessment, I will presume that the existing right turn and through traffic departing and arriving at Holland Court will be transferred to the site access at the signalised intersection of Stubbs Street / Racecourse Road.

For the additional traffic, I will presume the following:

- 20% of traffic will filter to the north and west via the local street network through Hill Street and Wellington Street.
- The remainder of traffic will be proportionally distributed to existing movements at the site access and Holland Court (allowing for the removal of right turns from this intersection).

Based on the projected traffic generation and distribution, Figure 10 has been prepared to illustrate the additional development peak hour traffic, and Figure 11 shows the post development peak hour traffic volumes for the intersections of the site access with Stubbs Street / Racecourse Road and Holland Court / Racecourse Road.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

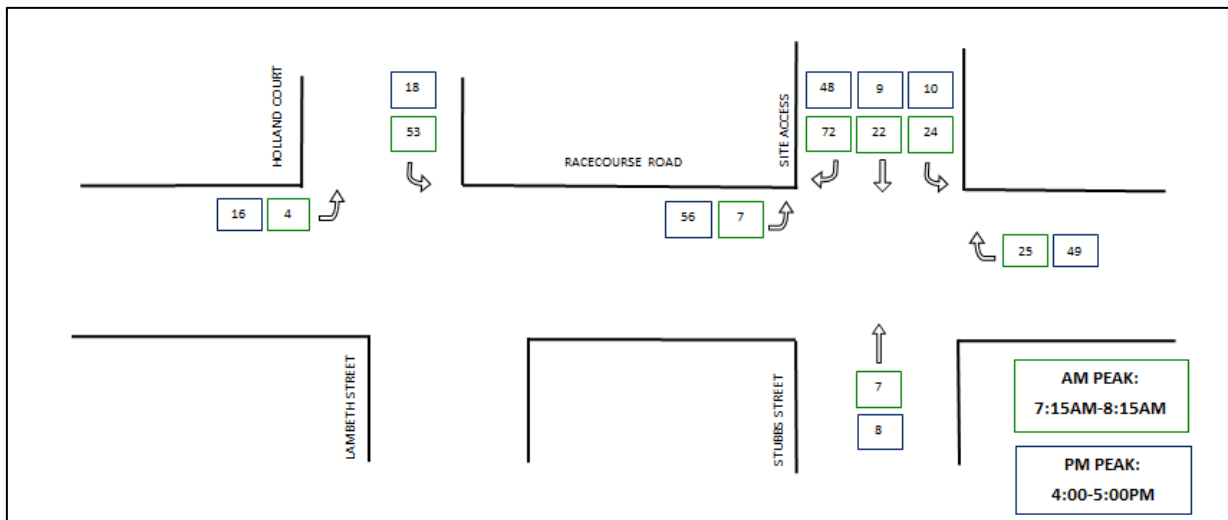


Figure 10: Additional Development Peak Hour Traffic

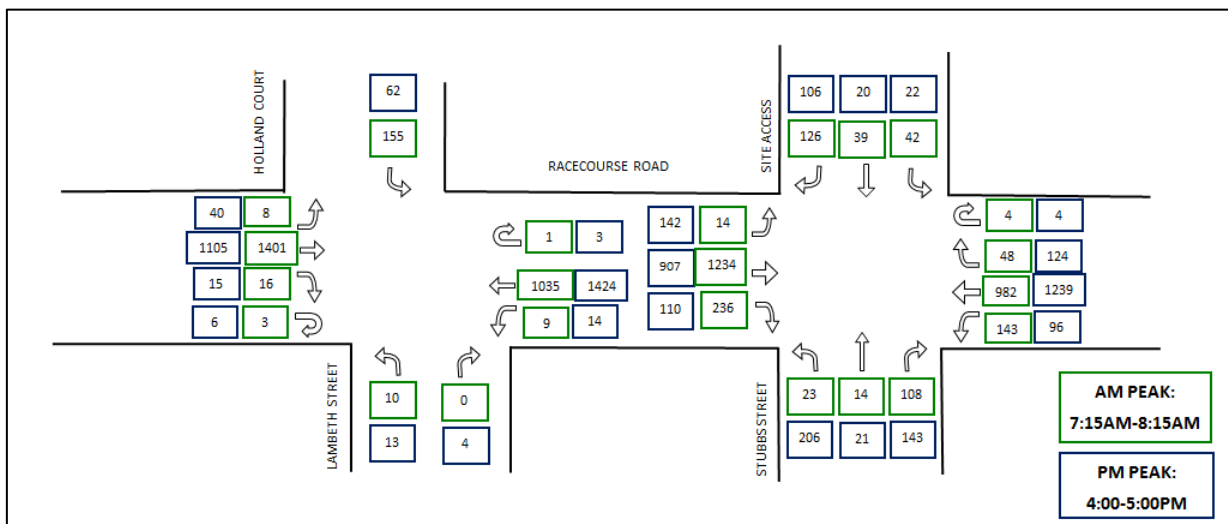


Figure 11: Post Development Peak Hour Traffic

5.6 Traffic Analysis

For comparison purposes, I have rerun the SIDRA analysis of the intersection of the site access with Stubbs Street / Racecourse Road, with the post development traffic volumes.

The analysis has presumed the construction of a left turn lane on Racecourse Road on the west approach to the signalised site access, as recommended by Beveridge Williams. In my view, this is a desirable but not essential improvement to the intersection, and the requirement for such works should be managed with consideration of the loss of trees that would be necessitated by the works.

The results of the analysis and comparison to existing conditions are summarised in Table 3 and Table 4.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Table 3: SIDRA Intersection Analysis – AM Peak Comparison

Approach	Movement	AM Peak – Existing			AM Peak – Post Development		
		DoS	Av. Delay (s)	95% Queue (m)	DoS	Av. Delay (s)	95% Queue (m)
Stubbs St (S)	L	0.04	32	7	0.04	32	7
	T	0.54	57	51	0.63	59	57
	R	0.54	62	51	0.63	65	57
Racecourse Rd (E)	L	0.61	28	187	0.62	28	193
	T	0.61	22	187	0.62	22	193
	R	0.45	81	9	0.89	86	26
Site Access (N)	L	0.04	9	2	0.10	10	5
	T	0.24	53	23	0.80	64	82
	R	0.24	59	23	0.80	69	82
Racecourse Rd (W)	L	0.54	14	150	0.01	11	2
	T	0.54	8	150	0.57	9	163
	R	0.92	65	102	0.92	65	102

Table 4: SIDRA Intersection Analysis – PM Peak Comparison

Approach	Movement	PM Peak – Existing			PM Peak – Post Development		
		DoS	Av. Delay (s)	95% Queue (m)	DoS	Av. Delay (s)	95% Queue (m)
Stubbs St (S)	L	0.34	32	61	0.37	33	63
	T	0.59	50	64	0.64	50	69
	R	0.59	55	64	0.64	56	69
Racecourse Rd (E)	L	0.76	31	242	0.76	30	251
	T	0.76	26	242	0.76	23	251
	R	0.52	73	14	0.71	66	56
Site Access (N)	L	0.02	8	1	0.03	10	2
	T	0.22	46	22	0.49	49	51
	R	0.22	51	22	0.49	54	51
Racecourse Rd (W)	L	0.47	17	120	0.15	20	30
	T	0.47	11	120	0.55	17	123
	R	0.63	39	33	0.69	41	35

The analysis shows that the projected development traffic can be accommodated through the site access signalised intersection, with manageable impacts.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

6 Car Parking Considerations

6.1 Existing Parking Conditions

To understand existing use of parking within and adjacent to the Flemington Estate, my firm conducted a series of spot car parking surveys on Thursday 24th of August and Saturday 26th of August 2017. The surveys included 8am, 12pm, 4pm and 8pm on each day.

The survey area, illustrated as Figure 12, included all on-site parking, on-street parking in Holland Court, and on-street parking for the frontage of Victoria Street.

The survey area has provision for 797 - 800 spaces (depending on restrictions that vary across the day), and is inclusive of 54 spaces along Holland Court and 27 spaces along the Victoria Street frontage.

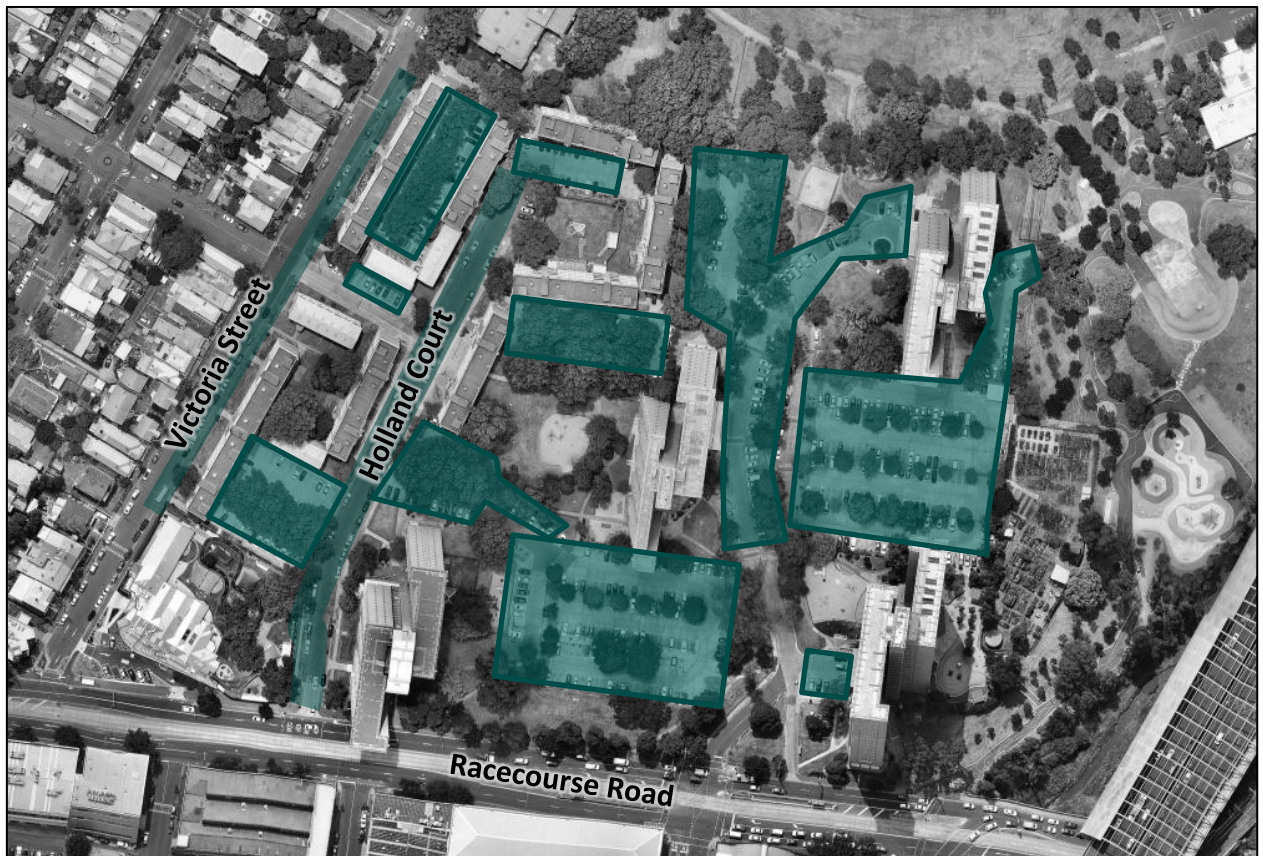


Figure 12: Survey Area

The results of the surveys are graphically illustrated in Figure 13, with a maximum demand for 708 spaces recorded at 8am on Saturday, noting that my staff observed that in the order of 30 cars appeared to be unregistered / abandoned.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

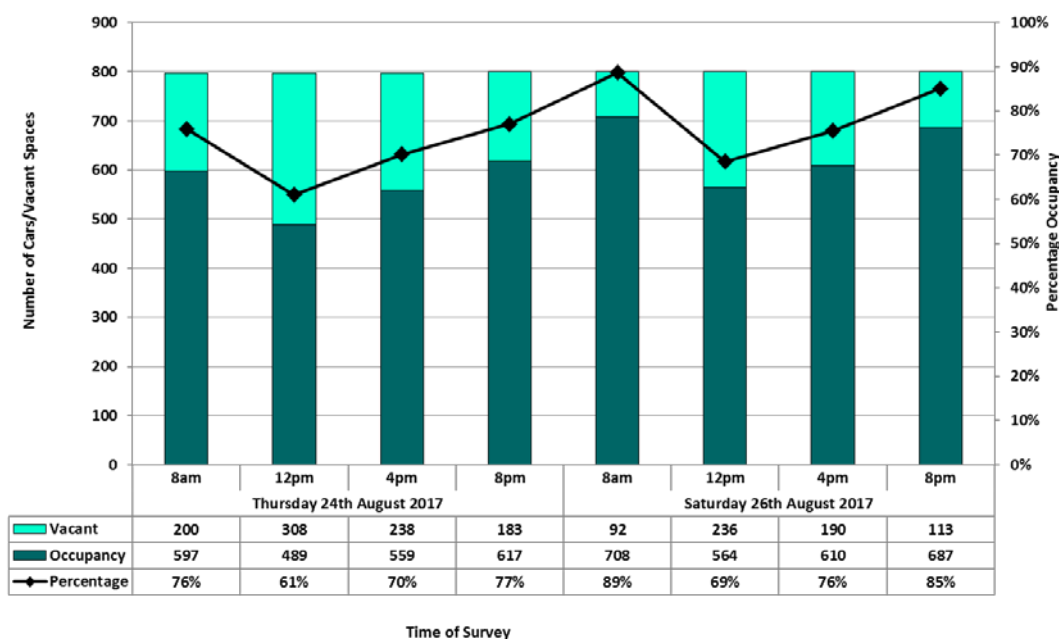


Figure 13: Car Parking Demand Summary

Accounting for a potential visitor demand of 0.1 spaces per dwelling, it is estimated that the existing resident demand is in the order of 586 car spaces. For the 918 dwellings, this is equivalent to a demand for 0.64 spaces per dwelling.

6.2 Proposed Parking Overlay

It is proposed to introduce a site-specific parking overlay to inform the redevelopment of the site. The objective of the parking overlay is to identify appropriate car parking rates for residential uses within the Flemington Estate.

The proposed car parking rates are detailed in Table 5.

Table 5: Proposed Parking Overlay Rates

Use	Rate
Dwelling (Social Housing)	0.6 spaces to each dwelling for residents
Dwelling (Private Housing)	0.7 spaces to each 1-bedroom dwelling for residents
	0.9 spaces to each 2-bedroom dwelling for residents
Dwelling (All)	0.1 spaces to each dwelling for visitors

The proposed parking overlay specifies a permit is required to reduce the minimum number of car parking spaces specified in the schedule.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

6.3 Adequacy of Proposed Car Parking Rates

An assessment of the adequacy of the proposed car parking rates follows.

6.3.1 Sustainable Modes of Transport

TravelSmart Map

Figure 14 provides an excerpt of the TravelSmart map for the municipality of Moonee Valley in the vicinity of the site. It illustrates the alternative transport modes accessible to the site, including public transport modes and bicycle and walking trails.

Pedestrian Accessibility

The site is well located to promote walking to everyday services.

Of note, the Newmarket shopping strip on Racecourse Road including a full line supermarket is within 10 minutes walk to the west of the site. The strip also includes banks, chemists and cafes / restaurants.

The estate also benefits from being located directly adjacent Debneys Park providing tennis courts, ovals and public open space, and is within 10 minutes walk of Debney Meadows primary school and Mount Alexander College.

Bicycle Accessibility

The City of Moonee Valley is well serviced by the Principal Bicycle Network (PBN), with on-road and off-road bicycle paths directly linking the City of Moonee Valley with surrounding municipalities. Specifically, the site has convenient connections to the Capital City Trail and Moonee Ponds Creek Trail.

The subject site is also well serviced by bicycle routes on many roads in the immediate vicinity, including Racecourse Road, Flemington Road Mt Alexander Road, and informal routes on Hill Street and Wellington Street.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme



Figure 14: Moonee Valley TravelSmart Map

Public Transport

The site is also well serviced by public transport with Flemington Bridge station on the upfield line some 250 metres to the east, and Newmarket station on the Craigieburn line some 500 metres to the west. Tram 57 connecting West Maribyrnong and the City, travels along Racecourse Road with a stop at the site frontage, whilst Tram 59 connecting Airport West with the City travels along Mount Alexander Road, via a stop conveniently accessible with a short walk through Debneys Park to Mount Alexander Road.

Table 6 summarises the available services, whilst Figure 15 illustrates the nearby routes.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Table 6: Public Transport Services in the Vicinity of the Subject Site

Service	Route	Distance to Node
Metropolitan Train Services		
Flemington Bridge Station	Upfield Line	~250m east
Newmarket Station	Craigieburn Line	~500m west
Metropolitan Tram Services		
Route 57	West Maribyrnong - City	Racecourse Road frontage
Route 59	Airport West - City	Mt Alexander Rd ~300m north-east

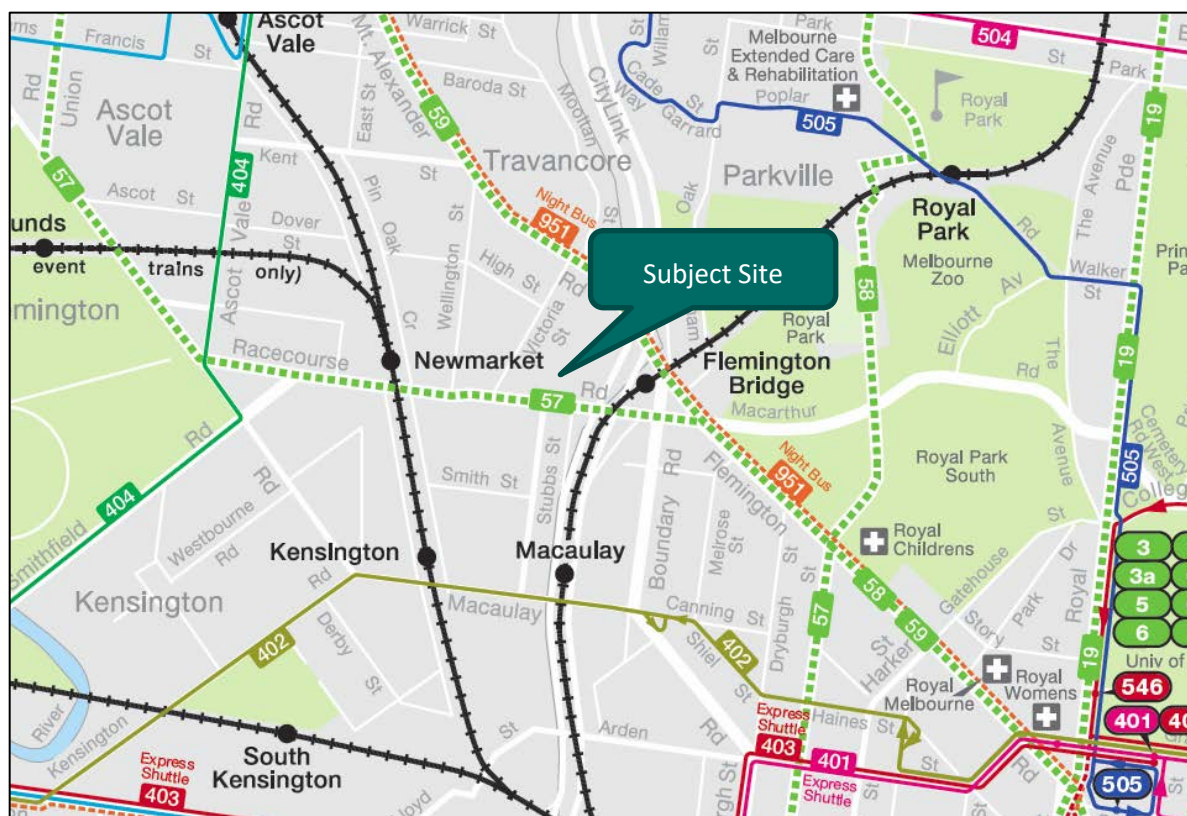


Figure 15: PTV Public Transport Map – Moonee Valley

6.3.2 Anticipated Parking Demand

To understand car ownership data for both social and private housing, I have sourced the 2011 ABS Car Ownership Data for the suburb of Flemington and the municipality of Moonee Valley. The data relates to all apartments / flats / units, whether they be 1 storey or multi-storey.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Public Housing Residents

For public housing, I have used the Moonee Valley data as it presents a bigger sample size. The data records an average car ownership of 0.58 cars per flat / apartment, with a summary provided in Table 7.

Table 7: 2011 ABS Car Ownership Data – Public Housing Moonee Valley

Description	Type	Moonee Valley	
		Av. rate	% ownership with 0 cars
Public	1-bed	0.3	74%
	2-bed	0.7	45%
	3-bed	0.7	41%

These statistics indicate that the parking requirements for dwellings set out under the Planning Scheme are greater than the ABS car ownership statistics in this locality.

The data is also relatively consistent with the car parking surveys undertaken of the Flemington Estate that suggest an existing resident parking demand of approximately 0.63 spaces per dwelling.

Based on the above analysis and in consideration of the excellent accessibility to public transport and services, I am satisfied that it is appropriate to provide new social housing dwellings at a rate of 0.6 spaces per dwelling as proposed within the Parking Overlay.

Private Housing Residents

For private housing, I have used the Flemington ABS 2011 car ownership data, and removed the social housing component. A summary of the data is provided in Table 8.

Table 8: 2011 ABS Car Ownership Data – Flemington

Description	Type	Flemington	
		Av. rate	% ownership with 0 cars
Private	1-bed	0.7	38%
	2-bed	0.9	24%
	3-bed	1.5	13%

Based on the above analysis and in consideration of the excellent accessibility to public transport and services, I am satisfied that it is appropriate to provide new private dwellings at a rate of 0.7 spaces per one-bedroom apartment, and 0.9 spaces per bedroom for two-bedroom apartment as proposed within the Parking Overlay.

Residential Visitors

To estimate the projected residential visitor car parking demand, car parking surveys undertaken by Cardno at apartment developments located at 127 and 147 Beach Street in Beacon Cove have been sourced.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

The surveys were conducted over a 42 hour period from 6:00am on Friday 19 November to midnight on Saturday 20 November, 2010. The surveys recorded a peak parking demand for 0.1 spaces per apartment of an evening and weekend, with a peak business hours demand of 0.06 spaces per apartment recorded.

Based on these surveys, I am comfortable that a requirement to provide 0.1 spaces per apartment for visitors is appropriate as proposed within the Parking Overlay.

I am of the opinion that on-street parking in Holland Court and along the Victoria Street frontage of the land can be counted as part of the visitor parking provision.

6.3.3 Planning Policy

Council Planning Scheme Policies

Moonee Valley Council supports sustainable transport and design in new and existing developments through a number of policies and initiatives. Excerpts from some of the relevant Clauses within the Moonee Valley Planning Scheme are provided as follows:

Clause 18.02-1 Sustainable personal transport

Encourage the use of walking and cycling by creating environments that are safe and attractive. Ensure development provides opportunities to create more sustainable transport options such as walking, cycling and public transport.

Clause 18.02-3 Principal Public Transport Network

To facilitate greater use of public transport and promote increased development close to high-quality public transport routes in Metropolitan Melbourne.

One of the strategies to achieve this objective is to:

Maximise the use of existing infrastructure and increase the diversity and density of development along the Principal Public Transport Network, particularly at interchanges, activity centres and where principal public transport routes intersect.

Clause 21.09-01 Transport Modes

As the City of Moonee Valley's road network accommodates many different transport modes, which can significantly impact on one another, the most efficient modes should be encouraged.

Objective 1

To establish a road space hierarchy based on modal efficiency as follows:

1. Pedestrians
2. Cyclists
3. Public Transport
4. Freight
5. Private Vehicles

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Strategy

Discourage new developments, which would significantly increase private vehicle congestion within the surrounding road network.

Clause 21.09-03 Public Transport

Although Council is not responsible for the construction and maintenance of public transport infrastructure, it does have indirect ways in which it can impact on the function of the system. This includes advocating for new infrastructure, constructing and maintaining complementary facilities (i.e. bus stops, park and ride facilities, bicycle lockers, etc) and locating new development where there is access to public transport to improve its viability.

Objective 1

To increase the number of residents and visitors who use public transport.

The proposed amendment to facilitate additional dwellings supports the transport strategies and objectives of Moonee Valley Council by providing additional dwellings adjacent to an activity centre, and with excellent accessibility to public transport.

The site enjoys a very high level of public transport accessibility that provides the opportunity for future residents and visitors to utilise alternative transport modes and not be reliant on owning a motor vehicle.

This development therefore prioritises sustainable transport modes as encouraged by the Moonee Valley's policies.

6.4 Proposed Parking Provisions

Based on the preceding, and having particular regard to the proximity of the site to alternative transport modes, it is considered that the provision of parking at reduced rates from those specified within Clause 52.06 would be appropriate for this site.

The rates outlined within the proposed Schedule to the Parking Overlay and adopted within the Design Framework are considered appropriate for the site as they are generally consistent with the ABS Data for the area and dwelling types, and visitor requirements are consistent with accepted case study data.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

7 Bicycle Considerations

The statutory bicycle parking requirements for future development will be subject to the requirements of Clause 52.34 of the Planning Scheme.

The Scheme requires the provision of 1 bicycle space for each 5 dwellings for residents and 1 space for every 10 dwellings for visitors.

Given that the proposed Parking Overlay proposes reduced car parking rates from Clause 52.06, I am of the opinion that it is appropriate to require additional bicycle parking beyond the requirements of Clause 52.34. Specifically, I recommend that the bicycle requirements for residents be:

1 space for every dwelling without a car space + 1 space for every 5 dwellings with a car space.

The visitor bicycle provision can remain as is.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

8 Conclusions

Having undertaken a detailed traffic engineering assessment of Amendment C177 to the Moonee Valley Planning Scheme, I am of the opinion that:

- a) The potential development yield and proposed parking provision could generate in the order of 2680 movements per day, inclusive of 268 movements in peak hours.
- b) The level of potential additional traffic can be accommodated by the existing site access arrangements with manageable impacts to the surrounding road network.
- c) It is appropriate to covert Holland Court to left-in / left-out at its intersection with Racecourse Road.
- d) The Amendment should incorporate the construction of a left turn lane on the west approach to the signalised site access, subject to approval of the removal of trees within the subject land.
- e) The resident and visitor parking rates proposed within the Parking Overlay are justified by:
 - i) The site is located next to an Activity Centre and is well served by public transport and alternative transport modes.
 - ii) ABS car ownership data supports the reduced residential rates.
 - iii) Case study data supports the proposed residential visitor rates.
- f) Bicycle parking should be provided in accordance with Clause 52.34, excepting that the residential tenant provision should include a single bicycle space for each dwelling that is not provided with a car space.
- g) There are no traffic engineering reasons that warrant abandonment of Amendment C177 to the Moonee Valley Planning Scheme.

I have made all the inquiries that I believe are desirable and appropriate and there are no matters of significance I regard as relevant, which to the best of my knowledge, have been withheld from the Advisory Committee.



JASON LEE WALSH
DIRECTOR
TRAFFIX GROUP
4 SEPTEMBER 2017

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Scheme

Appendix A Qualifications

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Name

Jason Lee Walsh - Director, Traffix Group Pty Ltd

Address

Suite 8, 431 Burke Road
GLEN IRIS
VICTORIA 3146

Qualifications

My educational qualifications and membership of professional associations are as follows:-

- Bachelor of Civil Engineering, Monash University
- Bachelor of Science, Monash University
- Member, Victorian Planning & Environmental Law Association

Experience

I have approximately 20 years experience in Traffic Engineering including,

- 1995-2000 at Turnbull Fenner (now Traffix Group), including short term placements at the cities of Bayside and Whittlesea,
- 2000-2011 at Grogan Richards Pty Ltd (now Cardno),
- 2011-present at Traffix Group.

Areas of Expertise

- Car parking and Traffic.
- Traffic advice and assessment of land uses and development proposals to planning authorities, government agencies, corporations and developers (including major residential, retail, food and drink, commercial, industrial, institutional and mixed use projects).
- Preparation and presentation of evidence before VCAT and Panels.

Expertise to Prepare this Assessment

My experience and expertise over the past 20 years, including involvement with varied forms of developments, qualifies me to comment on the traffic implications of the proposed Amendment.

Instructions

I was instructed by Norton Rose Fulbright on behalf of Department of Health and Human Services to undertake a traffic engineering assessment and prepare an evidence statement for Amendment C177 to the Moonee Valley Planning Scheme.

Amendment C177

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme

Facts, Matters and Assumptions Relied Upon

- Brief provided by Norton Rose Fulbright.
- Exhibited material.
- Design Framework prepared Hayball Architects.
- Site Renewal Traffic and Transport Assessment prepared by Beveridge Williams.
- Submissions.
- Moonee Valley Planning Scheme.
- Site inspection.
- Relevant experience.

Documents Taken into Account

See above.

Identity of Persons Undertaking Work

Jason Walsh as per the evidence statement.

Carlo Morello (Associate, Traffix Group) assisted with preparation of the evidence report.

Summary of Opinions

See Conclusions section of the evidence statement.

P####/2016

Flemington Estate Public Housing Renewal Program: Amendment C177 to the Moonee Valley Planning Scheme