

Our Reference: G31387L-02B

14 May 2024

Yarra City Council
PO Box 168
RICHMOND VIC 3121

Attention: Nina Collins

Dear Nina,

Charlotte Street, Richmond – Temporary Road Closure Assessment Traffic Engineering Assessment

Further to your instructions, please find following our assessment of the traffic and parking conditions during the temporary road closure on Charlotte Street, Richmond. The purpose of this assessment and temporary road closure is to validate the proposal to permanently close Charlotte Street between Church Street and St Crispin Street to construct a new public space.

Background

Traffix Group was engaged in 2022 to conduct a traffic engineering assessment of the proposed road closure of Charlotte Street between Church Street and St Crispin Street, Richmond. This closure was proposed to facilitate the construction of a new public space identified in the Swan Street Streetscape Master Plan as a new 'Civic Library'. The assessment largely concluded that there would be impacts associated with the loss of carparking and the redistribution of traffic (particularly Elm Grove and Charles Street), however these would generally occur within acceptable levels.

Following the above assessment, in February to April 2024, Yarra City Council implemented a temporary road closure to provide a 'Pop Up Park' in the location of the future permanent public space and trial the changes in traffic and parking conditions.

This assessment provides a comparison of traffic and parking conditions prior to the implementation of the Pop Up Park from the 2022 assessment, and data collected during the Pop Up Park trial in March 2024.

Charlotte Street Pop Up Park

The Charlotte Street Pop Up Park (and temporary road closure) commenced on Monday, 5th February, 2024 with the installation of temporary garden beds, benches and a painted pavement mural. An aerial photograph of the Pop Up Park is provided at Figure 1, with photographs of the park at Figure 2 and Figure 3.



Figure 1: Charlotte Street Pop Up Park Aerial Photograph





Figure 2: Charlotte St Pop Up Park – view west



Figure 3: Charlotte Street Pop Up Park – view west



Figure 4: Charlotte Street Pop Up Park - view east



Traffic Engineering Assessment

Intersection Turning Movement Counts

Intersection Turning movement counts were conducted on Thursday, 21st March 2024 between the time periods of 7:30am to 9:30am and 4:30pm to 6:30pm for the following intersections:

- Church Street / Elm Grove,
- Church Street / Swan Street,
- St Crispin Street / Elm Grove,
- St Crispin Street / Charlotte Street,
- St Crispin Street / Swan Street / Lt Lesney Street,
- Charles Street / Elm Grove / McNamara Street,
- Charles Street / Charlotte Street, and
- Charles Street / Swan Street.

An analysis of the existing turning movements revealed that there are two distinct peak time periods for analysis, based on turning movements into / out of the local road network, being:

- 8:00am to 9:00am, and
- 5:30pm to 6:30pm.

Whilst these time periods do not necessarily reflect the peak times of the arterial road network, they are best suited for this assessment.

It is noted that these peak periods are consistent with the peak hours observed during corresponding surveys conducted in 2022.

The turning movement volumes for the two (2) peak periods identified above are summarised below with 2024 results provided at Figure 5 and Figure 7 and 2022 results provided at Figure 6 and Figure 8 for the AM and PM period respectively.

The full turning movement counts data is provided at Appendix A.



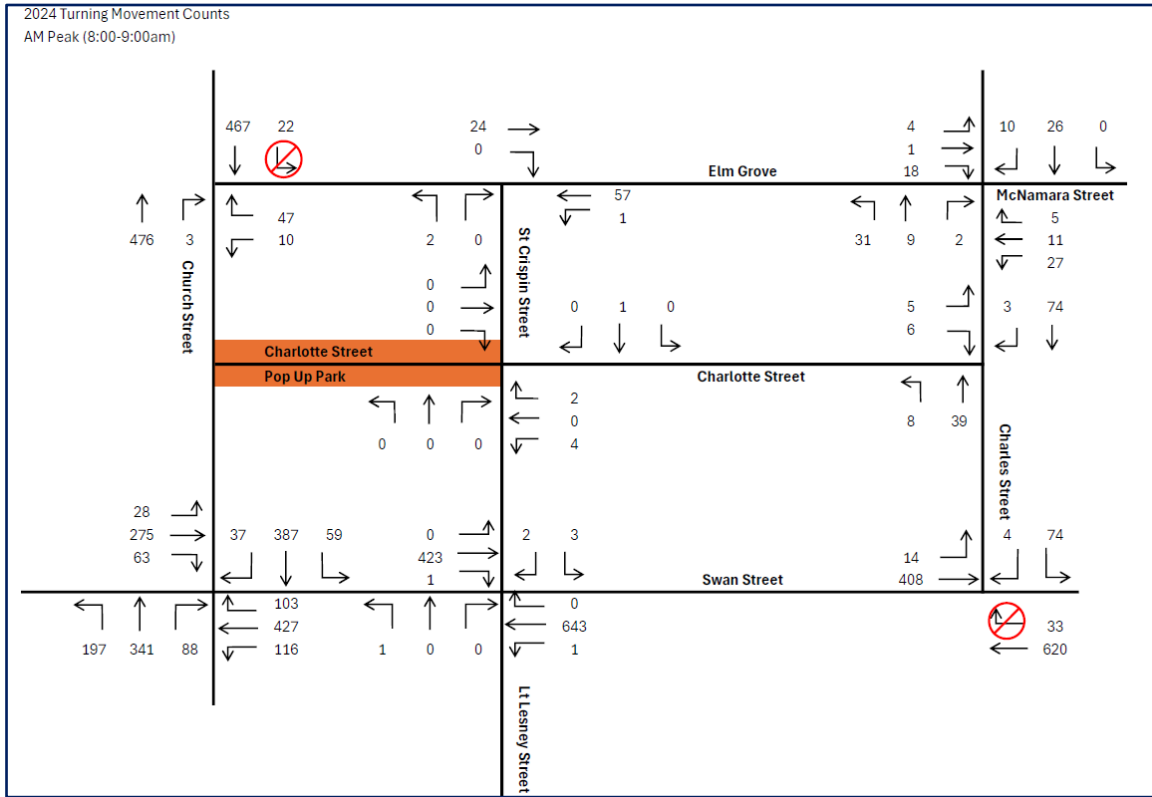


Figure 5: Turning Movement Counts - 2024 AM Peak

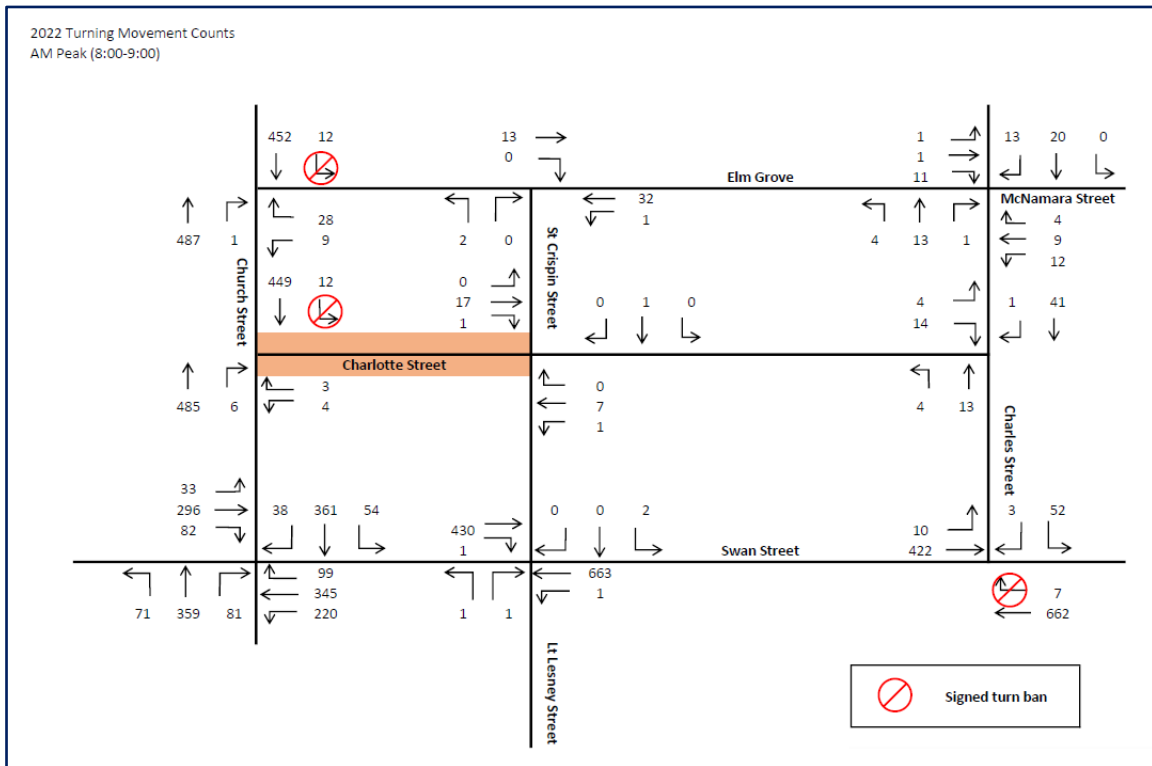


Figure 6: Turning Movement Counts - 2022 AM Peak



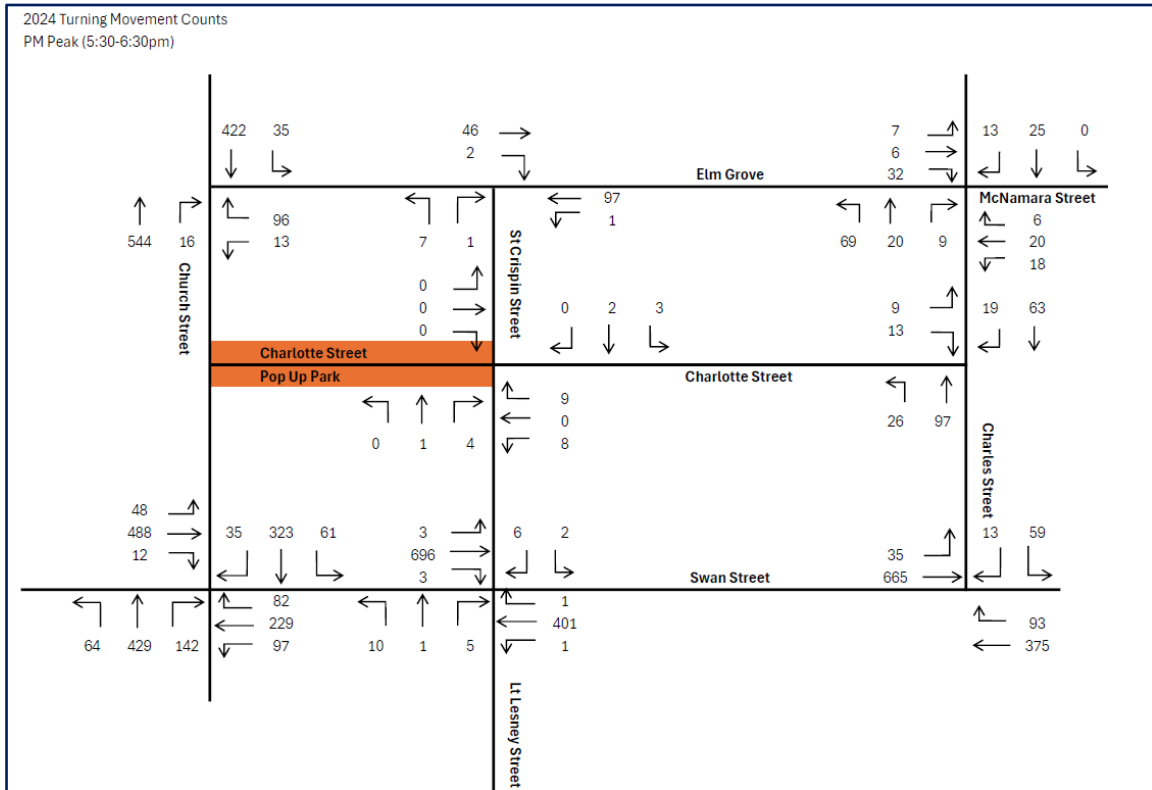


Figure 7: Turning Movement Counts – 2024 PM Peak

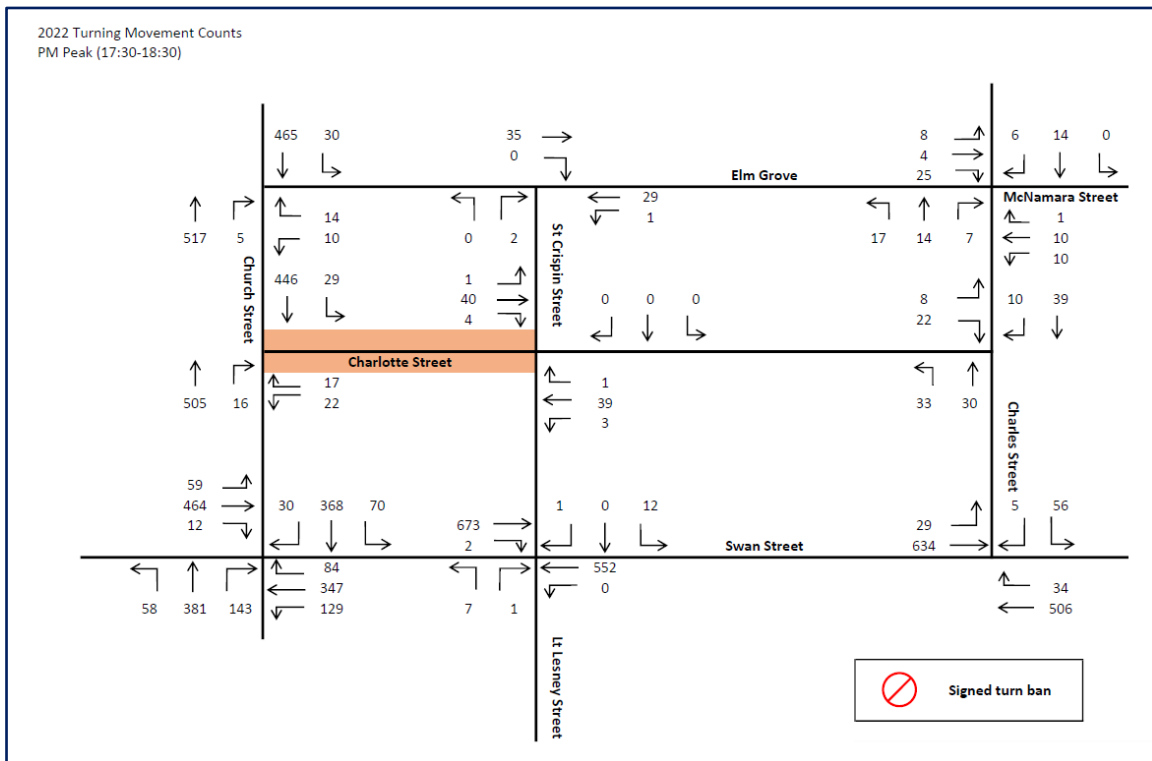


Figure 8: Turning Movement Counts - 2022 PM Peak



Key differences observed between the 2024 and 2022 TMC counts are summarised below:

- **AM Peak**

- Turning movements which contravened the signposted turn restrictions increased by 26 vehicles per hour at the Swan Street / Charles Street intersection and by 10 at the Church Street / Elm Grove intersection.

It is noted however that the 2022 conditions also included left turn movements in contravention of the left turn restriction at Charlotte Street, and when considering the Charlotte Street closure, two (2) fewer illegal left turns from Church Street into the study area occurred in this period,

- 12 additional vehicles were observed turning into Elm Grove from Church Street (1 movement every 5 minutes),
- 30 additional vehicles were observed turning into Charles Street from Swan Street (1 movement every 2 minutes),
- Through movements on Charles Street at the Charles St / Charlotte St intersection increased by 109%, (59 additional movements or approximately one (1) additional movement per minute),
- Negligible change to movements into/out of St Crispin Street, and
- Fewer turning movements into/out of Charles Street.

- **PM Peak**

- 16 additional vehicles were observed turning into Elm Grove from Church Street (1 movement every 4 minutes),
- 65 additional vehicles were observed turning into Charles Street from Swan Street (1 movement every 55 seconds),
- Through movements on Charles Street at the Charles St / Charlotte St intersection increased by 132%, (91 additional movements or approximately one (1) additional movement per 40 seconds),
- A minute change to movements into/out of St Crispin Street, and
- Fewer turning movements into/out of Charlotte Street.

It is worth noting that the data presented above indicated an increase in traffic volumes at several intersections suggesting a number of vehicles turning right from Swan Street into Charles Street then exiting to Church Street at Elm Grove (through traffic). Further investigations were undertaken on Thursday, 2nd May 2024 when Charlotte Street had been reopened to evaluate the above.

Additional Turning Movement Count and Investigations - Thursday, 2nd May 2024

A turning movement count was conducted between 5:30pm and 6:30pm at the intersection of Charles Street and Swan Street on Thursday, 2nd May 2024 (after Charlotte



Street had been reopened). The results of the turning movement count are summarised in Figure 9 below.

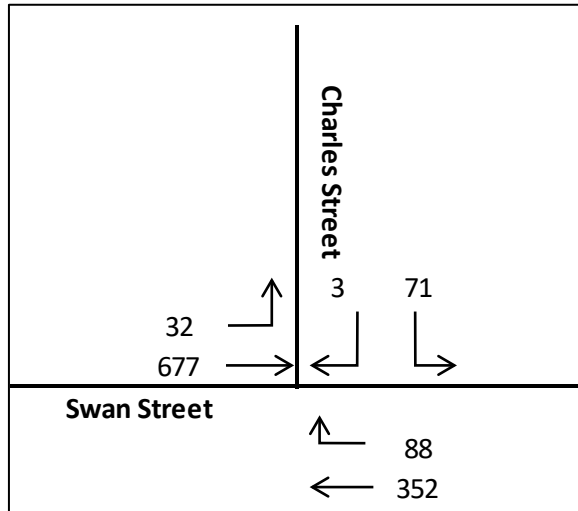


Figure 9: Turning Movement Counts – PM Peak, 02/05/2024

As shown in Figure 7 and Figure 9 above, the traffic volumes at the Charles St / Swan St are very similar between the 2024 Charlotte Street closed and open conditions, demonstrating that since 2022 traffic volumes have changed. Observations undertaken on site indicate that there is significant queuing for westbound traffic on Swan Street and motorists appeared to turn into Charles Street in an attempt to avoid these queues. A review of Google Maps driving directions undertaken at the time confirmed that mapping apps which adapt to live traffic were providing directions to citybound traffic to utilise Charles Street, Elm Grove and Gipps Street as an alternative to Swan Street.



Figure 10: Live Driving Directions – PM Peak, 02/05/2024



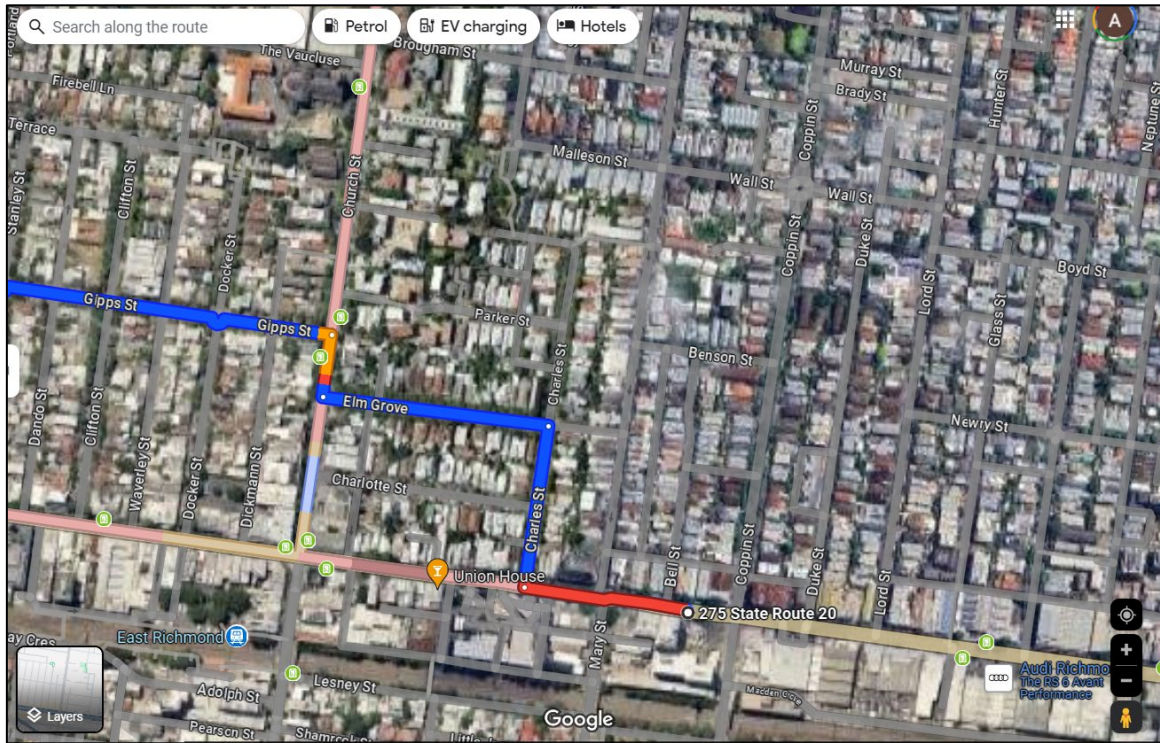


Figure 11: Live Driving Directions – PM Peak, 02/05/2024

In view of the above, and considering the logical access and egress routes for Charlotte Street, the following additional traffic movements (compared to 2022) can be conclusively associated with through traffic avoiding westbound queues on Swan Street:

- Right turn movements from Swan Street (east) into Charles Street,
- Left turn movements from Charles Street (south) to Elm Grove,
- Right turn movements from Elm Grove to Church Street (north),
- Westbound traffic on Elm Grove, and
- Northbound traffic on Charles Street.

We acknowledge that the closure of Charlotte Street will also contribute to the above movements (secondary to through traffic) with the exception of right turn movements from Swan Street (east) into to Charles Street, however to a significantly lesser extent.

Seven (7) Day Traffic Counts

Seven (7) day traffic counts were undertaken between Monday, 18th March 2024 – Sunday, 24th March 2024 (inclusive) at the same locations as the previous survey, with the addition of:

- St Crispin Street, between Elm Grove and Charlotte Street

A summary of traffic count results compared to results from the same locations in 2022 under existing conditions is presented in Table 1.



Table 1: Average Daily Traffic Volumes

Location	2022 Surveys			2024 Surveys		
	NB / EB	SB / WB	Total	NB / EB	SB / WB	Total
Daily Volumes						
Elm Grove – b/w St Crispin St and Charles St	337	378	715	568 (+231)	612 (+234)	1,180 (+465)
Charlotte Street – b/w St Crispin St and Charles St	312	275	587	191 (-121)	288 (+13)	479 (-108)
Charles Street – b/w Parker St and Elm Gr	323	318	641	363 (+40)	351 (+33)	714 (+73)
Charles Street – b/w Elm Gr and Charlotte St	418	523	941	617 (+199)	705 (+182)	1,322 (+381)
Charles Street – b/w Charlotte St and Swan St	567	674	1,241	749 (+182)	746 (+72)	1,495 (+254)
McNamara Street – b/w Charles St and Mary St	64	214	278	120 (+56)	256 (+42)	376 (+98)
St Crispin Street – b/w Elm Gr and Charlotte St	Survey Not Conducted			37	87	124
St Crispin Street – b/w Charlotte St and Swan St	41	66	107	56 (+15)	56 (-10)	112 (+5)
AM Peak Hour Volumes						
Elm Grove – b/w St Crispin St and Charles St	17	25	42	26 (+9)	39 (+14)	65 (+23)
Charlotte Street – b/w St Crispin St and Charles St	17	8	25	10 (-7)	13 (+5)	23 (-2)
Charles Street – b/w Parker St and Elm Gr	12	27	39	16 (+4)	31 (+4)	47 (+8)
Charles Street – b/w Elm Gr and Charlotte St	11	46	57	31 (+20)	71 (+25)	102 (+45)
Charles Street – b/w Charlotte St and Swan St	15	56	71	36 (+21)	75 (+19)	111 (+40)
McNamara Street – b/w Charles St and Mary St	0	20	20	7 (+7)	40 (+20)	47 (+27)
St Crispin Street – b/w Elm Gr and Charlotte St	Survey Not Conducted			1	3	4



Location	2022 Surveys			2024 Surveys		
	NB / EB	SB / WB	Total	NB / EB	SB / WB	Total
St Crispin Street – b/w Charlotte St and Swan St	0	2	2	0 (+0)	3 (+1)	3 (+1)
PM Peak Hour Volumes						
Elm Grove – b/w St Crispin St and Charles St	36	29	65	55 (+19)	70 (+41)	125 (+60)
Charlotte Street – b/w St Crispin St and Charles St	26	28	54	16 (-10)	32 (+4)	48 (-6)
Charles Street – b/w Parker St and Elm Gr	28	22	50	33 (+5)	25 (+3)	58 (+8)
Charles Street – b/w Elm Gr and Charlotte St	36	41	77	78 (+42)	66 (+25)	144 (+67)
Charles Street – b/w Charlotte St and Swan St	57	57	114	96 (+39)	67 (+10)	163 (+49)
McNamara Street – b/w Charles St and Mary St	11	20	31	12 (+1)	26 (+6)	38 (+7)
St Crispin Street – b/w Elm Gr and Charlotte St	Survey Not Conducted			5	4	9
St Crispin Street – b/w Charlotte St and Swan St	3	4	7	2 (-1)	4 (+0)	6 (-1)

As part of the 2022 assessment, an estimated increase in traffic on Elm Grove and Charles Street was predicted as a result of the partial closure of Charlotte Street. A comparison of the predicted and observed post closure traffic volumes is presented at Table 2.

Table 2: Daily Traffic Volume - Predicted v Observed Increase

Road	Predicted Traffic Volume (Average Weekday)	Observed Traffic Volume (Average Weekday)
Elm Grove	1,150vpd	1,180vpd (+30)
Charles Street – Elm Gr to Charlotte St	1,450vpd	1,322vpd (-128)
Charles Street – Charlotte St to Swan St	1,335vpd	1,495vpd (+160)



Based on the above, and as was predicted in our previous assessment, neither Elm Grove nor Charles Street have exceeded their environmental capacity as a result of the road closure.

The 'environmental capacity' of a road is the theoretical point in which increases in traffic volume begin to degrade its amenity and is typically much lower than the actual capacity of the road, or how much traffic it could physically accommodate. In this instance the environmental capacities of Elm Grove and Charles Street are in the order of 3,000 vehicles per day.

As noted above, part of the increased traffic volumes on Elm Grove and Charles Street can be attributed to external factors, and the increase in traffic volumes are not solely attributed to the closure of Charlotte Street. Furthermore, the increased traffic volumes recorded on Charles Street north of Elm Grove indicate that there has been a small increase in traffic volumes on the local road network (as this part of the network is effectively a 'closed' loop, and cannot be influenced by the arterial road network).

In view of the above, the actual traffic volumes redistributed as a result of the Charlotte Street closure is less than our previous conservative estimate. This validates our experience with local road closures in other areas (a previous example being The Esplanade in Altona) where the full quantum of traffic on the subject section of road is not fully redistributed (traffic increases on adjacent roads at a level lower than the full traffic volume on the subject road).

Parking Conditions

Spot parking surveys of the study area, as shown in Figure 12 below, were undertaken at the following times, and similar to the periods that were previously assessed:

- 2:00pm and 6:30pm on Saturday, 23 March, 2024, and
- 9:30am, 11:30am, 1:30pm, 4pm and 6:30pm on Tuesday, 26 March 2024.

With four (4) car parking spaces on the north side of Charlotte Street removed to facilitate the Pop Up Park, the available car parking spaces in the study area reduced from 229 to 227, noting that one (1) additional car parking space was identified in the Library car park and on Church Street, respectively, compared to the 2022 study.

Car parking restrictions generally remained consistent between the 2022 and 2024 parking surveys, with the following exceptions:

- Eight (8) spaces on the western side of Church Street changed from a '2P' restriction to a '2P Meter' restriction,
- Four (4) spaces in St Crispin Street changed from 'Permit Zone' to 'No Stopping Authorised Council Vehicles Authorised', and
- One (1) '1P Disabled Only' space on the south side of Elm Grove changed to a Works Zone restriction.

Despite this, the alterations to parking restrictions are not expected to have significance when comparing car parking occupancy from 2022 to 2024.





Figure 12: Parking Survey Area

Table 3 below presents a comparison of the 2022 and 2024 parking survey results for the overall study area.

Table 3: Car Parking Survey Results Summary

Survey Time	2022 Survey			2024 Survey		
	Vacant Spaces	Parked Cars	% Occupancy	Vacant Spaces	Parked Cars	% Occupancy
Weekday 9:30am	104	125	55%	92	133	59%
Weekday 11:30am	67	162	71%	68	159	70%
Weekday 1:30pm	60	169	74%	71	156	69%
Weekday 4pm	57	146	72%	56	146	72%
Weekday 6:30pm	18	211	92%	17	210	93%
Weekend 2pm	71	158	69%	35	192	85%
Weekend 6:30pm	7	222	97%	29	198	87%

As can be seen above, the parking conditions between the 2022 and 2024 parking surveys in the area are generally similar, with variances generally less than 10%. The biggest change between the two survey periods was observed on the weekend periods with the Saturday afternoon recording a higher occupancy of around 16% in 2024, however a lower occupancy was recorded in 2024 for the Saturday evening.



Overall, the peak occupancies were near similar between 2022 and 2022 despite occurring at different times. Thus we are of the view that the small loss of parking spaces in relation to the pop up pocket park has not had any significant impact on parking conditions in the study area.

Origin – Destination Surveys

Origin – destination surveys were conducted within the survey area on Thursday, 21st March 2024 between 7:30am-9:30am to assess the travel paths of vehicles turning into Elm Grove from Church Street. This includes a focus on left turn movements at the intersection which are in contravention to the posted turn restriction between the survey periods.

OD surveys capture the movement of individual vehicles between points to determine the volumes of vehicles along defined routes. This is typically done by ‘matching’ vehicle numberplates at each station, with up to a 30 minute allowance for the travel time between points. The location of the node points where vehicle movements were captured is shown in Figure 13.

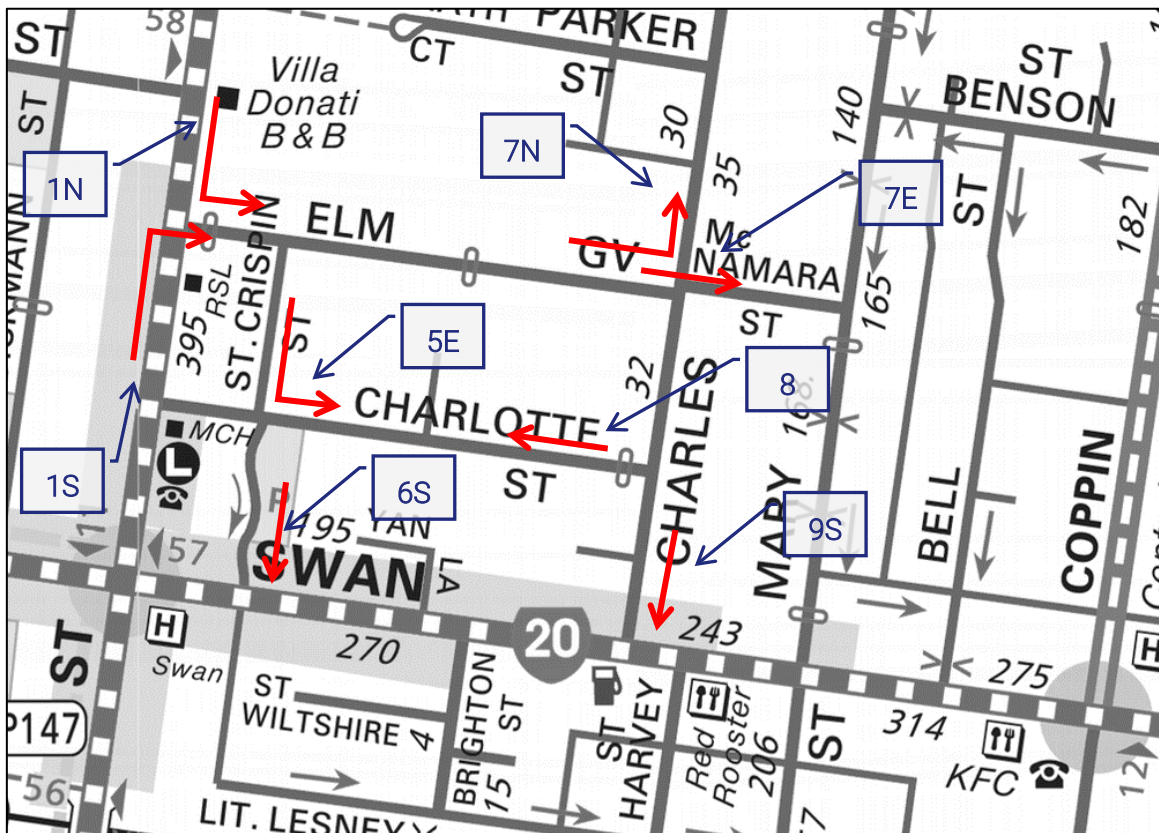


Figure 13: O-D Survey Nodes

An initial review of the origin destination surveys of the period of 8:00am to 9:00am indicates that of the 22 left turn movements and 3 right turn movements into Elm Grove from Church Street, 20 were matched at various nodes as shown in Figure 14 below. For the 5 vehicles that were not matched, it is possible that they parked on Elm Grove or equally were not matched for other reasons.



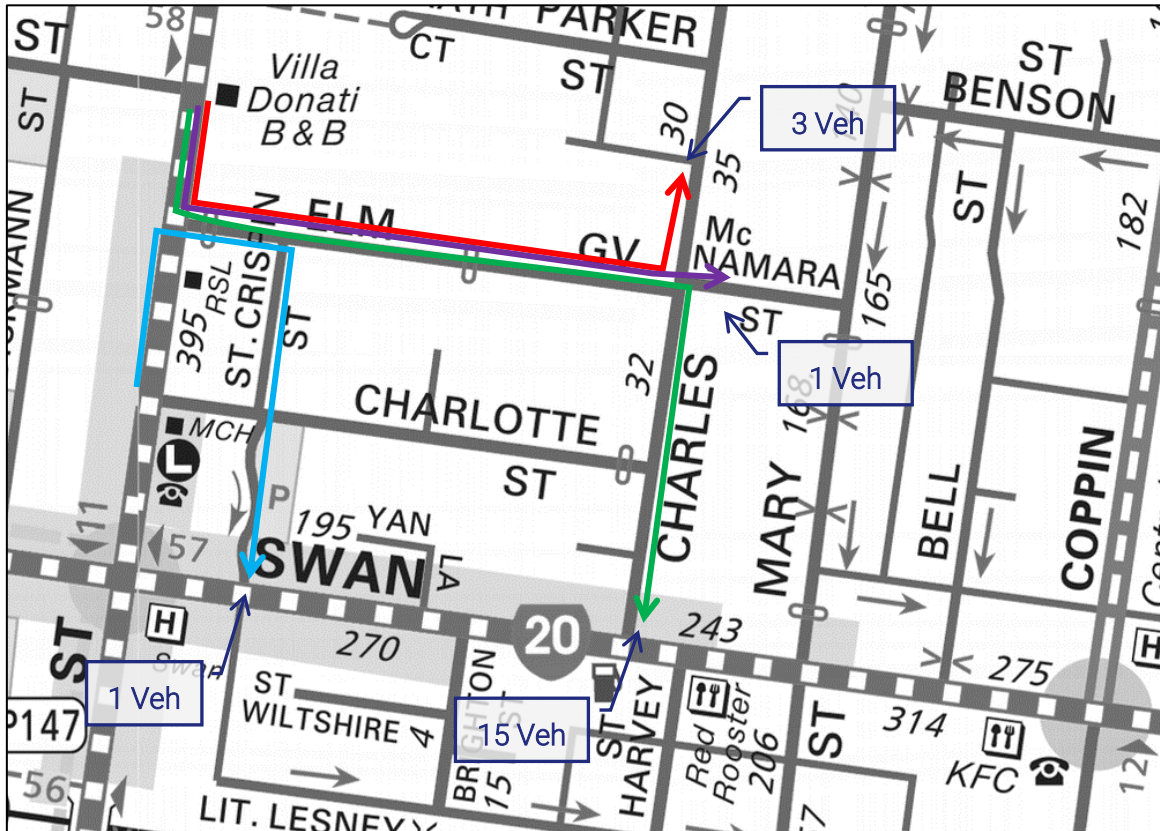


Figure 14: O-D Vehicle Travel Paths – 8:00am to 9:00am

As shown above, the principal travel route was vehicles turning left from Church Street then travelling through the local road network to exit to Swan Street via Charles Street. It is worth noting that this equates to 1 vehicle every four (4) minutes conducting this movement and is not of a significant level of concern.

Council could choose to refer the turn restriction to Victoria Police for enforcement, however in practice, there will always be some level of non compliance.

Assessment of One-Way on St Crispin Street

We understand that Council wish for us to consider the proposal for a one way traffic restriction on St Crispin Street between Charlotte Street and Elm Grove (noting the section between Charlotte Street and Swan Street is already limited to southbound only).

In consideration of the above, we note the following:

- St Crispin Street effectively operates as a laneway due to its narrow width and purpose in providing rear property access,
- The daily traffic volume recorded during the 2024 road closure was 124 vehicles per day, with a peak hour volume of 13 vehicles per hour,
- There is minimal likelihood of vehicles travelling in both directions conflicting based on the very low traffic volumes recorded (1 vehicle per 7 minutes),



- The turning movement intersection counts at either end of St Crispin Street saw very minor differences between the 2022 and 2024 road closure conditions, and,
- Its context within the local road network.

In view of the above, we do not consider it necessary to provide a one way traffic restriction along the subject length of St Crispin Street and are of the opinion that Council could retain the existing arrangements. We note however that as St Crispin Street primarily provides local property access, Council could consult with relevant property owners on the traffic arrangements for further review. We consider that a southbound one way restriction would be more appropriate than a northbound restriction in order to provide access to the north end of Charlotte Street, noting that the southern section of St Crispin Street already provides a one way southbound restriction. This is also reflected in the existing direction split of traffic for the northern section of St Crispin Street which has a 30% northbound and 70% southbound split across the day.

Assessment of Swan St / Charles St Turn Ban

We understand that Council wish for us to review the right turn restriction at the intersection of Swan Street and Charles Street. This right turn restriction currently prohibits right turn movements from Swan Street into Charles Street between 7:30am and 9:30am, Monday to Friday and has historically been in place for at least 15 years.

We expect that the right turn movement principally serves to dissuade through traffic from utilising the local network as an alternative to the arterial road network during the morning peak period.

As noted previously, the 2024 surveys saw an increase in right turn movements at the Swan Street / Charles Street intersection both during the time of the right turn restriction and during the PM peak. As noted previously, live traffic driving directions are contributing to these increases, and not the closure of Charlotte Street.

Council may need to further investigate this matter with the responsible software developers and consider measures to reduce the local road network being used as an alternative to the arterial road network, however in reviewing the suitability of the existing turn ban we note the following:

- The increase in non-compliance may warrant a referral to Victoria Police to conduct enforcement and reduce the instances of non-compliance with the turn ban,
- The right turn movement in the PM peak period has also increased however:
 - Some of these movements would comprise of residents returning to their dwellings within the local road network,
 - A right turn restriction does not allow for exemptions based on residence, and
 - If right turn movements were not permitted at this location in the PM peak, they would then occur at the Swan Street / Church Street intersection and may result in a further subsequent increase in queues and delays.
- Swan Street includes a shared tram lane and increased right turn movements at the Swan Street / Church Street intersection may result in increased delay to tram services. However, increased enforcement or extension of the existing right turn restrictions may



result in additional delays to tram services instead occurring at the Swan Street and Church Street intersection.

We recommend that Council consult with Yarra Trams, DTP, the relevant software developers (Google Maps/Apple Maps) and residents regarding right turn movements at this location in view of the above, and further investigations/measures may be warranted to address issues associated with the increase in westbound right turn movements into Charles Street.

Other Impacts

Church St / Swan St Intersection

We note that turning movements at the intersection of Church Street and Swan Street have not varied significantly between the two survey periods, with the exception of through movements for the arterial roads. It is noted that traffic volumes may vary day to day on the wider arterial road network and thus these variations are acceptable.

Critically, the right turn movements from Swan Street to Church Street (and vice versa) have not varied significantly, and thus the road closure on Charlotte Street has had little impact on this intersection.

We note that despite the limited change to traffic volumes, queues associated with westbound traffic have increased.

Conclusion

Having undertaken an assessment of the traffic and parking conditions during the Charlotte Street Pop Up Pocket Park (local road closure) at Charlotte Street, Richmond, we are of the opinion that:

- a) the temporary road closure generally saw changes in traffic conditions consistent with our previous assessment conducted in 2022. The key exception being an increase in vehicles turning right onto Charles Street from Swan Street to then turn right into Church Street from Elm Street due to increased congestion in Swan Street and live traffic mapping apps advising motorists to detour via the local streets,
- b) the increased daily traffic volumes on Elm Grove and Charles Street are still within their environmental capacity,
- c) there were no significant changes to parking conditions,
- d) there was no significant changes to the intersection of Church Street and Swan Street as a result of the road closure,
- e) the Origin – Destination surveys confirm that most of the left turn movements from Church Street into Elm Grove during the AM Peak (against the left turn ban) then utilise the local road network to access Swan Street via Charles Street,
- f) A one-way traffic restriction on the northern section of St Crispin Street is not required based on the very low traffic volumes along the road, which functionally operates as a laneway,



- g) Council may wish to review in more detail the status of the Swan Street / Charles Street right turn restriction in consultation with Yarra Trams and local residents, and
- h) Further to our previous assessment, the temporary local road closure of Charlotte Street has demonstrated that traffic and parking conditions do not deteriorate to such a level that a permanent arrangement is not feasible.





Appendix A

Intersection Turning Movement Counts

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Elm Gr and Church St, East Richmond

GPS -37.824385, 144.998173

Date:	Thu 21/03/24
Weather:	Overcast
Suburban:	East Richmond
Customer:	Traffic

North:	Church St
East:	Elm Gr
South:	Church St
West:	N/A

Survey Period	AM: 7:30 AM-9:30 AM
	PM: 4:30 PM-6:30 PM
Traffic Peak	AM: 8:15 AM-9:15 AM
	PM: 4:30 PM-5:30 PM

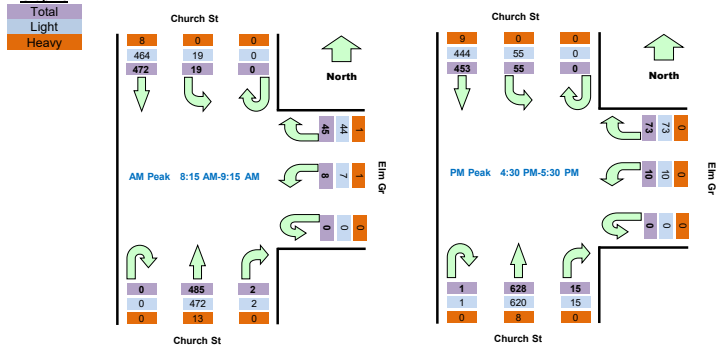
All Vehicles

Time		North Approach Church St			East Approach Elm Gr			South Approach Church St			Hourly Total	
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	Hour	Peak
7:30	7:45	0	105	3	0	3	1	0	0	106	985	
7:45	8:00	0	114	4	0	7	1	0	1	125	1006	
8:00	8:15	1	112	7	0	11	3	0	1	115	1026	
8:15	8:30	0	116	2	0	21	3	0	1	122	1031	Peak
8:30	8:45	0	109	5	0	6	1	0	1	117	1005	
8:45	9:00	0	130	8	0	9	3	0	0	122		
9:00	9:15	0	117	4	0	9	1	0	0	124		
9:15	9:30	0	113	2	0	6	2	0	2	114		
16:30	16:45	0	108	10	0	13	1	0	1	153	1235	Peak
16:45	17:00	0	122	17	0	15	5	0	7	154	1227	
17:00	17:15	0	105	15	0	19	3	0	4	145	1192	
17:15	17:30	0	118	13	0	26	1	1	3	176	1184	
17:30	17:45	0	99	12	0	26	2	0	3	136	1127	
17:45	18:00	0	91	5	0	16	3	1	5	164		
18:00	18:15	0	120	8	0	25	2	0	4	124		
18:15	18:30	0	112	10	0	29	6	0	4	120		

Peak Time		North Approach Church St			East Approach Elm Gr			South Approach Church St			Peak total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	total
8:15	9:15	0	472	19	0	45	8	0	2	485	1031
16:30	17:30	0	453	55	0	73	10	1	15	628	1235

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic



TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Charlotte St and Church St, East Richmond

GPS -37.825027, 144.998078

Date:	Thu 21/03/24
Weather:	Overcast
Suburban:	East Richmond
Customer:	Traffic

North:	Church St
East:	Charlotte St
South:	Church St
West:	N/A

Survey Period	AM: 7:30 AM-9:30 AM
	PM: 4:30 PM-6:30 PM
Traffic Peak	AM: 8:00 AM-9:00 AM
	PM: 4:30 PM-5:30 PM

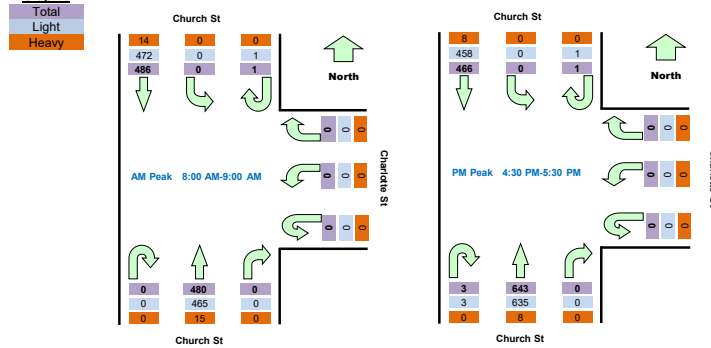
All Vehicles

Time		North Approach Church St			East Approach Charlotte St			South Approach Church St			Hourly Total	
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	Hour	Peak
7:30	7:45	0	100	0	0	0	0	0	0	104	919	
7:45	8:00	0	106	0	0	0	0	0	0	125	939	
8:00	8:15	0	127	0	0	0	0	0	0	119	967	Peak
8:15	8:30	0	117	0	0	0	0	0	0	121	963	
8:30	8:45	0	106	0	0	0	0	0	0	118	964	
8:45	9:00	1	136	0	0	0	0	0	0	122		
9:00	9:15	0	117	0	0	0	0	0	0	125		
9:15	9:30	0	120	0	0	0	0	0	0	119		
16:30	16:45	0	111	0	0	0	0	0	0	158	1113	Peak
16:45	17:00	0	127	0	0	0	0	0	0	157	1085	
17:00	17:15	0	105	0	0	0	0	2	0	155	1064	
17:15	17:30	1	123	0	0	0	0	1	0	173	1050	
17:30	17:45	0	99	0	0	0	0	0	0	142	992	
17:45	18:00	0	97	0	0	0	0	0	0	166		
18:00	18:15	0	120	0	0	0	0	0	0	128		
18:15	18:30	0	116	0	0	0	0	0	0	124		

Peak Time		North Approach Church St			East Approach Charlotte St			South Approach Church St			Peak total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	total
8:00	9:00	1	486	0	0	0	0	0	0	480	967
16:30	17:30	1	466	0	0	0	0	3	0	643	1113

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic



TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au



Intersection of Swan St and Church St, East Richmond

GPS -37.825677, 144.997922

Date:	Thu 21/03/24
Weather:	Overcast
Suburban:	East Richmond
Customer:	Traffix

North:	Church St
East:	Swan St
South:	Church St
West:	Swan St

Survey Period	AM: 7:30 AM-9:30 AM
	PM: 4:30 PM-6:30 PM
Traffic Peak	AM: 7:30 AM-8:30 AM
	PM: 4:45 PM-5:45 PM

All Vehicles

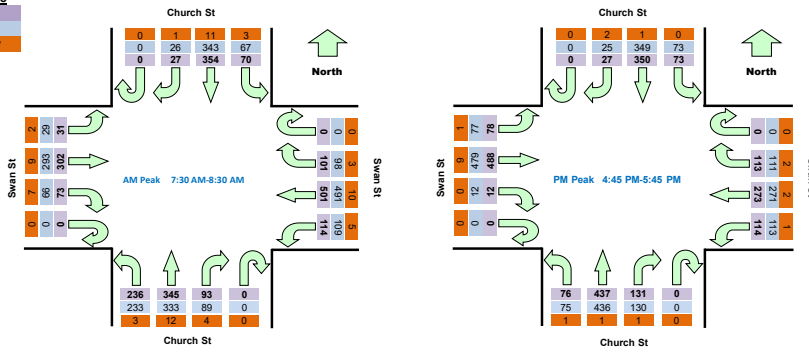
Time		North Approach Church St				East Approach Swan St				South Approach Church St				West Approach Swan St				Hourly Total	Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:30	7:45	0	5	85	13	0	27	131	29	0	20	90	63	0	24	79	10	2247	Peak
7:45	8:00	0	7	81	16	0	23	151	34	0	24	100	69	0	18	85	6	2216	
8:00	8:15	0	10	96	23	0	27	103	28	0	31	90	48	0	18	79	4	2121	
8:15	8:30	0	5	92	18	0	24	116	23	0	18	65	56	0	13	59	11	2073	
8:30	8:45	0	12	83	9	0	31	114	32	0	20	97	54	0	14	75	4	2062	
8:45	9:00	0	10	116	9	0	21	94	33	0	19	89	39	0	18	62	9		
9:00	9:15	0	16	85	13	0	24	87	37	0	23	83	54	0	24	50	13		
9:15	9:30	0	12	108	11	0	26	87	32	0	26	84	38	0	15	42	8		
16:30	16:45	0	7	91	13	0	32	54	23	0	35	107	13	0	1	99	19	2136	
16:45	17:00	0	6	103	10	0	22	78	38	0	27	110	22	0	4	118	21	2172	Peak
17:00	17:15	0	7	87	15	0	28	71	25	0	36	110	22	0	3	109	21	2123	
17:15	17:30	0	10	90	29	0	37	62	25	0	24	114	14	0	5	118	21	2089	
17:30	17:45	0	4	70	19	0	26	62	26	0	44	103	18	0	0	143	15	2010	
17:45	18:00	0	15	70	16	0	16	44	19	0	44	142	14	0	3	119	8		
18:00	18:15	0	7	100	13	0	22	66	28	0	25	103	18	0	3	109	6		
18:15	18:30	0	9	83	13	0	18	57	24	0	29	81	14	0	6	117	19		

Peak Time		North Approach Church St				East Approach Swan St				South Approach Church St				West Approach Swan St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:30	8:30	0	27	354	70	0	101	501	114	0	93	345	236	0	73	302	31	2247	
16:45	17:45	0	27	350	73	0	113	273	114	0	131	437	76	0	12	488	78	2172	

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Church St				East Approach Swan St				South Approach Church St				West Approach Swan St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:30	7:45	0	5	83	13	0	26	130	27	0	19	87	62	0	20	76	9
7:45	8:00	0	7	77	15	0	23	147	33	0	23	97	68	0	17	84	6
8:00	8:15	0	9	93	21	0	27	100	27	0	30	86	48	0	17	76	4
8:15	8:30	0	5	90	18	0	22	114	22	0	17	63	55	0	12	57	10
8:30	8:45	0	11	79	9	0	31	114	32	0	20	93	53	0	13	73	4
8:45	9:00	0	10	115	9	0	21	94	33	0	19	88	39	0	18	60	8
9:00	9:15	0	14	85	13	0	23	87	37	0	23	82	54	0	23	44	13
9:15	9:30	0	12	105	11	0	23	84	31	0	23	82	37	0	12	38	8
16:30	16:45	0	6	91	13	0	32	54	21	0	35	107	13	0	1	98	19
16:45	17:00	0	6	102	10	0	22	77	38	0	27	109	21	0	4	115	21
17:00	17:15	0	7	87	15	0	27	71	25	0	35	110	22	0	3	105	21
17:15	17:30	0	9	90	29	0	36	61	25	0	24	114	14	0	5	116	20
17:30	17:45	0	3	70	19	0	26	62	25	0	44	103	18	0	0	143	15
17:45	18:00	0	13	70	16	0	16	44	19	0	42	141	14	0	3	116	8
18:00	18:15	0	7	100	13	0	22	65	28	0	25	103	18	0	3	109	6
18:15	18:30	0	7	83	11	0	17	57	24	0	29	80	14	0	5	115	19

Peak Time		North Approach Church St				East Approach Swan St				South Approach Church St				West Approach Swan St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:30	8:30	0	26	343	67	0	98	491	109	0	89	333	233	0	66	293	29	2177
16:45	17:45	0	25	349	73	0	111	271	113	0	130	436	75	0	12	479	77	2151

Heavy Vehicles

Time		North Approach Church St				East Approach Swan St				South Approach Church St				West Approach Swan St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:30	7:45	0	0	2	0	0	1	1	2	0	1	3	1	0	4	3	1
7:45	8:00	0	0	4	1	0	0	4	1	0	1	3	1	0	1	1	0
8:00	8:15	0	1	3	2	0	0	3	1	0	1	4	0	0	1	3	0
8:15	8:30	0	0	2	0	0	2	2	1	0	1	2	1	0	1	2	1
8:30	8:45	0	1	4	0	0	0	0	0	0	0	4	1	0	1	2	0
8:45	9:00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	1
9:00	9:15	0	2	0	0	0	1	0	0	0	0	1	0	0	1	6	0
9:15	9:30	0	0	3	0	0	3	3	1	0	3	2	1	0	3	4	0
16:30	16:45	0	1	0	0	0	0	0	2	0	0	0	0	0	0	1	0
16:45	17:00	0	0	1	0	0	0	1	0	0	0	1	1	0	0	3	0
17:00	17:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	4	0
17:15	17:30	0	1	0	0	0	1	1	0	0	0	0	0	0	0	2	1
17:30	17:45	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
17:45	18:00	0	2	0	0	0	0	0	0	0	2	1	0	0	0	3	0
18:00	18:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
18:15	18:30	0	2	0	2	0	1	0	0	0	0	1	0	0	1	2	0

Peak Time		North Approach Church St				East Approach Swan St				South Approach Church St				West Approach Swan St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:30	8:30	0	1	11	3	0	3	10	5	0	4	12	3	0	7	9	2	70
16:45	17:45	0	2	1	0	0	2	2	1	0	1	1	1	0	0	9	1	21

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au



Intersection of Elm Gr and St Crispin St, East Richmond

GPS -37.824446, 144.998659

Date:	Thu 21/03/24
Weather:	Overcast
Suburban:	East Richmond
Customer:	Traffic

North:	N/A
East:	Elm Gr
South:	St Crispin St
West:	Elm Gr

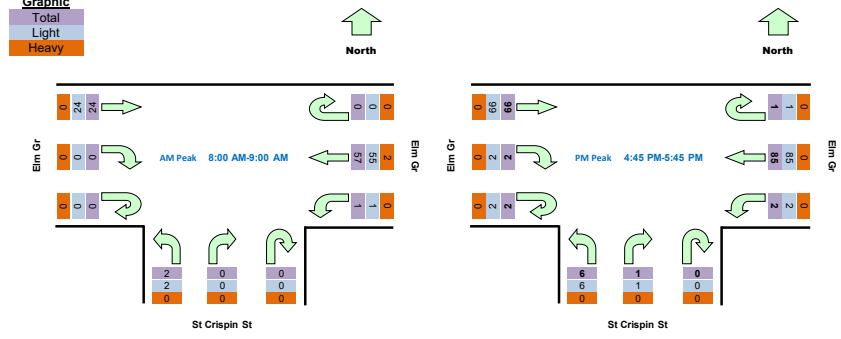
Survey Period	AM: 7:30 AM-9:30 AM
	PM: 4:30 PM-6:30 PM
Traffic Peak	AM: 8:00 AM-9:00 AM
	PM: 4:45 PM-5:45 PM

All Vehicles

Time		East Approach Elm Gr			South Approach St Crispin S			West Approach Elm Gr			Hourly Total	
Period Start	Period End	U	WB	L	U	R	L	U	R	EB	Hour	Peak
7:30	7:45	0	4	0	0	0	0	0	0	4	70	
7:45	8:00	0	8	0	0	0	0	0	0	5	76	
8:00	8:15	0	14	0	0	0	1	0	0	7	84	Peak
8:15	8:30	0	24	0	0	0	0	0	0	3	78	
8:30	8:45	0	6	1	0	0	1	0	0	6	63	
8:45	9:00	0	13	0	0	0	0	0	0	8		
9:00	9:15	0	10	1	0	0	0	0	0	5		
9:15	9:30	0	8	0	0	0	0	0	3	1		
16:30	16:45	0	12	1	0	0	1	0	0	12	149	
16:45	17:00	0	19	1	0	0	0	0	2	19	165	Peak
17:00	17:15	0	19	1	0	0	0	1	0	17	156	
17:15	17:30	0	25	0	0	0	2	0	0	17	157	
17:30	17:45	1	22	0	0	1	4	1	0	13	157	
17:45	18:00	0	20	0	0	0	1	0	1	10		
18:00	18:15	0	26	1	0	0	1	0	1	10		
18:15	18:30	0	29	0	0	0	1	1	0	13		

Peak Time		East Approach Elm Gr			South Approach St Crispin S			West Approach Elm Gr			Peak
Period Start	Period End	U	WB	L	U	R	L	U	R	EB	total
8:00	9:00	0	57	1	0	0	2	0	0	24	84
16:45	17:45	1	85	2	0	1	6	2	2	66	165

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.



TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Charlotte St and St Crispin St, East Richmond

GPS -37.825080, 144.998539

Date:	Thu 21/03/24
Weather:	Overcast
Suburban:	East Richmond
Customer:	Trafix

North:	St Crispin St
East:	Charlotte St
South:	St Crispin St
West:	Charlotte St

Survey Period	AM: 7:30 AM-9:30 AM
	PM: 4:30 PM-6:30 PM
Traffic Peak	AM: 8:30 AM-9:30 AM
	PM: 5:30 PM-6:30 PM

All Vehicles

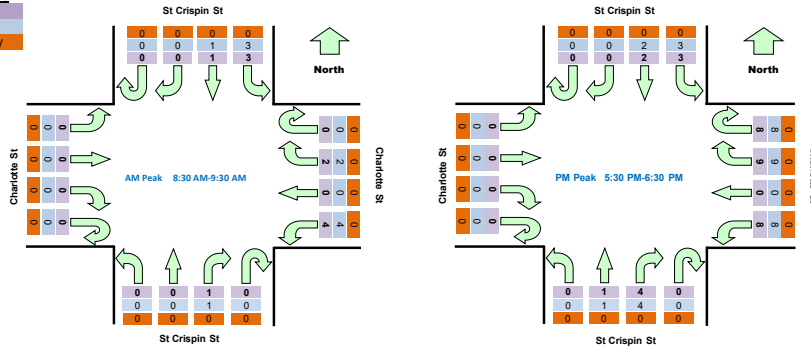
Time		North Approach St Crispin St				East Approach Charlotte St				South Approach St Crispin St				West Approach Charlotte St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:30	7:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	
7:45	8:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8	
8:00	8:15	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	8	
8:15	8:30	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	6	
8:30	8:45	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	11	Peak
8:45	9:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
9:00	9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15	9:30	0	0	0	3	0	1	0	1	0	1	0	0	0	0	0	0		
16:30	16:45	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	15	
16:45	17:00	0	0	0	3	1	0	0	3	0	0	0	0	0	0	0	0	23	
17:00	17:15	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	21	
17:15	17:30	0	0	0	0	1	2	0	1	0	0	0	0	0	0	0	0	26	
17:30	17:45	0	0	1	0	1	6	0	1	0	0	0	0	0	0	0	0	35	Peak
17:45	18:00	0	0	0	1	2	1	0	1	0	0	0	0	0	0	0	0		
18:00	18:15	0	0	0	2	1	1	0	2	0	2	0	0	0	0	0	0		
18:15	18:30	0	0	1	0	4	1	0	4	0	2	1	0	0	0	0	0		

Peak Time		North Approach St Crispin St				East Approach Charlotte St				South Approach St Crispin St				West Approach Charlotte St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
8:30	9:30	0	0	1	3	0	2	0	4	0	1	0	0	0	0	0	0	11
17:30	18:30	0	0	2	3	8	9	0	8	0	4	1	0	0	0	0	0	35

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Swan St and St Crispin St, East Richmond

GPS -37.825719, 144.998424

Date:	Thu 21/03/24
Weather:	Overcast
Suburban:	East Richmond
Customer:	Trafix

North:	St Crispin St
East:	Swan St
South:	Little Lesney St
West:	Swan St

Survey Period	AM: 7:30 AM-9:30 AM
	PM: 4:30 PM-6:30 PM
Traffic Peak	AM: 7:30 AM-8:30 AM
	PM: 4:45 PM-5:45 PM

All Vehicles

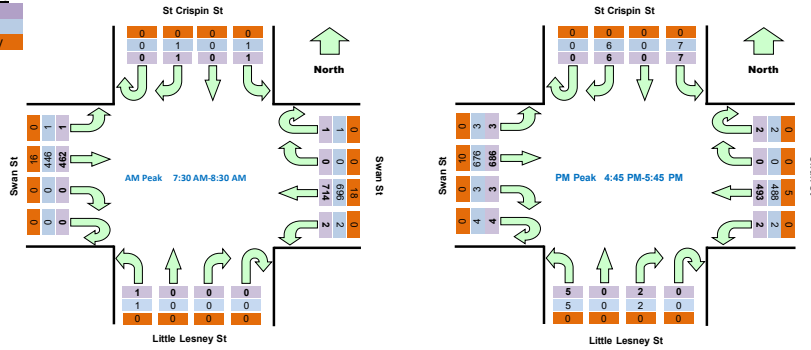
Time		North Approach St Crispin St				East Approach Swan St				South Approach Little Lesney St				West Approach Swan St				Hourly Total	Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:30	7:45	0	0	0	0	0	0	189	0	0	0	0	0	0	0	114	0	1183	Peak
7:45	8:00	0	0	0	1	1	0	205	1	0	0	0	1	0	0	120	1	1177	
8:00	8:15	0	1	0	0	0	0	174	1	0	0	0	0	0	0	132	0	1074	
8:15	8:30	0	0	0	0	0	0	146	0	0	0	0	0	0	0	96	0	999	
8:30	8:45	0	1	0	2	0	0	188	0	0	0	0	0	0	1	105	0	981	
8:45	9:00	0	0	0	1	0	0	135	0	0	0	0	1	0	0	90	0		
9:00	9:15	0	0	0	0	0	0	149	1	0	0	0	0	0	1	82	0		
9:15	9:30	0	0	0	1	1	0	144	0	0	0	0	0	0	0	77	1		
16:30	16:45	0	0	0	0	0	0	107	0	0	0	0	1	5	0	142	0	1134	
16:45	17:00	0	1	0	3	0	0	134	1	0	0	0	1	0	2	151	1	1213	Peak
17:00	17:15	0	1	0	2	0	0	131	1	0	0	0	0	1	0	158	1	1182	
17:15	17:30	0	2	0	1	0	0	115	0	0	1	0	2	2	0	167	0	1154	
17:30	17:45	0	2	0	1	2	0	113	0	0	1	0	2	1	1	210	1	1137	
17:45	18:00	0	1	0	0	0	1	81	0	0	1	0	2	0	2	175	0		
18:00	18:15	0	0	0	0	1	0	108	0	0	1	0	4	0	0	152	1		
18:15	18:30	0	3	0	1	4	0	99	1	0	2	1	2	0	0	159	1		

Peak Time		North Approach St Crispin St				East Approach Swan St				South Approach Little Lesney St				West Approach Swan St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Peak total
7:30	8:30	0	1	0	1	1	0	714	2	0	0	0	1	0	0	462	1	1183
16:45	17:45	0	6	0	7	2	0	493	2	0	2	0	5	4	3	686	3	1213

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach St Crispin St				East Approach Swan St				South Approach Little Lesney St				West Approach Swan St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:30	7:45	0	0	0	0	0	0	185	0	0	0	0	0	0	0	110	0
7:45	8:00	0	0	0	1	1	0	200	1	0	0	0	1	0	0	117	1
8:00	8:15	0	1	0	0	0	0	170	1	0	0	0	0	0	0	126	0
8:15	8:30	0	0	0	0	0	0	141	0	0	0	0	0	0	0	93	0
8:30	8:45	0	1	0	2	0	0	188	0	0	0	0	0	0	1	103	0
8:45	9:00	0	0	0	1	0	0	135	0	0	0	0	1	0	0	88	0
9:00	9:15	0	0	0	0	0	0	148	1	0	0	0	0	0	1	77	0
9:15	9:30	0	0	0	1	1	0	137	0	0	0	0	0	0	0	69	1
16:30	16:45	0	0	0	0	0	0	105	0	0	0	0	1	5	0	141	0
16:45	17:00	0	1	0	3	0	0	133	1	0	0	0	1	0	2	148	1
17:00	17:15	0	1	0	2	0	0	130	1	0	0	0	0	1	0	153	1
17:15	17:30	0	2	0	1	0	0	113	0	0	1	0	2	2	0	165	0
17:30	17:45	0	2	0	1	2	0	112	0	0	1	0	2	1	1	210	1
17:45	18:00	0	1	0	0	0	1	81	0	0	1	0	2	0	2	171	0
18:00	18:15	0	0	0	0	1	0	107	0	0	1	0	4	0	0	151	1
18:15	18:30	0	3	0	1	4	0	98	1	0	2	1	2	0	0	155	1

Peak Time		North Approach St Crispin St				East Approach Swan St				South Approach Little Lesney St				West Approach Swan St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:30	8:30	0	1	0	1	1	0	696	2	0	0	0	1	0	0	446	1	1149
16:45	17:45	0	6	0	7	2	0	488	2	0	2	0	5	4	3	676	3	1198

Heavy Vehicles

Time		North Approach St Crispin St				East Approach Swan St				South Approach Little Lesney St				West Approach Swan St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:30	7:45	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0
7:45	8:00	0	0	0	0	0	0	5	0	0	0	0	0	0	0	3	0
8:00	8:15	0	0	0	0	0	0	4	0	0	0	0	0	0	0	6	0
8:15	8:30	0	0	0	0	0	0	5	0	0	0	0	0	0	0	3	0
8:30	8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
8:45	9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
9:00	9:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0
9:15	9:30	0	0	0	0	0	0	7	0	0	0	0	0	0	0	8	0
16:30	16:45	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0
16:45	17:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0
17:00	17:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0
17:15	17:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0
17:30	17:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
18:00	18:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
18:15	18:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0

Peak Time		North Approach St Crispin St				East Approach Swan St				South Approach Little Lesney St				West Approach Swan St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:30	8:30	0	0	0	0	0	0	18	0	0	0	0	0	0	0	16	0	34
16:45	17:45	0	0	0	0	0	0	5	0	0	0	0	0	0	0	10	0	15

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Mc Namara St and Charles St, East Richmond

GPS -37.824610, 145.000506

Date:	Thu 21/03/24
Weather:	Overcast
Suburban:	East Richmond
Customer:	Traffix

North:	Charles St
East:	Mc Namara St
South:	Charles St
West:	Elm Gr

Survey Period	AM: 7:30 AM-9:30 AM
	PM: 4:30 PM-6:30 PM
Traffic Peak	AM: 8:00 AM-9:00 AM
	PM: 5:15 PM-6:15 PM

All Vehicles

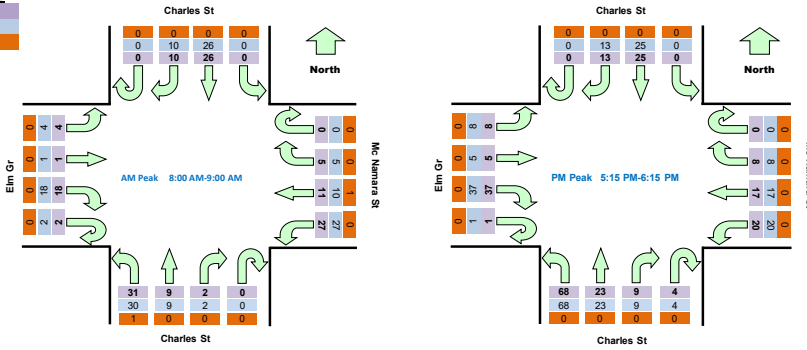
Time		North Approach Charles St				East Approach Mc Namara St				South Approach Charles St				West Approach Elm Gr				Hourly Total	Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:30	7:45	0	1	5	0	0	0	2	1	0	0	0	1	0	3	0	0	103	
7:45	8:00	0	3	5	0	0	4	1	3	0	1	0	1	1	4	1	0	122	
8:00	8:15	0	3	2	0	0	1	1	4	0	0	3	8	1	3	0	3	146	Peak
8:15	8:30	0	3	5	0	0	0	3	4	0	1	4	13	1	3	0	0	142	
8:30	8:45	0	1	10	0	0	0	0	9	0	1	0	5	0	6	0	0	121	
8:45	9:00	0	3	9	0	0	4	7	10	0	0	2	5	0	6	1	1		
9:00	9:15	0	1	3	0	0	0	4	2	0	0	3	6	0	6	0	0		
9:15	9:30	0	3	1	0	0	0	0	3	0	0	3	5	0	1	0	0		
16:30	16:45	0	0	2	0	0	1	3	1	0	1	1	10	0	9	1	1	173	
16:45	17:00	0	2	3	0	0	0	3	3	0	3	3	11	0	11	1	2	199	
17:00	17:15	0	4	2	0	0	2	5	1	0	0	2	11	0	13	0	2	218	
17:15	17:30	0	7	2	0	0	4	2	6	0	0	4	18	0	13	1	2	238	Peak
17:30	17:45	0	2	8	0	0	1	6	6	0	2	5	13	1	9	1	2	231	
17:45	18:00	0	1	10	0	0	1	5	4	2	4	7	15	0	10	1	1		
18:00	18:15	0	3	5	0	0	2	4	4	2	3	7	22	0	5	2	3		
18:15	18:30	0	7	2	0	0	2	5	4	1	0	1	19	0	8	2	1		

Peak Time		North Approach Charles St				East Approach Mc Namara St				South Approach Charles St				West Approach Elm Gr				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	10	26	0	0	5	11	27	0	2	9	31	2	18	1	4	146
17:15	18:15	0	13	25	0	0	8	17	20	4	9	23	68	1	37	5	8	238

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Charlotte St and Charles St, East Richmond

GPS -37.825275, 145.000378

Date:	Thu 21/03/24
Weather:	Overcast
Suburban:	East Richmond
Customer:	Traffic

North:	Charles St
East:	N/A
South:	Charles St
West:	Charlotte St

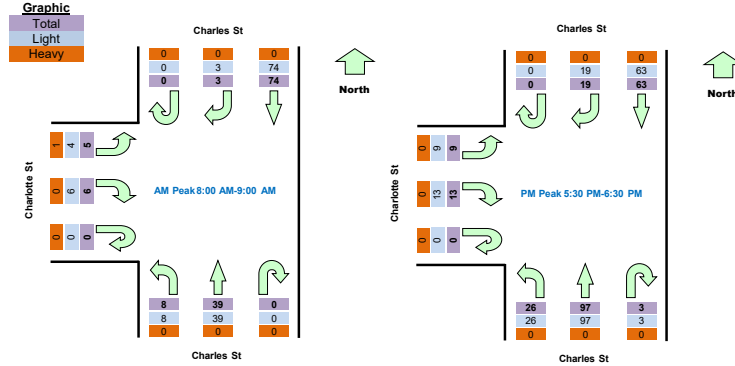
Survey Period	AM: 7:30 AM-9:30 AM
	PM: 4:30 PM-6:30 PM
Traffic Peak	AM: 8:00 AM-9:00 AM
	PM: 5:30 PM-6:30 PM

All Vehicles

Time		North Approach Charles St			South Approach Charles St			West Approach Charlotte St			Hourly Total	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	Hour	Peak
7:30	7:45	0	0	9	0	0	2	0	2	1	91	
7:45	8:00	0	2	9	0	1	1	0	0	1	113	
8:00	8:15	0	1	12	0	10	2	0	3	1	135	Peak
8:15	8:30	0	1	11	0	17	2	0	1	2	127	
8:30	8:45	0	1	25	0	6	2	0	1	1	114	
8:45	9:00	0	0	26	0	6	2	0	1	1		
9:00	9:15	0	0	10	0	9	1	0	1	0		
9:15	9:30	0	4	1	0	8	6	0	1	1		
16:30	16:45	0	1	11	0	12	1	0	1	1	156	
16:45	17:00	0	1	16	0	18	3	0	6	0	183	
17:00	17:15	0	1	15	0	13	3	0	3	0	200	
17:15	17:30	1	3	17	1	20	6	0	2	0	224	
17:30	17:45	0	5	18	0	20	6	0	3	2	230	Peak
17:45	18:00	0	4	23	2	25	5	0	0	2		
18:00	18:15	0	5	11	0	33	5	0	4	1		
18:15	18:30	0	5	11	1	19	10	0	6	4		

Peak Time		North Approach Charles St			South Approach Charles St			West Approach Charlotte St			Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	total
8:00	9:00	0	3	74	0	39	8	0	6	5	135
17:30	18:30	0	19	63	3	97	26	0	13	9	230

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.



TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au



Intersection of Swan St and Charles St, East Richmond

GPS -37.825912, 145.000271

Date:	Thu 21/03/24
Weather:	Overcast
Suburban:	East Richmond
Customer:	Traffix

North:	Charles St
East:	Swan St
South:	Petro Station Access
West:	Swan St

Survey Period	AM: 7:30 AM-9:30 AM
	PM: 4:30 PM-6:30 PM
Traffic Peak	AM: 7:30 AM-8:30 AM
	PM: 4:45 PM-5:45 PM

All Vehicles

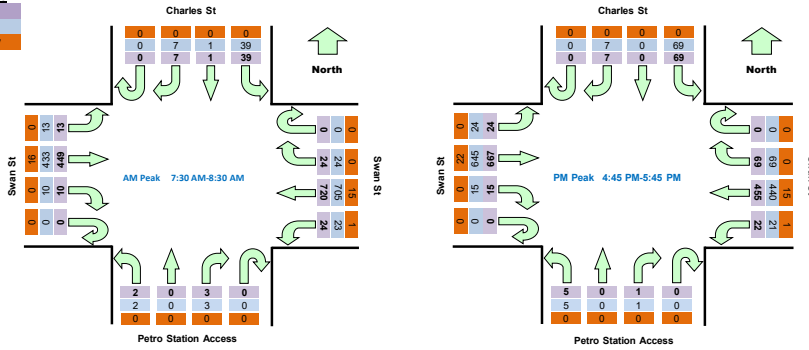
Time		North Approach Charles St				East Approach Swan St				South Approach Petro Station Access				West Approach Swan St				Hourly Total	Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:30	7:45	0	3	0	8	0	1	184	7	0	2	0	0	0	2	112	1	1292	Peak
7:45	8:00	0	1	0	8	0	1	203	7	0	0	0	1	0	5	119	2	1258	
8:00	8:15	0	1	0	13	0	8	179	8	0	1	0	1	0	2	122	3	1181	
8:15	8:30	0	2	1	10	0	14	154	2	0	0	0	0	0	1	96	7	1087	
8:30	8:45	0	1	0	23	0	4	149	5	0	0	0	0	0	1	101	2	1042	
8:45	9:00	0	0	0	28	0	7	138	2	0	1	0	1	0	2	89	2		
9:00	9:15	0	1	0	12	0	8	131	8	0	0	0	1	0	4	75	4		
9:15	9:30	0	0	0	1	0	12	140	8	0	0	0	1	0	2	74	4		
16:30	16:45	0	2	3	8	0	8	86	7	0	0	0	1	0	3	142	5	1234	
16:45	17:00	0	1	0	20	0	16	125	9	0	0	0	2	0	4	151	7	1334	Peak
17:00	17:15	0	2	0	16	0	12	112	4	0	1	0	2	0	3	155	4	1310	
17:15	17:30	0	2	0	16	0	21	109	4	0	0	0	0	0	1	164	6	1311	
17:30	17:45	0	2	0	17	0	20	109	5	0	0	0	1	0	7	197	7	1284	
17:45	18:00	0	4	2	16	0	21	79	5	0	0	0	3	0	4	167	10		
18:00	18:15	0	2	1	13	0	30	100	2	0	0	1	2	0	3	150	8		
18:15	18:30	0	5	1	13	0	22	87	2	0	0	0	0	0	5	151	10		

Peak Time		North Approach Charles St				East Approach Swan St				South Approach Petro Station Access				West Approach Swan St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:30	8:30	0	7	1	39	0	24	720	24	0	3	0	2	0	10	449	13	1292
16:45	17:45	0	7	0	69	0	69	455	22	0	1	0	5	0	15	667	24	1334

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Charles St				East Approach Swan St				South Approach Petro Station Access				West Approach Swan St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:30	7:45	0	3	0	8	0	1	182	7	0	2	0	0	0	2	108	1
7:45	8:00	0	1	0	8	0	1	197	7	0	0	0	1	0	5	116	2
8:00	8:15	0	1	0	13	0	8	175	7	0	1	0	1	0	2	117	3
8:15	8:30	0	2	1	10	0	14	151	2	0	0	0	0	0	1	92	7
8:30	8:45	0	1	0	23	0	4	149	5	0	0	0	0	0	1	99	2
8:45	9:00	0	0	0	28	0	7	138	2	0	1	0	1	0	2	87	2
9:00	9:15	0	1	0	11	0	8	127	8	0	0	0	1	0	4	71	3
9:15	9:30	0	0	0	1	0	11	137	8	0	0	0	0	0	1	67	4
16:30	16:45	0	2	3	8	0	8	84	7	0	0	0	1	0	3	137	5
16:45	17:00	0	1	0	20	0	16	120	9	0	0	0	2	0	4	145	7
17:00	17:15	0	2	0	16	0	12	109	3	0	1	0	2	0	3	146	4
17:15	17:30	0	2	0	16	0	21	105	4	0	0	0	0	0	1	159	6
17:30	17:45	0	2	0	17	0	20	106	5	0	0	0	1	0	7	195	7
17:45	18:00	0	4	2	16	0	21	75	5	0	0	0	3	0	4	161	10
18:00	18:15	0	2	1	13	0	30	96	2	0	0	1	2	0	3	145	8
18:15	18:30	0	5	1	13	0	22	83	2	0	0	0	0	0	5	145	10

Peak Time		North Approach Charles St				East Approach Swan St				South Approach Petro Station Access				West Approach Swan St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:30	8:30	0	7	1	39	0	24	705	23	0	3	0	2	0	10	433	13	1260
16:45	17:45	0	7	0	69	0	69	440	21	0	1	0	5	0	15	645	24	1296

Heavy Vehicles

Time		North Approach Charles St				East Approach Swan St				South Approach Petro Station Access				West Approach Swan St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:30	7:45	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0
7:45	8:00	0	0	0	0	0	0	6	0	0	0	0	0	0	0	3	0
8:00	8:15	0	0	0	0	0	0	4	1	0	0	0	0	0	0	5	0
8:15	8:30	0	0	0	0	0	0	3	0	0	0	0	0	0	0	4	0
8:30	8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
8:45	9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
9:00	9:15	0	0	0	1	0	0	4	0	0	0	0	0	0	0	4	1
9:15	9:30	0	0	0	0	0	1	3	0	0	0	0	1	0	1	7	0
16:30	16:45	0	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0
16:45	17:00	0	0	0	0	0	0	5	0	0	0	0	0	0	0	6	0
17:00	17:15	0	0	0	0	0	0	3	1	0	0	0	0	0	0	9	0
17:15	17:30	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0
17:30	17:45	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0
17:45	18:00	0	0	0	0	0	0	4	0	0	0	0	0	0	0	6	0
18:00	18:15	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0
18:15	18:30	0	0	0	0	0	0	4	0	0	0	0	0	0	0	6	0

Peak Time		North Approach Charles St				East Approach Swan St				South Approach Petro Station Access				West Approach Swan St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:30	8:30	0	0	0	0	0	0	15	1	0	0	0	0	0	0	16	0	32
16:45	17:45	0	0	0	0	0	0	15	1	0	0	0	0	0	0	22	0	38



Appendix B

Seven Day Traffic Counts

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

T. 1300 82 88 82 - F. 1300 83 88 83 - E. traffic@trafficsurvey.com.au - W. www.trafficsurvey.com.au

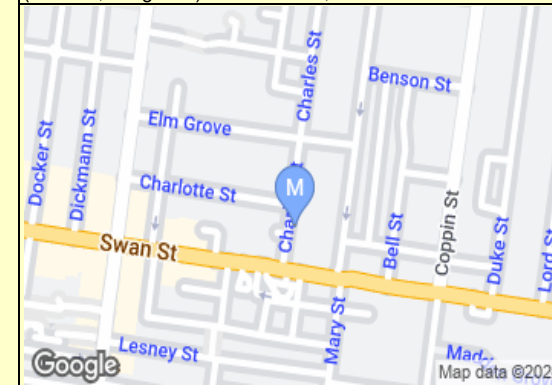
AUTOMATIC COUNT SUMMARY

Street Name :	Charles St	Location :	Outside Property 81
Suburb :	Richmond	Start Date :	00:00 Mon 18/March/2024
Machine ID:	YH07VHVH	Finish Date :	00:00 Mon 25/March/2024
Site ID:	18877	Speed Zone :	40 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information		Lat 37° 49' 31.83 South	Direction of Travel		
		Long 145° 0' 1.52 East	Both directions	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		1,495	749	746
	7 Day Average		1,511	771	740
Weekday	AM	08:00	110	36	75
Peak hour starts	PM	17:00	163	96	67
Speeds : (Km/Hr)	85th Percentile		34.4	35.1	33.6
	Average		29.0	29.6	28.3
Classification % :	Light Vehicles up to 5.5m		95.6%	95.4%	95.8%

Location

GPS Information [Load Google Map \(internet required\)](#)
(Latitude, Longitude) -37.825508, 145.000423



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

"Traffic behaviour is not the same as pre-pandemic (traditional morning/afternoon peak is much less pronounced and school start/finish times are much more pronounced), the current patterns are close enough to what probably is going to be a 'COVID normal' situation for at least the next year or two. Workplaces are currently not all yet open. These results should be used for indicative assessment only."

TRANS TRAFFIC SURVEY

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AUTOMATIC COUNT SUMMARY

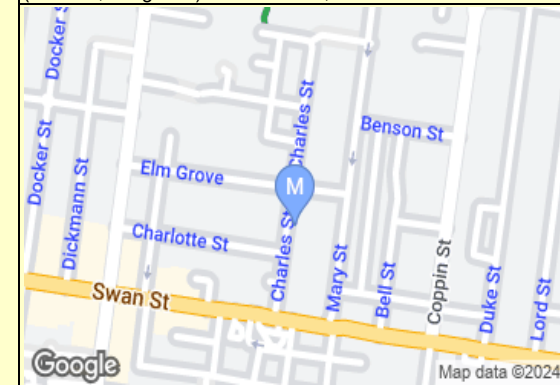
Street Name :	Charles St	Location :	Outside Property 61
Suburb :	Richmond	Start Date :	00:00 Mon 18/March/2024
Machine ID:	RZ17VYXC	Finish Date :	00:00 Mon 25/March/2024
Site ID:	18878	Speed Zone :	40 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information		Direction of Travel		
		Both directions	Northbound	Southbound
Lat	37° 49' 30.04 South			
Long	145° 0' 1.89 East			
Traffic Volume :	Weekdays Average	1,322	617	705
(Vehicles/Day)	7 Day Average	1,323	630	693
Weekday	AM 08:00	102	31	71
Peak hour starts	PM 17:00	144	78	66
Speeds :	85th Percentile	29.8	30.6	29.0
(Km/Hr)	Average	25.3	26.1	24.5
Classification % :	Light Vehicles up to 5.5m	97.7%	97.3%	98.0%

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -37.825011, 145.000526



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

"Traffic behaviour is not the same as pre-pandemic (traditional morning/afternoon peak is much less pronounced and school start/finish times are much more pronounced), the current patterns are close enough to what probably is going to be a 'COVID normal' situation for at least the next year or two. Workplaces are currently not all yet open. These results should be used for indicative assessment only."

TRANS TRAFFIC SURVEY

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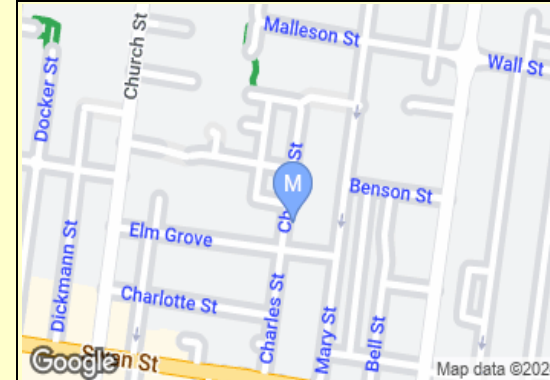
AUTOMATIC COUNT SUMMARY

Street Name :	Charles St	Location :	Outside Property 41
Suburb :	Richmond	Start Date :	00:00 Mon 18/March/2024
Machine ID:	YD29YXP3	Finish Date :	00:00 Mon 25/March/2024
Site ID:	18879	Speed Zone :	40 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information		Direction of Travel		
		Both directions	Northbound	Southbound
Lat	37° 49' 27.66 South			
Long	145° 0' 2.34 East			
Traffic Volume : (Vehicles/Day)	Weekdays Average	714	363	351
	7 Day Average	737	374	363
Weekday AM	08:00	47	16	31
Peak hour starts PM	18:00	60	33	28
Speeds : (Km/Hr)	85th Percentile	32.0	31.9	32.1
	Average	26.9	26.7	27.1
Classification % :	Light Vehicles up to 5.5m	97.3%	96.8%	97.8%

Location

GPS Information [Load Google Map \(internet required\)](#)
(Latitude, Longitude) -37.824351, 145.000649



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

"Traffic behaviour is not the same as pre-pandemic (traditional morning/afternoon peak is much less pronounced and school start/finish times are much more pronounced), the current patterns are close enough to what probably is going to be a 'COVID normal' situation for at least the next year or two. Workplaces are currently not all yet open. These results should be used for indicative assessment only."

TRANS TRAFFIC SURVEY

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AUTOMATIC COUNT SUMMARY

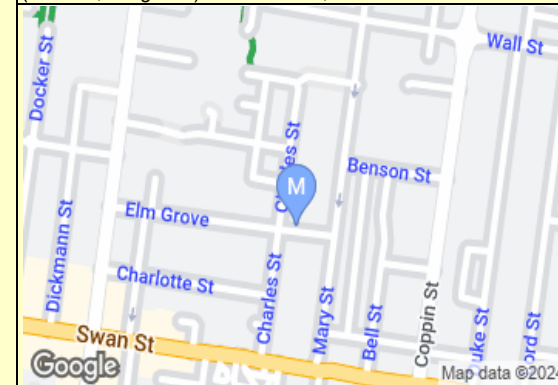
Street Name :	McNamara St	Location :	East of Charles St
Suburb :	Richmond	Start Date :	00:00 Mon 18/March/2024
Machine ID:	YC70FC76	Finish Date :	00:00 Mon 25/March/2024
Site ID:	18880	Speed Zone :	50 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information		Direction of Travel		
		Both directions	Westbound	Eastbound
Lat	37° 49' 28.52 South			
Long	145° 0' 2.65 East			
Traffic Volume : (Vehicles/Day)	Weekdays Average	376	256	120
	7 Day Average	367	244	123
Weekday AM	08:00	47	40	7
Peak hour start PM	17:00	38	26	12
Speeds : (Km/Hr)	85th Percentile	25.2	24.6	25.8
	Average	22.2	21.6	22.7
Classification % :	Light Vehicles up to 5.5m	98.6%	98.4%	99.2%

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -37.824589, 145.000737



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

"Traffic behaviour is not the same as pre-pandemic (traditional morning/afternoon peak is much less pronounced and school start/finish times are much more pronounced), the current patterns are close enough to what probably is going to be a 'COVID normal' situation for at least the next year or two. Workplaces are currently not all yet open. These results should be used for indicative assessment only."

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

T. 1300 82 88 82 - F. 1300 83 88 83 - E. traffic@trafficsurvey.com.au - W. www.trafficsurvey.com.au

AUTOMATIC COUNT SUMMARY

Street Name :	Elm Grove	Location :	Outside Property 5
Suburb :	Richmond	Start Date :	00:00 Mon 18/March/2024
Machine ID:	SA70B1RC	Finish Date :	00:00 Mon 25/March/2024
Site ID:	18881	Speed Zone :	40 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information		Direction of Travel		
		Both directions	Westbound	Eastbound
Lat	37° 49' 27.93 South			
Long	144° 59' 56.65 East			
Traffic Volume : (Vehicles/Day)	Weekdays Average	1,180	612	568
	7 Day Average	1,201	627	574
Weekday AM	11:00	68	32	35
Peak hour start PM	17:00	125	70	55
Speeds : (Km/Hr)	85th Percentile	33.9	34.1	33.7
	Average	28.6	29.0	28.1
Classification % :	Light Vehicles up to 5.5m	96.0%	95.5%	96.3%

Location

GPS Information [Load Google Map \(internet required\)](#)
(Latitude, Longitude) -37.824426, 144.999069



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

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AUTOMATIC COUNT SUMMARY

Street Name :	Charlotte St	Location :	Outside Property 20
Suburb :	Richmond	Start Date :	00:00 Mon 18/March/2024
Machine ID:	XP805MKT	Finish Date :	00:00 Mon 25/March/2024
Site ID:	18884	Speed Zone :	40 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information	Lat 37° 49' 30.41 South Long 144° 59' 58.17 East	Direction of Travel		
		Both directions	Westbound	Eastbound
Traffic Volume : (Vehicles/Day)	Weekdays Average	479	288	191
	7 Day Average	486	292	194
Weekday AM	11:00	28	17	11
Peak hour start PM	18:00	71	46	26
Speeds : (Km/Hr)	85th Percentile	34.0	34.9	33.6
	Average	29.2	29.4	29.3
Classification % :	Light Vehicles up to 5.5m	94.8%	94.5%	95.3%

Location

GPS Information [Load Google Map \(internet required\)](#)
(Latitude, Longitude) -37.825114, 144.999492



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

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AUTOMATIC COUNT SUMMARY

Street Name :	St Crispin St	Location :	North of Charlotte St
Suburb :	Richmond	Start Date :	00:00 Mon 18/March/2024
Machine ID:	YD97JRVE	Finish Date :	00:00 Mon 25/March/2024
Site ID:	18882	Speed Zone :	50 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information		Direction of Travel		
Lat 37° 49' 29.58 South				
Long 144° 59' 54.97 East				
		Both directions	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average	112	56	56
	7 Day Average	109	55	54
Weekday	AM 10:00	7	4	3
Peak hour starts	PM 18:00	11	6	4
Speeds : (Km/Hr)	85th Percentile	16.5	16.7	16.3
	Average	15.1	15.4	14.9
Classification % :	Light Vehicles up to 5.5m	98.2%	98.2%	98.2%

Location

GPS Information [Load Google Map \(internet required\)](#)
(Latitude, Longitude) -37.824884, 144.998603



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

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AUTOMATIC COUNT SUMMARY

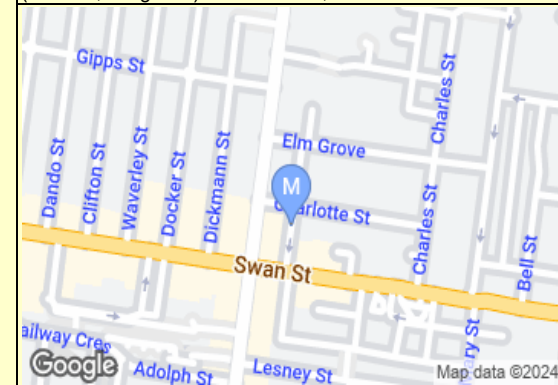
Street Name :	St Crispin St	Location :	South of Charlotte St
Suburb :	Richmond	Start Date :	00:00 Mon 18/March/2024
Machine ID:	RZ64GM0P	Finish Date :	00:00 Mon 25/March/2024
Site ID:	18883	Speed Zone :	50 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information		Direction of Travel		
		Both directions	Northbound	Southbound
Lat	37° 49' 31.01 South			
Long	144° 59' 54.59 East			
Traffic Volume : (Vehicles/Day)	Weekdays Average	124	37	87
	7 Day Average	128	39	89
Weekday	AM 11:00	5	2	3
Peak hour starts	PM 18:00	19	7	12
Speeds : (Km/Hr)	85th Percentile	21.9	22.0	22.3
	Average	19.0	19.6	18.8
Classification % :	Light Vehicles up to 5.5m	95.3%	95.0%	95.5%

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -37.825280, 144.998498



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

"Traffic behaviour is not the same as pre-pandemic (traditional morning/afternoon peak is much less pronounced and school start/finish times are much more pronounced), the current patterns are close enough to what probably is going to be a 'COVID normal' situation for at least the next year or two. Workplaces are currently not all yet open. These results should be used for indicative assessment only."



Appendix C

Parking Surveys

LOCATION	RESTRICTION	CAPACITY Min - Max	Saturday, 23rd March, 2024		Tuesday, 26th March, 2024				
			2:00pm	6:30pm	9:30am	11:30am	1:30pm	4:00pm	6:30pm
OFF-STREET CARPARKING									
RICHMOND LIBRARY CARPARK AT 6 CHARLOTTE STREET, RICHMOND									
	2P 7am-7pm	20	20	14	8	19	17	18	18
	No Stopping Council Library Vehicle Excepted	1	0	0	0	0	0	0	0
ON-STREET CARPARKING									
ST CRISPIN STREET									
East Side									
Charlotte Street to Swan Street	No Stopping Authorised Council Vehicles Excepted	4	0	0	0	0	0	0	0
CHARLOTTE STREET									
North Side									
Church Street to Charles Street	Permit Zone	19	16	21	13	15	15	16	20
South Side									
Church Street to Charles Street	2P 7am-Midnight MON - SAT	20	18	17	16	14	12	16	19
	1/4P 8am-10pm	1	0	0	0	1	1	1	1
	2P Disabled only 8am-8pm	1	0	0	0	1	1	1	1

LOCATION	RESTRICTION	CAPACITY Min - Max	Saturday, 23rd March, 2024		Tuesday, 26th March, 2024				
			2:00pm	6:30pm	9:30am	11:30am	1:30pm	4:00pm	6:30pm
CHARLES STREET									
East Side									
Swan Street to 73 Charles Street	Permit Zone	6	6	6	5	5	6	5	6
71 Charles Street to McNamara Street	Permit Zone	10	5	8	5	4	6	8	10
Elm Grove to 37 Charles Street	Permit Zone	5	5	5	2	3	3	3	5
West Side									
Elm Grove to laneway into Parker Street	2P 7am-Midnight MON - SAT	1	1	1	0	1	1	1	1
Charlotte Street to Elm Grove	2P 7am-Midnight MON - SAT	7	6	6	7	6	6	4	7
	P Disabled Parking	1	0	1	1	1	1	0	1
Swan Street to Charlotte Street	2P 7am-Midnight MON - SAT	4	4	4	3	3	4	4	4
	Loading Zone 15minutes 7am-6pm MON - SAT Permit Zone All Other Times	2	0	0	0	0	0	2	2
ELM GROVE									
North Side									
Charles Street to Church Street	2P 7am-Midnight MON - SAT	23	21	21	18	22	20	15	23
South Side									
Charles Street to Church Street	Permit Zone	20	18	17	9	14	10	10	17
	1P Disabled	1	1	0	1	1	1	0	0
	Works Zone 7am-6pm Mon-Fri, 9am-3pm Sat	1	0	1	0	1	1	1	1

LOCATION	RESTRICTION	CAPACITY Min - Max	Saturday, 23rd March, 2024		Tuesday, 26th March, 2024				
			2:00pm	6:30pm	9:30am	11:30am	1:30pm	4:00pm	6:30pm
CHURCH STREET									
East Side									
Property 381 to Charlotte Street	2P 8am-5pm MON - FRI, 8am-12:30pm Sat, Yarra City Council Area 7 Permit Excepted	11	11	11	9	11	11	8	10
Charlotte Street to Swan Street	No Stopping Zone	0	0	0	0	0	0	0	0
West Side									
Swan Street to Gipps Street	2P 8am-5pm MON - FRI (8:30am-5:30pm SAT)	12	12	12	12	12	12	12	12
	2P Meter 8am-5pm Mon-Fri, 8:30am-5:30pm Sat	8	8	7	3	4	6	6	8
	2P Meter 8am-5pm MON - FRI (8:30am-5:30pm SAT)	2	2	2	1	0	2	0	2
	Disabled only 7am - 5pm MON - FRI	1	1	1	0	0	1	0	1
	1/4P 7am - 9pm	1	1	0	0	0	0	0	0
	Authorised Car Share	1	0	1	1	1	1	1	1
SWAN STREET									
North Side									
Church Street to St Crispin	Clearway 4:30pm-6:30pm MON-FRI Loading Zone 15min All Other Times	2	1	0	1	0	0	0	0
St Crispin Street to Yan Lane	Clearway 4:30pm-6:30pm MON-FRI, 2P Meter 8:30am-4:30pm MON-FRI (8:30am-5:30pm SAT)	11	11	11	3	3	5	2	11
Yan Lane to Uchin Studio	Clearway 4:30pm-6:30pm MON-FRI, 2P Meter 8:30am-4:30pm (8:30am-5:30pm SAT)	12	10	12	7	7	5	0	12
South Side									
Church Street to Yan Lane	Clearway 7:00am-9:15am MON-FRI 2P Meter 9:15am-5:30pm MON-FRI (8:30am-5:30pm SAT)	14	11	14	6	9	6	8	13
Yan Lane to Harvey Street	Clearway 7:00am-9:15am MON-FRI 2P Meter 9:15am-5:30pm MON-FRI (8:30am-5:30am SAT)	5	3	5	2	1	2	4	4
LOCATION	Capacity	202 - 227	227	227	225	227	227	202	227
	Total Number of Cars Parked		192	198	133	159	156	146	210
	Total Number of Vacant Spaces		35	29	92	68	71	56	17
	Percentage Occupancy		85%	87%	59%	70%	69%	72%	93%



Appendix D

Origin – Destination Surveys

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

From 8:00

To 9:00

All Vehicles

	1N	1S	5E	6S	7N	7E	8W	9S
1N	0	0	0	0	3	1	0	15
1S	0	0	0	1	0	0	0	0
5E	0	0	0	0	0	0	0	0
6S	0	0	0	0	0	0	0	0
7N	0	0	0	0	0	0	0	7
7E	0	0	0	0	0	0	0	0
8W	0	0	0	0	0	0	0	0
9S	0	0	0	0	3	0	0	0



TRANS TRAFFIC SURVEY

trafficsurvey.com.au

From 7:30

To 9:30

All Vehicles

	1N	1S	5E	6S	7N	7E	8W	9S
1N	0	0	2	0	3	1	0	21
1S	0	0	1	1	0	0	0	0
5E	0	0	0	0	0	0	0	0
6S	0	0	0	0	0	0	0	0
7N	0	0	0	0	0	0	1	9
7E	0	0	0	0	0	0	0	1
8W	0	0	0	1	0	0	0	1
9S	0	0	0	0	4	0	0	0

