

Stage 1 works review - LATM 16 Victoria Precinct (Richmond)

1. Background

During 2013/14, Council conducted a Local Area Traffic Management (LATM) study in the Victoria Precinct (LATM 16). The study area is bounded by Victoria Street, Burnley Street, Bridge Road and the Yarra River in Richmond. It comprises approximately 1,000 properties and includes commercial, industrial, residential, and community uses.

In March 2014, Council endorsed a Traffic Management Plan (TMP) for the precinct that details specific actions to improve traffic conditions.

A copy of the report considered by Council before endorsing the TMP appears on the [Council meeting webpage](#) (agenda item 11.1). The endorsed TMP can be viewed at [LATMS 16 Traffic Management Plan March 2014](#).

The implementation of the TMP is spread across two financial years. A list outlining the staging of the works can be viewed on [Council's website](#). The works in Stage 1 were substantially completed in October 2014. In line with best practice, the Council resolution requires a post construction evaluation of these Stage 1 works.

The post construction evaluation aims to determine the effectiveness of the traffic management measures. In conducting the review, a number of data sets are interrogated. For traffic speeds and volumes (including peak traffic and heavy vehicle usage) the 'before' data collected in 2013 as part of developing the traffic plan is compared to 'after' data collected 12 months post Stage 1 completion in 2015. The same methodology is applied in reviewing the accident crash data. Consideration is also given to community feedback received in the past 12 months.

This memo outlines the findings of the LATM 16 Stage 1 post construction evaluation.

2. Post construction evaluation findings

2.1. Traffic data

Traffic data has been collected from eight locations on the local road network within the LATM study area to conduct the post construction review. The 'before' and 'after' traffic data is tabulated in *Appendix A – Traffic data comparison*.

In reviewing the traffic data, road hierarchy, land use and other factors need to be taken into consideration:

- All roads in the study area are classified as local streets, however River Street and Murphy Street serve a 'collector' function. Collector roads move traffic from local streets to arterial roads. Therefore, it is the function of these streets to carry a higher volume of traffic.
- The land use in LATM 16 is a mixture of commercial, industrial, residential and community uses. Significant land uses in the study area which impact on traffic volumes include: Victoria Gardens Shopping Centre; Yarraberg Children's Centre and Community Centre; Amora Hotel Riverwalk.

2.2. Daily traffic volume

The daily traffic volumes of five of the eight streets analysed within the precinct have decreased with the other three streets remaining fairly constant.

There have been significant decreases in traffic volume in Appleton Street (65%) and North Street (39%). It is considered that the left in/left out treatments installed at their intersections with Burnley Street as part of the Stage 1 works would have contributed to this reduction in traffic volume.

While all roads in the study area are classified as local streets, it is considered that River Street and Murphy Street serve a 'collector' function in the study area owing to their wider carriageway width, connectivity to the wider road network, and signalised intersection with an arterial road (as is the case with Murphy Street). They function more as collector roads where the typical design standard volumes are between 3,000-7,000 vehicles per day. As such, while traffic volumes on these streets are the highest in the study area, it is considered appropriate given their existing function.

2.3. Peak hour traffic volume

Acceptable peak hour traffic volumes are calculated as a percentage of the daily traffic volume. The ratio of peak hour to daily traffic volume should be less than 14%.

All streets within the LATM 16 study area continue to have a ratio below 14%, with three out of five seeing a further reduction in peak hour traffic volume.

2.4. Heavy vehicle traffic volume

There is a reasonable use of the local road network in the LATM 16 precinct by heavy vehicles. For local streets, heavy vehicle volumes in the order of 5% of daily traffic volumes are generally considered to be acceptable. For collector roads, heavy vehicle volumes are generally expected to be between 5% and 10% of daily traffic volumes. These target percentages are based on typical residential streets, however in the study area there are a lot of commercial and industrial land uses. On this basis, heavy vehicle volumes would be expected to be higher than these ranges to allow for truck access to these properties. It is therefore considered that heavy vehicle traffic is generally within the targeted volume range for all streets surveyed in the study area.

There have been significant decreases in heavy vehicle volume on Appleton Street (81%), North Street (47%) and White Place (27%), with other streets in the study area increasing slightly.

2.5. Vehicle speed

The traffic surveys undertaken in 2013 as part of the traffic study indicated that Murphy Street, Palmer Street and River Street (between Palmer Street and Murphy Street) had 85th percentile speeds measuring well above 44km/h.

Bicycle lanes and supplementary 40km/h signage/pavement markings were installed in Murphy Street as part of the Stage 1 works. These have contributed to an 8% decrease in speed with the 85th percentile speed now measuring 43.2km/h. The Stage 2 works for LATM 16 include constructing a raised intersection at Murphy Street/Vaughan Street. It is considered that this will reduce vehicle speeds further.

Linemarking to visually narrow the street and supplementary 40km/h signage/pavement markings were installed in Palmer Street. These have contributed in an 8% decrease in speed with the 85th percentile speed being reduced from 48.2 to 44.3km/h. The 85th percentile speed is now only slightly above the intervention level of 44km/h.

A raised pedestrian crossing and supplementary 40km/h signage/pavement markings were installed in River Street (between Palmer Street and Murphy Street). These have contributed to a 7% decrease in speed with the 85th percentile speed now measuring 42.5km/h.

2.6. Contravention of one-way street

The TMP included the installation of a pavement marking arrow to reinforce the one-way restriction in Whites Place as part of the Stage 1 works. The 'after' traffic surveys indicate that there has been a 27% decrease in vehicles contravening the restriction.

2.7. Crash data

As the LATM study focuses predominantly on improving road safety and traffic management on the local road network, the post construction comparison focuses on crashes occurring on these roads.

In the 5 years preceding (July 2007 to June 2012) the development of the LATM study for the Victoria precinct, seven reported personal injury crashes occurred on the internal local road network. Four crashes were at local street intersections and three crashes were on local streets at mid-block locations within the precinct.

The most recent available crash data since the completion of the Stage 1 works (November 2014 to December 2014) confirms there have been no reported personal injury crashes on the local road network. It is not possible to interrogate more recent crash data, as it is not yet available from VicRoads.

Crash data is not available for the same 'before' and 'after' duration. At this time it is not possible to accurately evaluate or draw conclusions on crash statistics for this precinct.

3. Conclusion

The LATM works implemented in 2014 within the Victoria Precinct have substantially delivered the desired outcomes by creating a safer road environment with lower vehicle speeds and in a number of cases, reduced traffic volumes.

It is considered that the success of the LATM study will be further enhanced through the completion of the Stage 2 works.

Appendix A – Traffic data comparison

Location	Before data						After data					
	Weekday					Speed 85 th %ile (km/h)	Weekday					Speed 85 th %ile (km/h)
	Daily Volume						Daily Volume					
EB/NB	WB/ SB	Total	Peak hour %	Heavy vehicle %		EB/NB	WB/ SB	Total	Peak hour %	Heavy vehicle %		
Appleton Street b/w David Street and Clarke Street	378	356	734	9.5%	7.8%	29.9	100	154	254	8.7%	4.3%	34.2
Blazey Street b/w Burnley Street and Vaughan Street	376	161	537	9.1%	5.4%	36.0	388	141	529	9.5%	6.4%	35.3
Murphy Street b/w Vaughan Street and River Street	1,367	1,695	3062	8.9%	5.4%	46.8	1,328	1,894	3,222	9.5%	5.6%	43.2
North Street b/w Burnley Street and Vaughan Street	849	1,080	1929	8.2%	5.8%	34.6	440	731	1,171	8.7%	5.0%	38.9
Palmer Street b/w Burnley Street and River Street	903	1,241	2144	9.0%	5.9%	48.2	937	1,342	2,279	8.3%	7.2%	44.3
River Street b/w Crown Street and North Street	1,139	892	2031	8.9%	5.0%	43.9	1,100	803	1,903	9.0%	5.8%	38.9
River Street b/w Palmer Street and Murphy Street	2,968	2,588	5556	9.3%	5.1%	45.7	3,239	2,521	5,760	9.7%	5.6%	42.5
White Place b/w Palmer Street and Bridge Road	30	391	421	11.9%	3.6%	20.5	22	393	415	11.1%	2.7%	20.9

Legend

EB/NB: Eastbound/Northbound (direction of traffic flow).

WB/SB: Westbound/Southbound (direction of traffic flow).

Illegal manoeuvre

Peak hour % - Acceptable peak hour percentage <14% of daily traffic volume.

Heavy vehicle % - Acceptable residential heavy vehicle percentage <5% of daily traffic volume.

(In a mixed use zone or on collector roads heavy vehicle volumes may be between 5-10%)

85th %ile speed – Desirable to be not more than 10% above the posted speed limit

	Within intervention level
	Outside intervention level