

CITY OF MITCHAM



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MITCHAM

COLONEL

LIGHT

GARDENS

TRAFFIC

ASSESSMENT

Summary and Recommendations

1. SUMMARY

Based on the assessment undertaken within the subject area, the summarised outcomes of each respective assessment category are detailed below;

Peak Hour Traffic Analysis

- Collector and Distributor roads are operating acceptably during the peak periods based on their industry defined function, which is to carry local traffic from and to the Arterial Road Network. Road performing their function include East Parkway, Doncaster Avenue, Rochester Avenue Salisbury Crescent etc. In alignment with the study undertaken in 1994/1996, the majority of CLG vehicle traffic is locally generated. This can be supported by the 'Journey to Work' census data which illustrates that 69% of residents within CLG used a car as a method of travel to work.
- During both the AM and PM peak periods, the predominant movement of traffic surrounding the local roads within Colonel Light Gardens occurs between the times of 8am-9am and 3pm-4pm respectively. This appears to occur mainly south of The Strand, attributed to the main activity generators such as Colonel Light Gardens Primary School, St Therese Primary School and the nearby shopping areas.
- Based on their proximity to the school, it is inevitable that roads such as Sturt Avenue, West Parkway, Windsor Avenue and Freeling Crescent will generate levels of traffic during these peak periods. Therefore, deterrents for these movements, such as restricting access arrangements, are not considered to be appropriate. It would be more appropriate to discourage vehicle use through the promotion of active travel by implementing pedestrian connectivity and safety treatments.
- Tidworth Crescent, Kandahar Crescent were demonstrated, during the PM peak periods, to have levels of non-residential traffic utilising these roads. Narrowing the data to east vs westbound movements, vehicles are actively attempting to avoid the intersection of Grange Road, Goodwood Road and Edward Street, which has demonstrated significant delays for vehicle east-west connectivity during PM peak periods.

Mid-Block Analysis

- A 24hr mid-block analysis was undertaken to understand if any roads were subject to high levels of traffic, that would cause disruptive levels of congestion and to understand if roads were 'fit for function'. Apart from East Parkway (north of Wattlebury Road), the data confirms that roads are operating with a Level of Service A according to their function (local, collector, distributor).
- Despite East Parkway (north of Wattlebury) illustrating a lower Level of Service (B), it still maintains stable traffic flow with a high degree of freedom, albeit with minor influence from other vehicles on Wattlebury Road and Salisbury Crescent (both collector roads). As this is the only distributor road within CLG, East Parkway should continue to be monitored over a 3-year period, in alignment with the traffic data collection program.
- Given that West Parkway is situated adjacent to CLG Primary, approximately 40-50% of the daily traffic use this road during the school peak periods. In alignment with the peak hour traffic summary, the promotion of active travel should be considered by implementing pedestrian connectivity and safety to discourage vehicle use attributed to the school.

Traffic Growth

- Concerns had been previously raised by the community regarding the perceived increase in vehicle traffic. Data was compared over the years ranging from the 1994/1996 CLG traffic assessment, 2016 data and the current 2020 traffic data. Based on the traffic growth assessment, the subject area has illustrated growth slower than the typical industry growth rates on urban roads, on average 0.34%.
- We have seen some notable declines in growth when comparing historical to the 2020 CLG traffic volumes. Given most traffic within CLG is locally generated, the suburb has not undergone any significant changes that would warrant the industry accepted annual growth trends of 2-5%.
- It should be noted that while West Parkway and Winchester Avenue exhibited an increase greater than the industry growth rates, they are still operating at an acceptable capacity.

Intersection Analysis

- Several intersections were analysed to determine their performance in terms of traffic movements and level of service. A review of the following intersections was accommodated for within this report, they were selected based on their community concern and high volume of traffic movements.
 - Springbank Road/East Parkway (Kent Road)
 - As a result of the CLG 1994/1996 report, the intersection of Kent Road/Springbank Road was upgraded with a raised central median to promote a safer environment for turning movements, this upgrade occurred in 2006/2007 based on satellite imagery comparisons. Subsequently, the entirety of Springbank Road received a road upgrade with bicycle lanes, raised medians and channelised turning lanes in 2017.
 - As a result of the 2017 upgrade, the intersection of Vancouver Avenue and Springbank Road was restricted to Left In, Left Out movements. Albeit the turning assessment from 2014 illustrates that this would not affect the AM turning movements where vehicles were found to be travelling to CLG via Vancouver Avenue from the Panorama suburb.
 - The turning assessment from 2014 noted that 25-30% of vehicles turning into Kent Road were from Vancouver Avenue (Panorama). A review of the surrounding area illustrated that vehicles from Panorama were likely attributed to school traffic, which was further supported by CLG primary school's students (approximately 88% of 740 students) who live within 3km of the school. Unfortunately, data could not be obtained regarding the indicative number of the 200 enrolled students place of residence from St Therese Primary School.
 - Based on the two-way volumes obtained from the 2020 data on Kent Road in comparison to the 2014 turning assessment had seen a notable decrease (-3.0%). The only period where this intersection has received growth was during the 8 – 9 AM peak (+0.9%).

- Goodwood Road/Grange Road/Edward Street
 - The intersection of Goodwood Road, Grange Road and Edward Street was found to have poor operating conditions for northbound traffic in the AM peak periods. In the PM peak, east west connectivity, on Grange Road and Edward Street, suffered the same poor operating conditions due to the priority of southbound movements on Goodwood Road.
 - To improve the level of service, affording additional cycle times to traffic on Grange Road/Edward Street would only escalate the delays on Goodwood Road, resulting in potential non-residential traffic permeation to adjoining local roads.
 - Consideration should be given to this intersection regarding lane capacity, turning restrictions, access arrangements. By accommodating for a segregated left turn (Figure 23), would result in less delay for Grange Road to Goodwood Road and potentially for westbound movements. This would need to be assessed in terms of feasibility to ensure any proposed infrastructure related solutions don't contravene the CLG Conservation Management Plan.

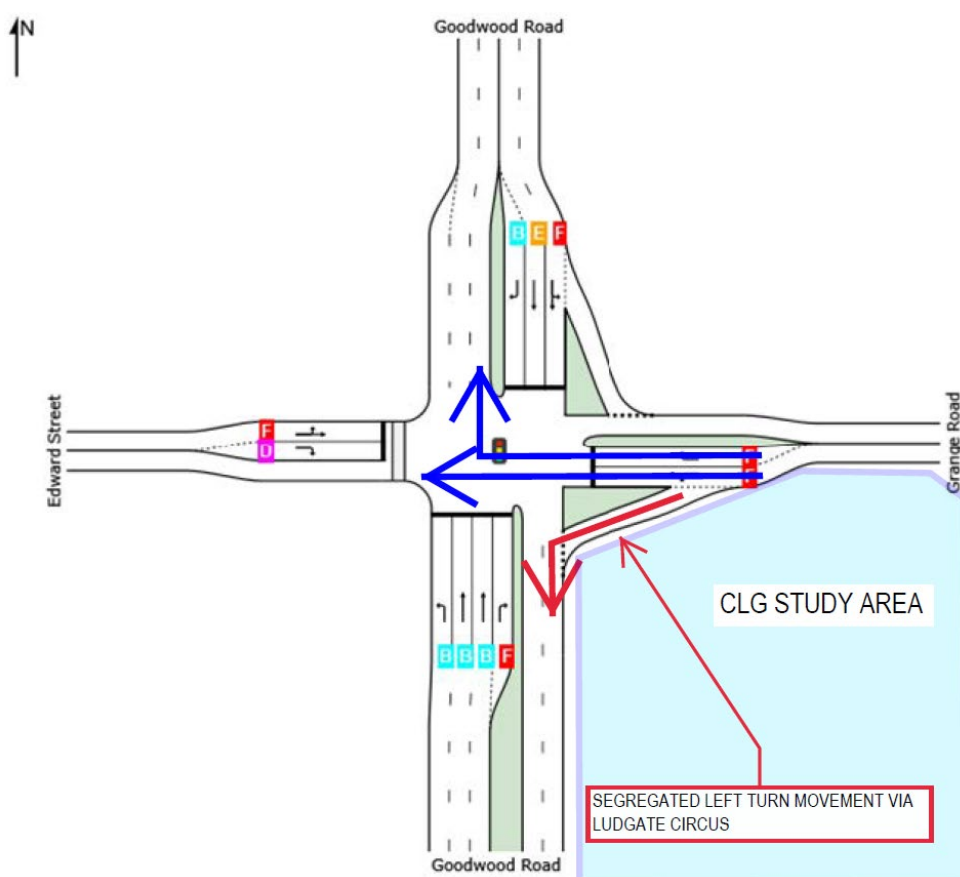


Figure 1: Feasibility sketch of improving lane capacity (Goodwood Road, Grange Road, Edward Street intersection)

Travel Time Analysis

- Based on the travel time analysis undertaken, many catchments that would potentially include movements through CLG illustrate that the Arterial Road network (Goodwood Road, Belair Road and Cross Road) provides the quickest and 'shortest' route of travel during the AM and PM peaks. When observing the use of CLG and Belair Road during the AM and PM peaks, the Southern Catchment (Clapham/Panorama) illustrates the same distance and time travelling north/southbound, albeit it is noted that this is not demonstrative of every vehicle in the Southern Catchment as their travel demands may differ.

Vehicle Speed Analysis

- Based on the recent data that was collected, the 85th percentile speeds demonstrated values within an acceptable limit range of the 50km/h speed limit. While a small percentile of roads was shown to exceed the speed limit, this was during off peak hours (10pm-6am) and not enough to warrant significant traffic control related interventions. Council acknowledge the increased vehicles speeds during 'outside of hours' times and will report this behaviour to SAPOL for their reference in future patrols.

Crash History/Road Safety

- A total of 103 crashes have occurred within the Study Area over the past 5 years (2016-2020), inclusive of both DIT and Council owned roads. Out of the 103 crashes, 64 of these crashes occurred within Council owned areas, Grange Road (between Sussex Terrace and Goodwood Road) received the highest frequency of crashes (24). The most common crash severity was related to property damage (67), followed by injury (36) and serious injury (4), no fatalities have occurred within the study area.
- At an intersection category, 2/3 of crashes occurred at DIT owned intersections, Goodwood Road/minor intersections (13), Springbank Road/Goodwood Road (11) and Grange Road/Goodwood Road (21) were intersections with high crash frequencies. The Sussex/Grange roundabout received the highest proportion of crashes within the Council owned area (12). The Sussex Grange roundabout has seen a notable decrease in crash frequency and severity since its implementation, Council administration will continue to monitor this intersection and its crash history to determine any further solutions that could be implemented.
- Due to their severity, several intersections on East Parkway and Rochester Avenue were identified for minor linemarking and signage improvements after they exhibited similar crash types and intersection configurations.

2. RECOMMENDATIONS

The following recommendations should be considered as part of this assessment. A recommendations map has also been developed for reference.

Item	Reference	Recommendation	Priority
1	CLG Primary/St Therese School Active Travel	Promotion of active travel and implementing pedestrian connectivity and safety treatments. Pedestrian improvements on West Parkway and Sturt Avenue have been identified and designed for consultation in the 21/22 financial year.	High (within 6 months)
2	Intersection of Goodwood Road/Grange Road/Ludgate Circus	Discussion with DIT regarding lane capacity, turning restrictions, access arrangements at the intersection of Goodwood Road, Grange Road and Ludgate Circus. This would need to be first assessed in terms of feasibility to ensure any proposed infrastructure related solutions don't contravene the CLG Conservation Management Plan.	Medium (6 - 12months)
3	Sussex Grange roundabout	Continue to monitor this intersection and its crash history to determine any further solutions that could be implemented. Installation of traffic counters have been scheduled for 2021 collection and will inform the review.	Medium (6 - 12months)
4	Intersection Linemarking and Sign Improvements	The following intersection will be considered for minor linemarking and sign improvements based on configuration and demonstrated crash history; <i>East Parkway / Salisbury Crescent</i> <i>East Parkway / Lincoln Avenue</i> <i>East Parkway / Windsor Avenue</i> <i>Rochester Avenue / West Parkway</i> <i>Rochester Avenue / Kandahar Cr</i> <i>Rochester Avenue / Flinders Avenue</i> These will be prioritised amongst competing Traffic and Transport priorities for design, consultation and implementation.	Medium (6 - 12months)
5	CLG 1994/1996 Report Actions	Several outstanding items for action from the 1994/1996 CLG Traffic Assessment illustrated that some measures could be incorporated for local improvements to the road network.	Medium (6 - 12months)
6	Report Speeding Vehicles	Report the roads within the study area which receive high vehicle speeds to SAPOL for their attention and action.	Low (12 + months)
7	Non- Residential Traffic	Consideration of restricting access to Tidworth and Kandahar Crescent during the PM peak periods.	Low (12 + months)
8	Traffic Growth on East Parkway	East Parkway is the only distributor road within CLG and should continue to be monitored over a 3-year period, in alignment with the traffic data collection program. Furthermore, we will request DIT Traffic Data for an up to date turning movement summary at the intersection with Kent Road and Springbank Road.	Low (12 + months)



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