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15th April 2019

Attention: Colin Comber

Re: Oakura School Traffic Concerns

Dear Colin,

Submissions to private plan change 48 (Wairau Estate) and the subsequent meeting with the school, play centre and ministry for education raised concerns regarding the traffic at the school. This prompted a site visit and traffic count to be undertaken. This letter outlines our findings and recommendations.

Oakura School is situated on Donnelly St some 150m from the State highway, the following aerial photograph shows the school and play centres location bounded in red and the surrounding road network.



Donnolly St is a no exit street but has paper roads leading from Donnolly St to Wairau Rd and another from the end of Hussey St to Butlers lane as shown in the following aerial photograph.



Donnolly St has a sealed width of 8m from the state highway to the school where it widens to 13.2m and turns through 90° and narrows to 5.7m.

On the 26th November 2018 a turning count was undertaken for the a.m. peak hour (8:00-9:00) for the intersection of Donnolly St, The Outlook and state highway 45 (South Rd). The intersection takes the form of a giveway controlled cross roads a painted median finishes some 65m to the south and whilst there is a gap in the markings there are no right turn bays as shown below:



The results of the count are shown below:

				Donnolly St						
				105						
				↑	54	77	21			
							←	↓	↘	
SH45 North	51		↗				→		184	
	216	163	→				↖	52	SH45 South	
	2		↘				←	335		
	398		←				↙	8		
				↖	↑	↗	↓			
				9	2	1				
							12	12		
							The Outlook			

The traffic was then modelled in SIDRA 8 the results indicated that all the movements are operating at a Level of Service (LOS) A.

The traffic flows were then increased to include the proposed traffic generation for Wairau Estate. The turning volumes on the SH45 South leg were adjusted in the same proportions as counted and the Donnolly St and The Outlook flows adjusted accordingly to give the following flows for the higher generation rate.

				Donnolly St						
				131						
				↑	73	103	28			
							←	↓	↘	
SH45 North	51		↗				→		291	
	315	262	→				↖	78	SH45 South	
	2		↘				←	499		
	585		←				↙	12		
				↖	↑	↗	↓			
				13	2	1				
							16	16		
							The Outlook			

The output of the SIDRA analysis for the new flows indicates that the right turn movements out of both Donnolly St and The Outlook drop to a LOS B as does the straight through movement from The Outlook.

Following a pre-hearing meeting with the school, play centre and ministry for education a site visit was undertaken on the 20th February 2019 between 2:30 and 3:30 to observe traffic and pedestrian movements at the end of a school day. During this time we observed 20 pedestrians walk towards the school either from Donnolly St or Hussey St. We also observed one cyclist, 64 cars and two buses head towards the school. Departing from the school we counted 160 pedestrians, 62 cars and the two buses. There was some minor congestion around the pedestrian crossing with cars queuing to head towards the highway and we observed a queues of up to eight vehicles at the highway intersection, predominantly right turning vehicles. These queues were short lived and by 3:10 they started to drop substantially and by 3:15 the traffic had completely dispersed.

The width of the first section of Donnolly St at 8m restricts parking to one side otherwise there is insufficient room for two vehicles to pass freely. The widened section in front of the school is 84m in length with a 16m bus bay marked outside the school entrance leaving 68m available for parking. We observed that cars angle parked along this length at approximately 75° in accordance with Appendix 23 of the District Plan allowing for vehicles to parallel park on the opposite kerb a width of 2.8m is required which would allow 24 vehicles to park outside the school. There is sufficient space along the opposite kerb for 8 cars can be parked without obstructing any driveways.

After 90degree bend the road narrows to 5.7m with a 4.5m sealed shoulder for parking on the school side. The widened shoulder is 108m long but there is a 6.5m wide crossing part way along providing 101.5 m. Cars park at 90° to the road the district plan requires a minimum parking bay width of 2.8m

with a manoeuvring space of 7.5m behind for a right turn into the bay. Given there is only a road width of 5.7m if an allowance of 3m per vehicle is used then 33 vehicles can be parked along this length, it would appear that some of this is utilised by the staff at the school.

Additional kerb side parking is available on Hussey St and some on Donnolly St north of the school.

Discussion

Whilst we have not been able to quantify the impacts on the school in terms of increased role from the proposed re-zoning we have used the existing traffic volumes to determine the future traffic patterns if the turning proportions remain the same. This indicates the effects on the intersection with State highway 45 are less than minor with the performance of three of the movements dropping to a LOS B which indicates there is still plenty of capacity in the intersection if the volumes increase seven more. We noted during the survey that queuing from the pedestrian crossing can block the intersection but only affects the left turn out and straight through movements from The Outlook both of which are very minor in nature.

There is currently ample parking around the school and surround local roads to cater for the afternoon pick up traffic and whilst we recognise the observations were made on a fine day the additional traffic on a wet day should also be able to be catered for. There are some delays as vehicles exit Donnolly St but these are short lived with the demand being dissipated with 15 minutes or so, these are likely to increase with an increase in the role but will remain for a short period of time. It may be beneficial to investigate restricting parking to one side of Donnolly St north of the school to help vehicle flows to the intersection.

We note that whilst Donnolly St is currently a "No Exit" street there are paper road connections to Wairau Rd and Butlers Lane and should congestion become a significant issue then one of these could be completed to provide another exit route. The paper road to Wairau crosses a very steep sided gully and is probably impractical to construct, whilst paper road from Hussey St to Butlers Lane is flat and could easily be constructed.

Conclusion

Whilst the proposed re-zoning will likely lead to an increase in roll it is hard to quantify the traffic modelling based on the existing situation indicates the intersection will cater for the potential growth with capacity to spare. Opening the connection to Butlers Lane would provide an alternative access and egress point which would relieve pressure on Donnolly St.

Yours sincerely,



Andrew Skerrett B.Eng
Director