

QLDC School Speed Zones

QLDC



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Quality Assurance Information

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Executive Summary

Queenstown Lakes District Council commissioned Abley Ltd to investigate schools in the Queenstown and Wanaka areas for potential 30km/h speeds limits around each school. A total of 13 schools were investigated, with two schools analysed from a desktop perspective.

Presently under the Setting of Speed Limits Rule (2017) a variable 30km/h speed limit cannot be installed outside of a school without Waka Kotahi approval. This report analyses the existing data we have for the schools and recommends speed management treatments to aim for 30km/h speeds.

The existing data and concerns from the school’s support 30km/h school speed zones within QLDC. Of the 13 schools assessed in this report a 30km/h variable school speed zones are presently viable for all the schools except Makarora School. Some schools already having low speeds and no additional speed treatment would be required to install the 30km/h school speed zone. As explained in **Section 4**, Makarora village speed limit should be permanently changed to 40km/h to make this village consistent with the surrounding villages and towns.

Two different types of school speed zones have been recommended in this report – a electronic (VMS) variable school speed zone and a static variable school speed zone. The schools that are recommended to have a static 30km/h school speed zone are Kingsview Primary School, Remarkables Primary School, St Joseph’s Primary School, Shotover Primary School, Wakatipu High School and Wanaka Primary school. The installation of a static variable school speed zone requires a formal trial by QLDC for Waka Kotahi.

The schools recommended to have VMS school speed zones are Arrowtown Primary School, Glenorchy Primary School, Queenstown Primary School, Holy Family School, Mount Aspiring College and Hawea Flat School. The installation of a VMS school speed zone requires Waka Kotahi’s approval.

By installing the VMS and static signs at the same time, QLDC and Waka Kotahi can compare the effectiveness of these signs for speed management. A static sign is significantly cheaper than a VMS sign and data showing the difference in these signs will be helpful for any future speed management treatments, both for QLDC and other Councils in New Zealand.

To proceed with the 30km/h school speed zones in the QLDC district a budget of **\$276,500** (plus traffic management) is required. This is the budget for the installation of the variable school speed signs (static and VMS) and the associated high priority treatments. There will also be additional monitoring costs for each school sites. QLDC will also require formal approval from Waka Kotahi to proceed and to follow the consultation process as set out in the Setting of Speed Limits Rule (2017).

The total budget required to install all the speed management treatments recommended in this report is **\$453,700**, this is broken down into high, medium and low priority works. The table below shows the budget breakdown for each priority level.

	High	Medium	Low
All Schools	\$276,500	\$93,750	\$83,450

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1. Introduction

1.1 Background

Queenstown Lakes District Council (QLDC) adopted a new Speed Limits Bylaw in June 2019 which lowered permanent urban speed limits to 40km/h to create safer roads. Extensive research has shown that lower speed limits result in substantial reductions in the incidence and severity of road crashes. The majority of the 40km/h speed limits have now been installed on their roading network and there are existing 40km/h school variable speed zones within the network so they now have less impact. QLDC now intend to install 30km/h school speed zones around all the schools in their district.

Speed limits need to reflect the varying types of road users, the road environment and the safety and amenity of the community. Outside of schools a speed limit of 30km/h is preferable due to the high pedestrian usage. Lower speed limits around schools makes streets safer and that in turn makes them more attractive and accessible for children to walk and cycle to school. The risk to the pedestrian rises exponentially with collision speeds beyond 30km/h. Lowering speeds is a way to gain safety benefits, both perceived and actual.

In New Zealand the only school speed limit that has been approved under the Setting of Speed Limits Rule Section 5.2(2) is a variable 40km/h. All other variable speeds limits, such as 30km/h, require Waka Kotahi (New Zealand Transport Agency) approval and a formal gazette notice approval.

QLDC commissioned Abley Limited (Abley) to investigate 30km/h speed limits around QLDC schools. This report assesses the existing data available for the schools and recommends speed management treatments at each school.

There are fourteen existing schools in the district with Te Kura O Take Kārara (TKOK) opening in 2020. This report focusses on the 13 schools listed below. Wakatipu High School

- Mt Aspiring College
- Holy Family School (Wanaka)
- Shotover Primary School
- Kingsview School
- Wanaka Primary School
- Hawea Flat School
- Makarora Primary School
- Arrowtown School
- Glenorchy School
- Queenstown Primary School
- St Joseph's School (Queenstown)
- Remarkables Primary School

TKOK has not been included due to it being a new school that has been designed in line with the latest guidance that promotes lower speed limits and accessibility and the surrounding development is incomplete.

1.2 Objective

The objective of this report is to recommend speed management treatments at the schools identified to reduce mean speeds to 30km/h to enable the installation of a 30km/h school speed zone. There are three different types of 30km/h speed zones that are considered:

1. A permanent 30km/h speed limit – installed under the Setting of Speed Limits Rule requirements
2. An electronic sign variable 30km/h school speed zone – requires Waka Kotahi approval
3. A static variable 30km/h school speed zone – requires a formal trial and Waka Kotahi approval

2. Existing Information

2.1 Site Locations

The school sites are located in the Queenstown Lakes and Wanaka areas. Site visits were undertaken to the Queenstown schools between 18-20 November 2020 and the Wanaka schools between 7-11 December 2020. Glenorchy School and Makarora School were not visited. These schools were assessed using streetview and QLDC data for the surrounding road network.

In Queenstown the following schools were visited at either the school start or finish times; Queenstown Primary School, St Josephs School, Kingsview Primary School and Remarkables Primary School. In Wanaka the following schools were visited at either the school start and finish times; Holy Family, Hawea Flat and Wanaka Primary School. All other schools were visited during school hours or after school.

2.2 Traffic Counts

There are existing traffic counts available for the majority of roads adjacent to the schools. The speed limit for some of these roads has changed to 40km/h since the traffic counts were undertaken. On these roads it is likely that the mean speeds will decrease given the posted speed limit has decreased. These roads were Centennial Avenue, Robins Road, Lane Avenue, Stalker Road, Red Oaks Drive, Maramako Road, Plantation Road and Totara Terrace.

The traffic counts on the roads outside Arrowtown Primary, Queenstown Primary, Remarkables Primary, Shotover Primary, Makarora Primary and Hawea Flat School were undertaken during the school holidays. These counts are likely to show higher speeds than during the school term due to the lack of activity during school start and finish times.

The traffic counts outside Hawea Flat School were both undertaken in 2014, which is unlikely to reflect the current environment.

The traffic count data provided a breakdown for each hour over the time period that the counters were installed. The speed data each hour was shown as a mean speed and the raw data was not given. Therefore, the table shows the range of mean speeds rather than a mean of the mean speeds.

Table 2.1 Speed Counts

School	Road	8:00am Mean Min	Mean Max	3:00pm Mean Min	Mean Max	Daily Mean Min	Mean Max
Queenstown							
Arrowtown Primary	Centennial Ave	46.3	49	43.9	46.3	45.8	46.9
Glenorchy Primary	Oban St	37.5	42.4	36.1	39.6	38.0	39.1
Kingsview Primary	Yewlett Cres	24.1	30.1	25.9	28.7	26.7	27.9
Queenstown Primary	Robins Road	38.5	39.7	34.4	38.9	37.4	39.7
Remarkables Primary	Lake Ave	34.3	41.8	34.9	40.6	35.6	37.7
St Josephs School	Hallenstein St	36.4	38.1	36.9	37.8	37.5	38.8
Shotover Primary	Stalker Rd	34.5	37.6	35.3	36.7	36.5	37.0
Wakatipu High	Red Oaks Dr	26.5	29.6	21.7	26.9	23.6	26.4

Wanaka

School	Road	8:00am Mean Min	Mean Max	3:00pm Mean Min	Mean Max	Daily Mean Min	Mean Max
Holy Family School	Makamako Rd	35.4	40.3	34.5	39.7	36.8	37.9
Mount Aspiring	Plantation Rd	29.2	51.1	31.6	52.4	39.6	52.2
Makarora School	Rata Road	29.5	39.2	22.3	45.1	29.7	36.2
Wanaka Primary	Totara Terr	35.4	36.4	29.9	34.7	35.9	37.8
Wanaka Primary	Kings Drive	34.7	39.4	34.8	37.4	36.9	38.3
Hawea Flat School	Kane Road	72.6	78.1	72.3	85.6	75.2	81.5
Hawea Flat School	Camp Hill Rd	43.2	55.2	48.1	52.6	49.4	51.8

* These schools operated under a variable 40km/h speed zone during school drop off and pick up

The latest TomTom data has also been assessed. **Table 2.2** shows the operating speed data for the periods between 8:25am and 9:00am, and between 2:55pm and 3:15pm from TomTom. These times represent typical pick-up and drop-off hours for most schools. The operating speeds across these intervals were averaged into a single operating speed value for each school. Generally Tomtom data is used for long corridor speed assessments and short sections of the corridor. This could lead to some variations between the Tomtom data and the single point speed data collected from a tube count.

Table 2.2 Tomtom speed data

School	Road	Tomtom AM Mean	Tomtom PM Mean	Daily Mean Min	Daily Mean Max	Largest Change
Arrowtown School	Centennial Avenue	40.7	40.9	45.8	46.9	6.2
Glenorchy School	Oban Street	32.7	33.3	38.0	39.1	6.4
Kingsview School	Yewlett Crescent	25.5	26.5	26.7	27.9	2.4
Queenstown Primary School	Robins Road	27.9	27.5	37.4	39.7	11.1
Remarkables Primary School	Lake Avenue	28.6	30.3	35.6	37.7	9.1
St Joseph's School	Hallenstein Street	30.5	29.0	37.5	38.8	9.8
Shotover Primary School	Stalker Road	26.4	31.8	36.5	37.0	10.6
Wakatipu High School	Red Oaks Drive	21.7	21.7	23.6	26.4	4.7
Holy Family School (Wanaka)	Makomako Road (actually Kirimoko Crescent)	24.8	23.1	36.8	37.9	14.8
Mt Aspiring College	Plantation Road	32.1	41.6	39.6	52.2	10.6
Wanaka Primary School	Totara Terrace	25.0	29.9	35.9	37.8	12.8
Hawea Flat School (CAMP HILL RD)	Camp Hill Road	43.8	43.7	49.4	51.8	8.1
Hawea Flat School (Kane Road)	Kane Rd	58.6	59.0	75.2	81.5	22.9
Makarora Primary School	Rata Road	17.9	18.0	29.7	36.2	18.3

There is a difference in the mean speeds between the TomTom data and the traffic count data. The TomTom data typically has lower speeds recorded than the traffic count data. There is good correlation between Kingsview School and Wakatipu High School counts. Arrowtown School, Glenorchy School, Remarkables Primary School, St Joseph's School and Hawea Flat School (Camphill Road) all have reasonable correlation between the speed data. The rest of the school sites have larger differences with Hawea Flat School (Kane Road) having the largest difference and Makarora School also having nearly a 20km/h difference in speeds.

The likely reason for this is the shorter timeframe of speed data by TomTom. The TomTom data is only recorded during the very busy period close to school starting and ending. Therefore, the roads are likely to be busy with school traffic which will lead to slower speeds. The TomTom data was compared against the daily mean speeds which are obviously taken over a day and the congestion at school start and finish times and the school speed zone times will not influence the speed data over the whole day.

Even though there are differences in the speed data, considering both sets of data the speed data for Kingsview School, Queenstown Primary School, Remarkables School, St Joseph's School, Shotover School, Wakatipu High School, Wanaka Primary School and Makarora School all show speeds consistent with the setting of a 30km/h speed limit. This would indicate that a lower speed limit could be installed without the need for additional speed management interventions.

2.3 Speed Limit Rule (2017)

The Setting of Speed Limits Rule (2017) is the legal instrument used to change speed limits. Under this Rule, QLDC can set a permanent speed limit of 30km/h if:

- The mean operating speed is less than 10% above the speed limit and
- Waka Kotahi approves the setting of the speed limit and
- as per clause 3.3(3) of the rule, the point at which a speed limit change must be at, or close to, a point of obvious change in the roadside development or the road environment.

The last point would make it very hard to justify a permanent speed limit just outside of a school location as there is likely to be no obvious change in the roadside environment. A permanent 30km/h speed limit would likely only work where there is a residential zone and the whole zone, which includes the school, becomes 30km/h. Again, this residential zone would need to be different to other residential zones, so the speed limits in Queenstown are still self-explaining to residents and tourists.

A variable speed limit is set under clause 5.3(2) of the rule. Before setting a variable speed limit, a road controlling authority must obtain approval from Waka Kotahi to set that speed limit, unless the variable speed limit has already been approved under clause 5.2(2). The only variable speed limit outside schools that has approval under 5.2(2) is 40km/h, so Councils can just install 40km/h zones (provided they meet the requirements of the gazette notice). All other variable speed limits require firstly Waka Kotahi to be notified before consultation (clause 5.3(1)), and then a formal gazette notice approval.

Therefore, to install both permanent or variable 30km/h speed limits, QLDC will need approval from Waka Kotahi.

2.4 Waka Kotahi Safer Journeys to Schools Assessment

Waka Kotahi recently commissioned Abley to analyse all schools throughout New Zealand to prioritise the top 40% of schools for speed management interventions. Urban and rural schools were assessed separately with the desired speed limit outside schools being 30km/h for urban schools and 60km/h for rural schools.

The urban and rural risk assessments involved calculating and combining several risk metrics. Urban schools were assessed using three metrics: School Boundary Risk, Vehicle Network Risk and Walk/Cycle catchment risk. Rural schools were assessed using two metrics: School Boundary Risk and Vehicle Network Risk. These metrics were then combined to give a school risk rating. Then this school risk rating was averaged with the operating speed percentile to give each school a ranking in a prioritisation band. It should be noted that the results of this assessment are based on high level data and each school should also be assessed individually.

The following are the results for schools assessed within QLDC district.

Table 2.3 QLDC's Schools Rank

School	Road	Prioritisation Band	Top 40 %
Arrowtown Primary	Centennial Ave	High	Yes
Glenorchy Primary	Oban St	Medium	No
Kingsview Primary	Yewlett Cres	Low-Medium	No
Queenstown Primary	Robins Road	Medium	No
Remarkables Primary	Lake Ave	Medium	No
t Josephs School	Hallenstein St	Medium	No
Shotover Primary	Stalker Road	Low-Medium	No
Wakatipu High School	Red Oaks Dr	High	Yes
Holy Family School	Makomako Rd	Medium-High	Yes
Mount Aspiring	Plantation Rd	Medium-High	Yes
<i>*Makarora School</i>	<i>Rata Road</i>	<i>Low</i>	<i>No</i>
Wanaka Primary	Totara Terr	Low	No
Hawea Flat School	Kane Road	Medium-High	Yes

** Makarora School was the only school classified as rural*

As shown in **Table 2.3** there are five schools in the district that are in the top 40% of schools assessed as requiring speed management interventions. Wakatipu High School and Arrowtown High School were the highest ranking schools from the district. The Wakatipu High School results are skewed as the speed data for Hawthorne Road was used, not Red Oaks Drive, which is the active frontage for Wakatipu High School. Holy Family School also has a higher speed road used in its assessment than the traffic counts show.

This ranking list could be used to prioritise which schools QLDC considers for 30km/h school speed zones.


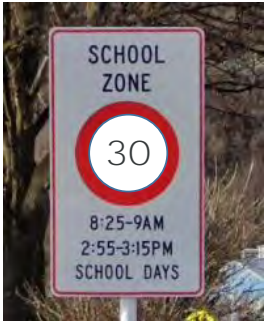

2.5 School concerns




QLDC supplied Abley with a list of concerns from each of the schools. Some of the concerns can be addressed directly through speed management treatments, however some are related to accessibility and parking. There may be some associated benefits to accessibility concerns and parking concerns with speed management treatments but overall these concerns should be addressed separately to this report. The table in **Appendix A** categorises the schools concerns into speed, accessibility and parking and only the speed concerns are addressed in this report. Comments have been added to the table but these have not been discussed with QLDC or the schools themselves.



3. Proposed Treatments Toolkit

In order to standardise the school treatments for QLDC, **Table 3.1** shows the range of treatments proposed in Section 4. Each treatment has a brief description, the impacts this may have on road users and approximate cost to supply and install the treatment. The costs are based on a recent quote of works from Waimakariri District Council and may not reflect the costs for infrastructure in Queenstown. Traffic Management has not been factored into the costs, this is usually a day rate cost and it would vary with the amount of treatments proposed to be installed at each site.

Table 3.1 Proposed Treatment Toolkit

Treatment	PERMANENT 30KM/H SPEED LIMIT	STATIC 30KM/H SCHOOL SPEED ZONE	VARIABLE 30KM/H SCHOOL SPEED ZONE
Example			
Description	Involves using static signs to permanently change the speed limit for a section of road/s.	Involves using static signs to legally change the speed limit for a section of road during the stated times.	Involves using an electronic variable signs to legally change the speed limit while the signs are active.
Impacts	<ul style="list-style-type: none"> Residential roads will likely be affected as the speed limit change would need to be installed in an area to minimise multiple speed limit changes in a small area and comply with the Setting of Speed Limits Rule Easy to understand for road users as this is a standard sign used throughout the country 	<ul style="list-style-type: none"> Approved formal trial required to install these signs Hard for road users to understand as they have to read the times the speed limit is applicable Risk that regular road users will ignore the sign as generally when they pass it, it won't apply Travel times will be similar for road users as the zones are for a small section of road. Low cost to install 	<ul style="list-style-type: none"> Approval to install this sign required Easy for road users to understand as it will only be operational when the speed limit is in place Travel times will be similar for road users as the zones are for a small section of road. Expensive sign to install and the signs can only display one message e.g. 30
Cost	\$400 / sign (plus traffic management)	\$600 - \$1,000 / sign (plus traffic management)	\$12,500 / sign (plus traffic management)

Treatment	ADVISORY 30KM/H ZONE	SCHOOL ROAD MARKING	RAISED TABLE / SPEED HUMPS
Example			
Description	Involves using static signs to advise motorists to slow to 30km/h when children are present during school times. Speed limit cannot be enforced.	Involves putting a red slurry seal band across the road and on the entry to the school installing the words 'SCHOOL'	Humps/platforms are vertical deflection treatments used to control speed and are suitable for roads with limited emergency and heavy vehicle volumes. To achieve safety benefits they need to be installed with a ramp gradient of 1:15
Impacts	<ul style="list-style-type: none"> Minimal decrease in speed likely as the speed limit is advisory Travel times will be similar for road users as the zones are for a small section of road. Low cost to install 	<ul style="list-style-type: none"> This can be installed without any NZTA approval It creates a visual difference on the road surface to highlight a change ahead The red will fade, so will need to be put on the maintenance schedule 	<ul style="list-style-type: none"> The vertical deflection forces drivers to slow down There can be some resistance to putting in vertical treatments in residential areas due to the potential noise of traffic travelling over them
Cost	\$600 - \$1,000 / sign (plus traffic management)	\$2,750 / location (plus traffic management)	\$15,000 / location (plus traffic management)

Treatment	RAISED PEDESTRIAN REFUGE ISLAND	KERB EXTENSIONS
Example		
Description	<p>A raised courtesy crossing can create a safe slow speed crossing. They encourage motorists to give way to pedestrians at the crossing, but it is not a priority crossing.</p>	<p>Kerb extensions are a way to create a localised narrowing on a street.</p>
Impacts	<ul style="list-style-type: none"> • This creates a fully accessible crossing • The vertical change forces drivers to slow down and highlights the people on the crossing • There can be some resistance to putting in vertical treatments in residential areas due to the noise of traffic travelling over them 	<ul style="list-style-type: none"> • Kerb extensions can be used to slow speeds through a localised narrowing • Infrastructure, such as signage can be installed on the islands to put the signs in a more prominent space within the road cross section • Relatively low cost to install
Cost	<p>\$20,000 (plus traffic management)</p>	<p>\$5,000 (plus traffic management)</p>

4. Schools

4.1 Arrowtown Primary School

Existing Information

Arrowtown Primary School is located on Centennial Avenue which is one of the main roads into Arrowtown off SH6. Centennial Ave is a Primary Collector 40km/h road. The school operates a one-way vehicular access from Centennial Ave to Hood Crescent. This has recently changed to this direction, previously it operated in the opposite direction. The school also has pedestrian access from Cotter Ave.

Traffic counts were undertaken in July 2018 when the speed limit on Centennial Avenue was 50km/h, however there was a 40km/h variable school speed limit in operation. The traffic speeds around the start and finish of school show mean speeds above 40km/h as a section of this monitoring period would have been a 50km/h speed limit. These speeds show that the existing mean speed is too high to implement a 30km/h school speed zone without additional treatments.

Table 4.1 Centennial Ave Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Centennial Ave	46.3	49	43.9	46.3	45.8	46.9	High

Existing Treatments

There is an existing 40km/h school speed zone in operation around Arrowtown Primary school. Electronic variable 40km/h school speed zone signs are on Centennial Avenue and Chalmers Place (**Figure 4.1**) and a static variable sign is on Cotter Ave. However, the speed limit on these roads has been permanently reduced to 40km/h, so this school speed zone does not change the speed on the roads during school drop off and pick up times.



Figure 4.1 Existing electronic variable school speed zone sign

The berm area on Centennial Avenue adjacent to the school is used as angle parking as shown in **Figure 4.2**. This car parking can encroach into the new footpath along the school boundary.



Figure 4.2 Angle parking against footpath adjacent to the school

A kea crossing operates on Centennial Avenue outside the school. There are kerb buildouts on both sides of the road to shorten the crossing distance and increase sightlines for people crossing at this location. There is an appropriate amount of no stopping lines on the approach to this crossing point, see **Figure 4.3**.



Figure 4.3 Approach to kea crossing

There is also pedestrian access on Cotter Avenue with buildouts and a pedestrian refuge island. There is also time limited parking outside the school to allow drop off and for parents to walk their children into the school. There are school advisory signs and a School road marking on Centennial Avenue.

Recommendations

It is recommended that the existing VMS signs installed on Centennial Avenue and Chalmers Place are changed to reflect a 30km/h school speed zone. Since there are no kerb and channels on these roads, it is recommended that a kerbed island is installed on each side of the carriageway. These islands will create a visual and physical narrowing of the road and it will highlight the school speed zone signage.

Red school road surface markings are being recommended for other schools in the district. This change in colour on the road gives a visual clue to drivers that they are entering a school zone. However, given Arrowtowns village feel, this red

road marking could be out of place and not supported by the majority of the residents. If monitoring shows that speeds are still high in this area without this treatment, then this treatment should be reassessed.

Another solution to higher speeds is a vertical speed management treatment like a raised pedestrian crossing point. This could be considered on Centennial Avenue at the kea crossing location. Centennial Avenue is a main road into Arrowtown and consideration would need to be given to installing a wide table that buses and heavy vehicles could navigate. If a vertical treatment is not considered feasible on this main route then an additional pedestrian refuge island near the intersection with Cotter Ave could be considered. This is a wide intersection and there is a residential area to the east. A new pedestrian refuge island at this location would assist in people crossing Centennial Avenue and would also break up the long visual straight along Centennial Avenue. This may assist in slowing speeds.

The change in the speed limit is the highest priority for this school. The electronic signs will create a strong visual clue to drivers in the area that they need to slow down and also that they are approaching a school. The other treatments will assist in reinforcing this message but some may be difficult to get support to install within the Arrowtown village.

Cost

Table 4.2 Arrowtown School Estimates

Recommendation	Cost	Priority
30km/h Variable Speed Zone – 3 x VMS and 2 x static	\$39,500	High
SCHOOL road marking and red backing x 3	\$8,250	Medium
Raised speed table at kea crossing x 1	\$20,000	Medium
Additional pedestrian refuge island	\$15,000	Low
TOTAL	\$82,750	

4.2 Glenorchy Primary School

Existing Information

This school was not visited, and the information below has been ascertained from a desktop study of the school.

Glenorchy Primary School is located on Oban Street, which is a 40 km/h Primary Collector road in Glenorchy. Oban Street is the main route into Glenorchy from Queenstown. The school has its main frontage on Oban Street, with access also from Cantire Street and Islay Street. There is a small formal parking area on Cantire Street for visitors to the school and buses. The Glenorchy general store is located opposite the school on Oban Street. Oban Street currently has a narrow-painted median adjacent to the school and general store. There are around 30 children at the school.

Traffic counts show a mean traffic speed of around 40km/h. Since there are not a lot of children at this school, the school start and finish times are likely not too congested and traffic will likely generally be free flowing. The counts show that there is a good compliance with the 40km/h speed limit.

Table 4.3 Oban St Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Oban St	37.5	42.4	36.1	39.6	38.0	39.1	Medium

Existing Treatments

There are formal parking facilities on Cantire Street in the form of signs and wheel stops on a sealed area. On Oban Street, there is a gravel shoulder in front of the school which could be used as a parking area. There is currently static advisory signage on Oban St to indicate the presence of the school.

There are no obvious obstructions to the sightlines and visibility around the school. There is currently no facility for crossing Oban Street.

Recommendations

It is recommended that VMS signs be installed on Oban Street. Oban Street is the main street into Glenorchy and given the variety of road users that will be using this street a VMS sign is considered to be the most effective treatment. Combined with this red school banner marking should be installed on Oban Street at the VMS sign locations. Outside of school start and finish times, this will highlight the presence of the school to drivers. Static signs should also be installed on Cantire Street and Islay Street.

Consideration should be given to a new pedestrian refuge island on Oban Street. This would benefit the school but also the commercial businesses in the area.

The VMS signs and road markings are high priority and are likely to make the greatest difference to speed in the immediate area. Meanwhile, the refuge island is medium priority and could be installed at a later stage to aid pedestrian accessibility.

Cost

Table 4.4 Glenorchy School Estimates

Recommendation	Cost	Priority
30km/h Variable Speed Zone – 2 x VMS and 2 x static	\$27,000	High
SCHOOL road marking and red backing x 2	\$5,500	High
New pedestrian refuge island	\$20,000	Medium
TOTAL	\$52,500	

4.3 Kingsview Primary School

Existing Information

Kingsview Primary School was visited in the morning school peak. It is located on Yewlett Crescent which is a Secondary Collector 40km/h road in Frankton, Queenstown. The school leases part of the Frankton Arms Tavern building for their classrooms and they use the recreational reserve at the lake front as their school grounds. To access these grounds students are required to walk along the footpath to the pedestrian crossing on Lake Terrace and cross into the recreational reserve. Therefore, the active school front is from the classrooms on Yewlett Crescent around to the reserve entry on Lake Terrace. This route is used throughout the school day, rather than just at school start and finish times.

Traffic counts were undertaken in September 2020 and show that the mean traffic speed in the section of Yewlett Crescent adjacent to the school is between 24.1 - 30.1km/h in the AM and PM peak. Over a 24 hour period, the mean speed is less and ranges between 26.7 – 27.9km/h. This indicates that traffic is already travelling at 30km/h, therefore installing a 30km/h speed zone can be undertaken under the Land Transport Rule, Setting of Speed Limits (2017), without the need for additional traffic calming works.

Table 4.5 Yewletts Cres Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Yewlett Cres	24.1	30.1	25.9	28.7	26.7	27.9	Low-med

Existing Treatments

There is an existing advisory School Speed Zone sign installed on the Yewlett Crescent approach to the school and also the Lake Terrace approach to the school, see **Figure 4.4**. However, the school does not have a prominent street frontage and as mentioned above, adjoins the local pub. Drivers unfamiliar to the area will not realise there is a school there.

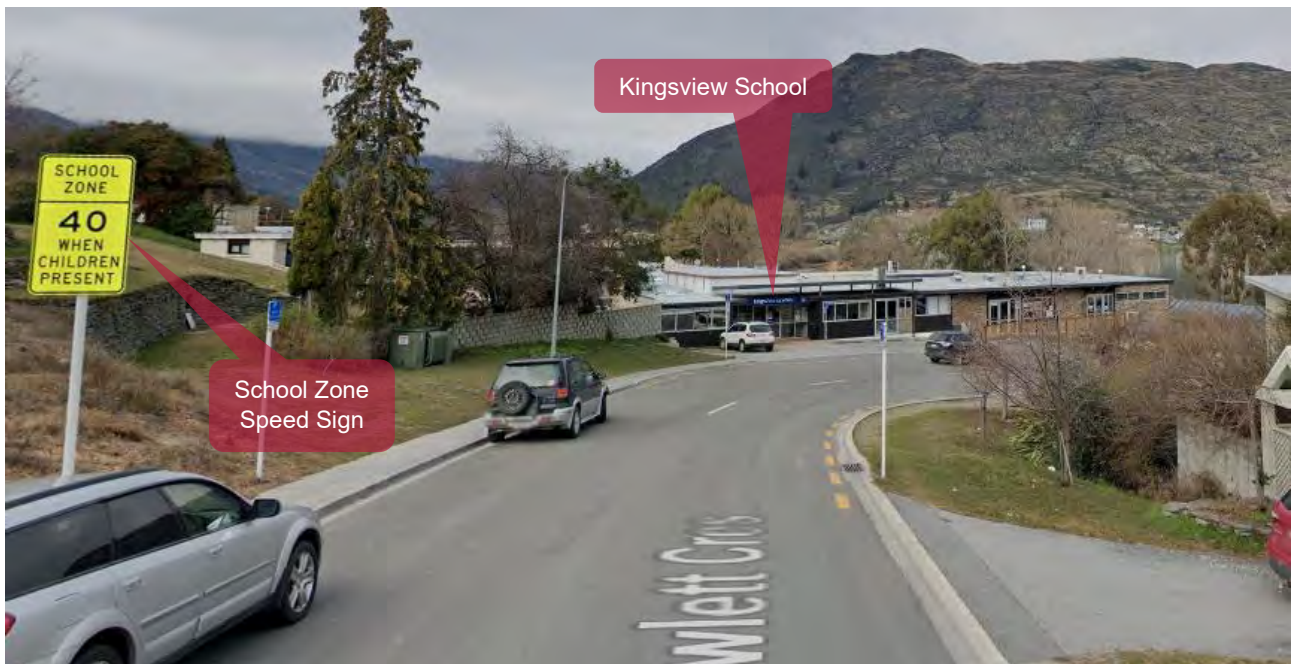


Figure 4.4 Yewlett Road Northern Approach

The pedestrian refuge island on Lake Terrace is positioned at the end of the footpath on the northern side. As shown in **Figure 4.5** the vegetation blocks visibility to the east, especially for children and smaller adults. The vegetation in this area should be low growing so intervisibility is maximised between pedestrians and drivers.



Figure 4.5 Pedestrian Refuge Island on Lake Avenue

Recommendations

It is recommended that a variable static 30km/h speed limit is installed for Yewlett Crescent and the section of Lake Terrace up to the entrance to number 4 Lake Terrace. The speed data from both the tube counts and Tomtom data show that the speeds in this area are already low.

Additional treatments are also recommended to support the speed zone. Given the inconspicuous school frontage a painted 'SCHOOL' road marking is proposed on each approach on Yewlett Crescent and Lake Avenue to indicate to drivers that they are approaching a school. It is also recommended to remove and replant the vegetation at the pedestrian refuge island to improve the sightlines.

It would also be beneficial to raise the pedestrian crossing point to further enforce lower speeds at this potential conflict point. This also creates a safer pedestrian area between the school/Frankton Arms Tavern and the lake reserve. This crossing is well used by the school during the school day and also by other people enjoying the lake reserve. A raised platform with a pedestrian refuge island would improve visibility for the pedestrian and create an accessible crossing point.

The speed signs and the school road marking are the highest priority as they will enforce the existing low speeds and the road marking will highlight the presence of the school through the change in road surface. It is also important to improve the sightlines at the pedestrian crossing point, not only for the school but for all people who use this crossing. Raising the pedestrian crossing would have good benefits for the wider community but since the current speeds are low, it will likely show little change in the speeds along this corridor.

Cost

Table 4.6 Kingsview Primary School Estimate

Recommendation	Cost	Priority
30km/h Static Variable School Speed Zone – Static sign x 3	\$3,000	High
SCHOOL road marking and red backing x 2	\$5,500	High
Vegetation clearance at pedestrian refuge island	\$1,000	High
Raised Pedestrian Refuge Island	\$20,000	Low
TOTAL	\$29,500	

4.4 Queenstown Primary School

Existing Information

Queenstown Primary School is located just outside the CBD area. Robins Road is the frontage road and also a key road for commuters and travellers to use as an alternative to Gorge Road. Robins Road is classified as a Primary Collector road. The speed counts shown in **Table 4.7** were from July 2018 when the posted speed limit was 50km/h.

Table 4.7 Robins Road Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Robins Road	38.5	39.7	34.4	38.9	37.4	39.7	Medium

It was noted during the site visit that a lot of children and parents choose to cross Robins Road north of the school opposite the hotel entrance lane, see **Figure 4.6**. This is not an appropriate place to cross Robins Road because this is where the drop off lane intersects with Robins Road and there are a lot of car movements and bus movements.



Figure 4.6 People crossing Robins Road at the exit to the drop off area

A new shared path is proposed to be installed along the eastern side of Gorge Road. A link into the school should be considered from this shared path.

Existing Treatments

Queenstown Primary School has a separate drop off zone running adjacent to Robins Road. This drop off zone is one-way northbound. At the exit point there is an arrow to indicate you can turn right into Robins Road (see **Figure 4.7**),

however this is one of the concerns that the school has raised about right turns out of this lane. Given the main residential area is south and east of this school, there is likely a high demand to turn right.



Figure 4.7 Drop off area road marking

The drop off zone has a wide raised pedestrian crossing (zebra) separating the drop off zone into two zones. This pedestrian crossing also extends over Robins Road and links the school to the footpath network on the eastern side. The crossing is wide but the footpath leading up to the crossing is narrow and barely wide enough to accommodate two people walking side by side. The waiting area has been extended and the kerb buildouts allow some space to wait but overall the connections into the crossing are poor for large groups of people accessing the school.



Figure 4.8 Kerb buildout, zebra crossing and a pedestrian refuge Island.

The drop off zone has a mixture of times, with the school side operating as a kiss and go arrangement and the road side having a P15 restriction during school start and finish times and P60 at other times, see **Figure 4.9**. This allows parents of smaller children to accompany them into school and assist them crossing the zebra crossing.



Figure 4.9 School drop off and pick up zone

Recommendations

It is recommended to install two electronic 30km/h signs on Robins Road to legally define a 30km/h zone. The existing mean speeds are slightly above the ideal speeds for installing a 30km/h zone. Therefore additional school road marking should be installed at each electronic sign location. This will alert drivers to the school zone.

The proposed shared path on the eastern side of Robins Road as part of a Wakatipu Active Travel route will alter the environment of this road significantly if installed. Additional measures to assist the school in speed management and pedestrian and traffic control, should be investigated once the route is confirmed.

At this stage the only speed management treatments recommended for the school are the signs and road markings and they are both considered high priority.

Cost

Table 4.8 Queenstown Primary School Estimates

Recommendation	Cost	Priority
30km/h Variable Speed Zone – 2 x VMS signs	\$25,000	High
SCHOOL road marking and red backing x 2	\$5,500	High
TOTAL	\$30,500	

4.5 Remarkables Primary School

Existing Information

Remarkables Primary school is a new build school on Lake Avenue. The main accessible frontage is on Lake Avenue, however given the gradients in the area, the school also has frontages on McBride Street and Allan Crescent. McBride Street and Lake Avenue are Secondary Collector roads. All roads surrounding the school have a current speed limit of 40kmh.

The main vehicle access is off Lake Avenue but there is also a staff car park off Alan Crescent. The school buses use McBride Street to drop off and pick up children. Pedestrians use all the exits of the school and spill out onto Lake Avenue, McBride Street and Allan Crescent.

The speed counts on Lake Avenue show speeds around 40km/h (**Table 4.9**) and the Tomtom data shows speeds around 30kmh. The tube count data is from July 2018 when the speed limit was 50km/h. Therefore, the Tomtom data might be more accurate reflection of speeds on this corridor currently.

Table 4.9 Lake Ave Road Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Lake Ave	34.3	41.8	34.9	40.6	35.6	37.7	Medium

Existing Treatments

There are a number of existing treatments around Remarkables Primary School. There is a separate drop off zone which is only used in the morning, see **Figure 4.10**. In the afternoon it is coned off so no vehicles can use it. This exacerbates the parking issue on Lake Avenue and Allan Crescent as this parking area cannot be used.



Figure 4.10 Pick and Drop off Area in front of Remarkables Primary School

There is also a raised table on the approach to this drop off zone. This raised table is right before the school parking area and just before the entry to the school pick up and drop off. This raised table is designed to slow speeds and is not for pedestrian accessibility as shown in **Figure 4.11**.



Figure 4.11 Raised speed table

McBride Street also has existing speed management treatments. There are speed humps before the Lake Avenue intersection which will slow traffic in that area. The speed hump shown in **Figure 4.12** has an advisory speed of 15km/h and is installed just before the pedestrian refuge island which assists people crossing McBride Street.



Figure 4.12 Speed bump with advisory sign

The pedestrian refuge island not only provides a crossing to students but also a crossing point for people travelling from SH6 or east of SH6 to the residential roading network or the lakeside.

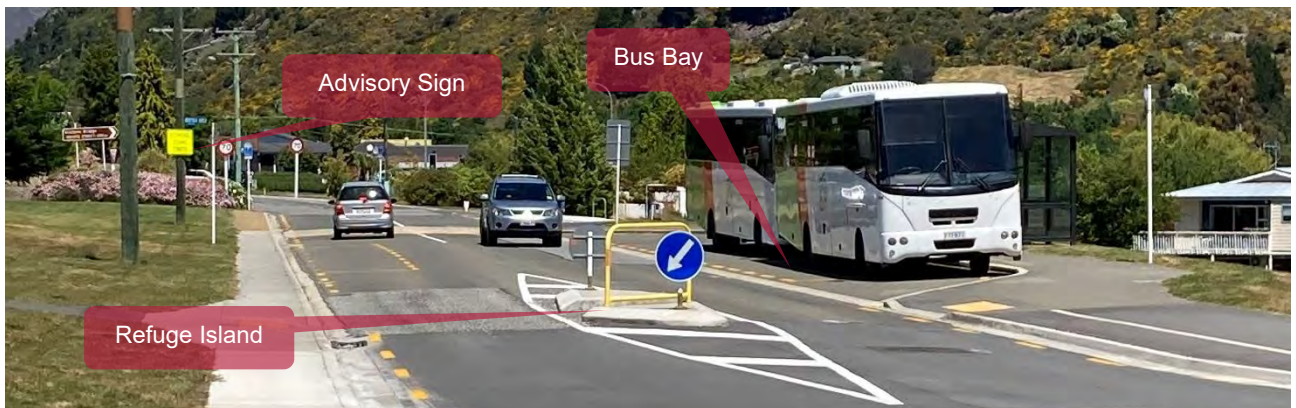


Figure 4.13 Bus bay and a pedestrian refuge island

Alan Crescent is also used to pick up children. Our site observations were made in the afternoon but we assume there is some form of drop off in the morning as well. Alan Crescent is a narrow road which provides access to the lake. The school parking in the area overwhelms the parking allocation and creates a congested lane. There are existing signs to indicate that it is school buses only, however this is not followed or enforced. The buses that use this area add to the general congestion of the area.

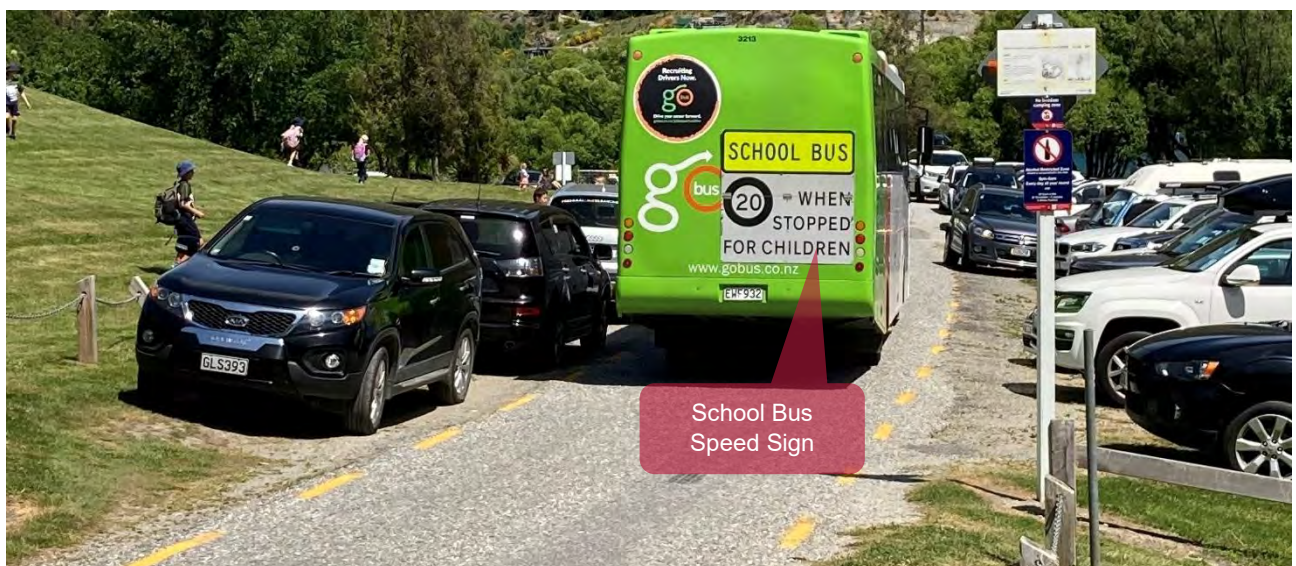


Figure 4.14 School parking congestion on Allan Cres

Recommendations

The existing speed data show the speeds to be around 30km/h on Lake Avenue. There are a number of existing speed management treatments on Lake Avenue and McBride Street. These measures are working to reduce the speeds. Therefore, it is recommended to install static variable 30km/h school speed zones. This should be installed on McBride Street and Lake Avenue to form the school speed zone. Red school banner road marking should also be installed at each static sign location. Since the school is set back from the road and slopes down to the lake, it is not very conspicuous from the road. The banner marking will remind drivers that there is a school in the area. The static signs will need to be a formal trial for NZTA.

However, there is a large amount of congestion around this school, especially along Allan Crescent. The speeds along here were observed to be low but as **Figure 4.14** shows it is heavily congested. The speed treatments will not solve this congestion.

Cost

Table 4.10 Remarkables Primary School Estimates

Recommendation	Cost	Priority
30km/h Variable School Speed Zone – 3 x static signs	\$3,000	High
SCHOOL road marking and red backing x 2	\$8,250	High
TOTAL	\$11,250	

4.6 St Joseph's School

Existing Information

St Joseph's School has three road frontages, Hallenstein Street which is a Secondary Collector and Beetham Street and Melbourne Street which are a local (access) roads. There is a car park on Melbourne Street in front of the church. People can access the school from this car park or from the gate on Beetham Street. The main kiss and drop area is also on Beetham Street directly outside the gate. St Joseph's School has a number of school buses that children use to access the school. The bus stops are located on Hallenstein Street, as shown in **Figure 4.15**. Being a catholic school a number of children will travel from outside of the immediate area and will need to access the school by car or bus.

The speed counts show that the existing speeds on Hallenstein Street are just below 40km/h, see **Table 4.11**.

Table 4.11 Hallenstein Street Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Hallenstein St	36.4	38.1	36.9	37.8	37.5	38.8	Medium

Existing Treatments

Hallenstein Street has some traffic calming facilities installed along it. Either side of the school are speed humps, that frame the school speed zone area. These speed humps are signed at an advisory 15km/h, as shown in **Figure 4.16**. There is also a zebra crossing that links directly into the school. However, the footpath on the northern side only continues west and does not continue east to Edgar Street. Site observations showed that very few school children used this crossing but other people use it to walk towards the town, see **Figure 4.15**.

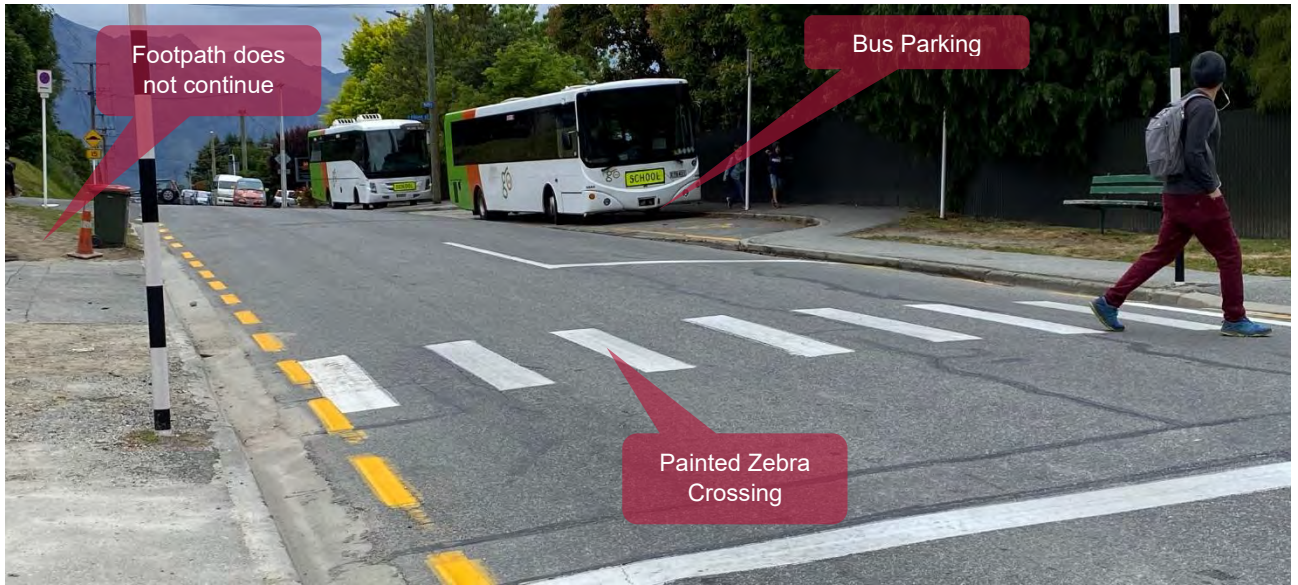


Figure 4.15 Painted Zebra Crossing and bus bay.



Figure 4.16 Speed bump and advisory sign

There is a school zone installed on the streets surrounding the school, see [Figure 4.17](#). There are no speed advisory limits given on these signs. The school itself is not visible from Melbourne Street because the Church is along the frontage of this road. It is also not very conspicuous from Beetham Street due to the school being significantly higher than the road level.



Figure 4.17 School zone sign

Recommendations

It is recommended that a 30km/h variable school zone is established around the school. The speed zone would encompass Hallenstein Street, Beetham Street and Melbourne Street. It is recommended that a static 30km/h zone is trialled since there is existing vertical speed calming treatments along Hallenstein Street and Beetham Street is a narrow, steep road. Melbourne Street forms a T-intersection with Beetham Street having priority, therefore speeds along this section of Melbourne Street are likely to be slower than the other sections.

At each of these sign locations it is recommended red School road markings are installed. This road marking will highlight the presence of the school to road users.

Both treatments are high priority and both are necessary to create a 30km/h school speed zone around St Joseph's school.

Cost

Table 4.12 St Joseph's School Estimates

Recommendation	Cost	Priority
30km/h Variable School Zone – 4 x static signs	\$4,000	High
SCHOOL road marking and red backing x 3	\$8,250	High
TOTAL	\$12,250	

4.7 Shotover Primary School

Existing Information

Shotover Primary school is located in the heart of a new subdivision called Shotover Country. The school is located on Stalker Road and Jones Avenue, which are 40km/h Secondary Collector roads. Both these streets are main routes into and around the subdivision. The local bus services use these roads and sometimes the timetables overlap with school start and finish times, adding to the congestion in the area.

There are pedestrian accesses on both roads and Jones Avenue has an on-site kiss and drop zone.

The speed counts were taken when the speed limit was 50km/h and show speeds in the thirties, this demonstrates that the existing speeds are low, even when considering daily mean speeds.

Table 4.13 Stalker Road Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Stalker Rd	34.5	37.6	35.3	36.7	36.5	37.0	Low-Med

Existing Treatments

There is no stopping on the school side of Stalker Road with an on-site bus parking bay. As shown in **Figure 4.18** some parking occurs in the bus parking area. There is also a staff car park that is accessed off this entrance. On the opposite side of the road there are indented parking bays. The existing lane widths are narrow and a flush median ensures that turning vehicles do not impede the traffic flow. There is also a pedestrian refuge island (**Figure 4.19**) on Stalker Road which allows good pedestrian access across Stalker Road. It also breaks up the continuous flush median and adds some traffic calming to the middle of the road.



Figure 4.18 Stalker Road School Frontage



Figure 4.19 Pedestrian refuge

There is an on-site one-way kiss and drop zone on Jones Avenue, see **Figure 4.20**. This allows parents to exit the road and drop their children within the school site. There is also on street parking along this frontage that allows parents to stay on the road and drop their children off. When parents are parked on-street it effectively blocks the traffic lane and road users are then required to use the flush median to pass the parked cars. This is likely to create a very congested section of road during the drop off times with the flush median effectively operating like a traffic lane, see **Figure 4.21**.



Figure 4.20 Drop off and Pick up Zone.

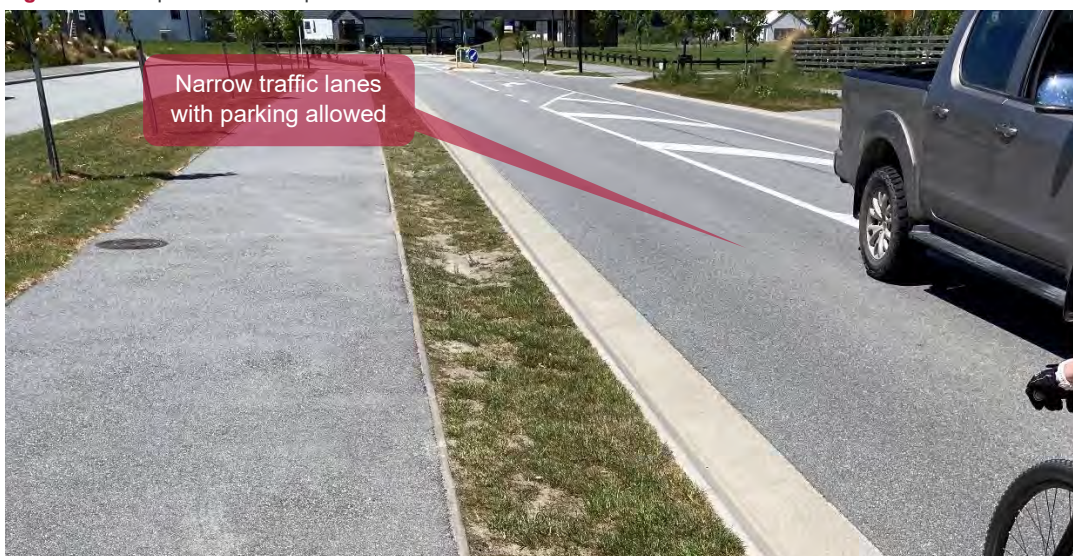


Figure 4.21 Jones Avenue on street car parking

Recommendations

It is recommended to install a static variable 30km/h school speed zone around Shotover Primary School. The existing speeds are low, even when it was a 50km/h posted speed limit. The speed limit has now changed to 40km/h. The signs will highlight to drivers that there is a school along the roads. School banner road marking could be considered as an additional treatment. Since the speeds are low, then it is likely that the marking will have little effect on the speeds but it will highlight the presence of a school. The static signs will need to be a formal trial for NZTA.

Cost

Table 4.14 Shotover Primary School Estimate

Recommendation	Cost	Priority
30km/h Variable School Speed Zone – 8 x Static Signs	\$8,000	High
SCHOOL road marking and red backing x 2	\$5,500	Medium
Raised Pedestrian Refuge Island x 2	\$40,000	Low
TOTAL	\$53,500	

4.8 Wakatipu High School

Existing Information

Wakatipu High School is a new school near the airport. The area surrounding the school is being developed, with a number of hotels and apartment blocks currently being built. The roading network is also still being built and some of the roads do not form connections yet.

Wakatipu High School has three frontage roads, Red Oaks Drive, Hawthorne Drive and Mountain Ash Drive. Red Oaks Drive is the active frontage with pedestrian and vehicular access off Red Oaks Drive. There is a purpose built lane behind the school buildings that links Red Oak Drive to Mountain Ash Drive. Pedestrians can enter the school from all roads, although it is likely that the majority of pedestrians will come from Red Oak Drive given the residential areas around the school.

The speed counts on Red Oak Drive show very low speeds. This road formation is not complete and there are a number of building sites along this road. In the future this road will form one of the key links through this new area.

Table 4.15 Red Oaks Dr Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Red Oaks Dr	26.5	29.6	21.7	26.9	23.6	26.4	High

Existing Treatments

There is an existing purpose built one-way lane that links Red Oaks Drive to Mountain Ash Drive. This lane provides access to the staff and student parking and also has the bus bays along it. There is good traffic calming along this lane with speed bumps and raised pedestrian crossing points, see **Figure 4.22**.



Figure 4.22 Bus Bay and Pick up and drop off spaces

Along Red Oaks Drive there is no stopping on both sides, a marked cycle lane and a median island. There is also a visitor and drop off car park accessed off Red Oaks Drive. There is a raised pedestrian crossing across this car park that links the main entrance to Red Oaks Drive. Just south of this is a pedestrian crossing point through the median island, as shown in **Figure 4.23**. This is the only pedestrian crossing point near the school frontage and provides access from the school into the shopping area west of the school.



Figure 4.23 Pedestrian refuge

Recommendations

Further discussion is required with QLDC and NZTA regarding this school site. The existing speed data would suggest that a static 30km/h variable school speed zone could be installed on Red Oaks Drive. However, this road is not completed and the roading network is not linked in the area. In the future this road will be a key link in the subdivision and the speeds will likely increase as there will be through traffic using the road.

If the speed management treatments are going to be installed within the next year then a static 30km/h variable school speed zone sign on Red Oaks Drive would be recommended. However, if the speed management treatments are a number of years away, then it is likely that an electronic 30km/h variable school speed zone will be required on Red Oaks Drive, given its future classification.

If a static 30km/h school speed zone is installed then this will be a formal trial.

Cost

Table 4.16 Wakatipu School Estimate

Recommendation	Cost	Priority
30km/h Variable School Speed Zone – 3 x Static	\$3,000	High
TOTAL	\$3,000	

4.9 Holy Family School

Existing Information

Holy Family School is located on Aubrey Road and Kirimoko Road in Wanaka. Aubrey Road is a 40 km/h Secondary Collector road. The Holy Family Church is in front of the school and the church is visible from the road rather than the school. The vehicular access is a 10 km/h loop road from Aubrey Road to Kirimoko Crescent. This provides drop off areas of parents and bus bays for the school buses. There is a staff car park which is accessed off Kirimoko Crescent.

There is pedestrian access from both roads via the existing footpaths linking into the footpath along the loop road.

Traffic counts taken in July 2019 show that the average speed on Makomako Road in the AM and PM peaks is between 34.5 and 35.4 km/h. Given the traffic counts were taken when the speed limit was 50km/h, this shows that speeds along this route are already self regulating.

Abley were not supplied with speed counts for Aubrey Road.

Table 4.17 Makomako Road Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Makomako Rd	35.4	40.3	34.5	39.7	36.8	37.9	Medium-High

Existing Treatments

There are currently multiple advisory static signs on Aubrey Road to highlight the presence of the school. This also indicates a 40km/h speed limit when children are present, which is now the posted speed limit. There are more school signs on Makomako Road. The school does not have prominent street frontage on either of these roads and outside of school start and finish times it would be not obvious to road users that there is a school at this location. There are some pedestrian facilities along Aubrey Road to assist people in crossing this road. There are kerb buildouts near the loop road, as shown in **Figure 4.24**. This creates a narrowing on Aubrey Road and no stopping lines are installed on both sides of the road to give good pedestrian visibility.



Figure 4.24 Kerb build out with tactiles

There is also a pedestrian refuge island on Aubrey Road east of the school, as shown in **Figure 4.25**. This refuge island is used by students to cross onto the school side of Aubrey Road. Unfortunately, the shared path on Aubrey Road is not well used by school children as they choose to cross at this crossing point and carry on along the footpath rather than use the shared path to the other pedestrian crossing point shown in **Figure 4.24**.



Figure 4.25 Pedestrian refuge

Within the loop road there is a zebra crossing which links the school to the church and the drop off areas. The loop road is wide with good parking opportunities for parents and school buses.



Figure 4.26 Pick up and Drop off Zone, zebra crossing and kerb build out

Recommendations

It is recommended that VMS Signs be installed on Aubrey Road. Aubrey Road is the through road which services many of the surrounding streets in the area. A VMS sign will be the most effective treatment because the school is hidden behind the church and not obvious to road users. Red school banner marking is also recommended on Aubrey Road at the VMS sign locations. Outside of school start and finish time this will reinforce the fact the school is there. A further VMS sign will be installed on Koromiko Crescent, and a static sign will be installed on Kings Drive.

A raised table with a pedestrian refuge island on Aubrey Drive should also be considered. A vertical treatment forces road users to slow down and creates an accessible crossing point.

The VMS and static signs and the school road banner marking are High Priority and are likely to make the greatest difference to speed in the immediate area. The pedestrian refuge island is Medium priority and could be installed at a later stage to aid pedestrian accessibility.

Cost

Table 4.18 Holy Family School Estimate

Recommendation	Cost	Priority
30km/h Variable School Speed Zone – 3 x VMS 1 x static	\$38,500	High
SCHOOL road marking and red backing x 2	\$5,500	High
Raised Pedestrian Refuge Island x 1	\$20,000	Medium
TOTAL	\$64,000	

4.10 Mount Aspiring College

Existing Information

Mount Aspiring College is located on Plantation Road which is a 40km/h Secondary Collector road. The only vehicle accesses are off Plantation Road, with a number of entrances providing access to the school. The school also uses the car parking at the old pool site, beside the school. Some students will drive to the school and they are required to park on the surrounding street network.

Pedestrians can enter the school from Plantation Road, Kings Drive, Totara Terrace and through Wanaka Primary School off Koru Way.

The school is currently undergoing some school expansion works with new buildings proposed for the site. This will alter the layout of the front of the school and move some of the existing pedestrian and vehicle accesses.

The traffic counts were taken when the speed limit on Plantation Road was 50km/h, however a 40km/h school speed zone operated. As shown in **Table 4.19** the minimum mean speeds are around 30km/h but the maximum mean speeds are into 50km/h.

Table 4.19 Plantation Rd Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Plantation Rd	29.2	51.1	31.6	52.4	39.6	52.2	Medium-High

Existing Treatments

There are existing 40km/h VMS signs on Plantation Road. Given the recent speed limit change, these signs do not change the speed limit of Plantation Road during school start and finish times. As shown in **Figure 4.27** Mount Aspiring College is located down the hill from the speed signage.



Figure 4.27 Existing school signage

Outside of the school there is a pedestrian refuge island on the eastern end of the school, as shown in **Figure 4.28**. This crossing point is used by students who park on Plantation Road. It has good visibility due to the no stopping lines installed each side of it. There are also bus bays in front of the school to cater for the school buses. The P120 parking on the opposite side of the road allows some drop off but is also used by people using the reserve. The wide flush median allows vehicles turning into the school to wait outside of the traffic lane. It also allows able people to cross the road, using the flush median as a waiting area.

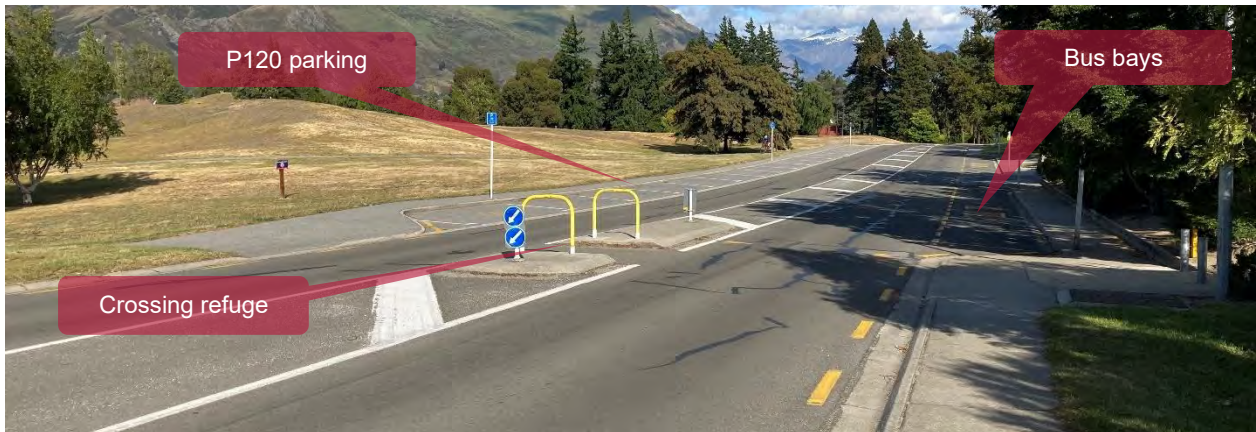


Figure 4.28 Mount Aspiring College frontage

Recommendations

Due to the high maximum mean speeds along Plantation Road an electronic 30km/h school speed sign is recommended. The signs should be installed at the current locations. In addition red school banner marking should be installed at each sign location. This will highlight the presence of the school to road users at all times.

The speeds should be monitored in front of Mount Aspiring College and if there is poor compliance then a raised pedestrian refuge island is recommended. This would help to reduce speeds but also provide a good crossing point for the school and any other people using this area. This is the only dedicated crossing facility on Plantation Road near the school and the reserve.

The school speed zone signage should be installed first before the raised pedestrian crossing.

Cost

Table 4.20 Mount Aspiring College Cost Estimates

Recommendation	Cost	Priority
30km/h Variable School Speed Zone – 2 x VMS signs	\$25,000	High
SCHOOL road marking and red backing x 2	\$5,500	High
Raised Pedestrian Refuge Island x 1	\$20,000	Medium
TOTAL	\$50,500	

4.11 Makarora Primary School

Existing Information and treatments

This school was not visited, and the information below has been ascertained from a desktop study of the school.

Makarora Primary School is located on Rata Road, which is a rural 100 km/h road in the Makarora Valley at the head of Lake Wanaka. The school has a small roll, and only has three teachers. The school facilities are on shared land with a QLDC operated community centre and library. There is no dedicated pick up and drop off area for the school.

Traffic counts taken show that the mean traffic speed on the section of Rata road around the school is between 22.3 and 29.5km/h in the AM and PM peak. Tomtom data shows the speed slightly lower at 18km/h. Both counts show very slow speeds in this village area.

Table 4.21 Rata Road speed counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Rata Road	29.5	39.2	22.3	45.1	29.7	36.2	Low

Rata Road connects the main highway (SH6) to multiple hotels and camping facilities. The school is near the end of the road, as shown in **Figure 4.29**. Visitors to the area are unlikely to go past the school and locals should know that a school is within the community.

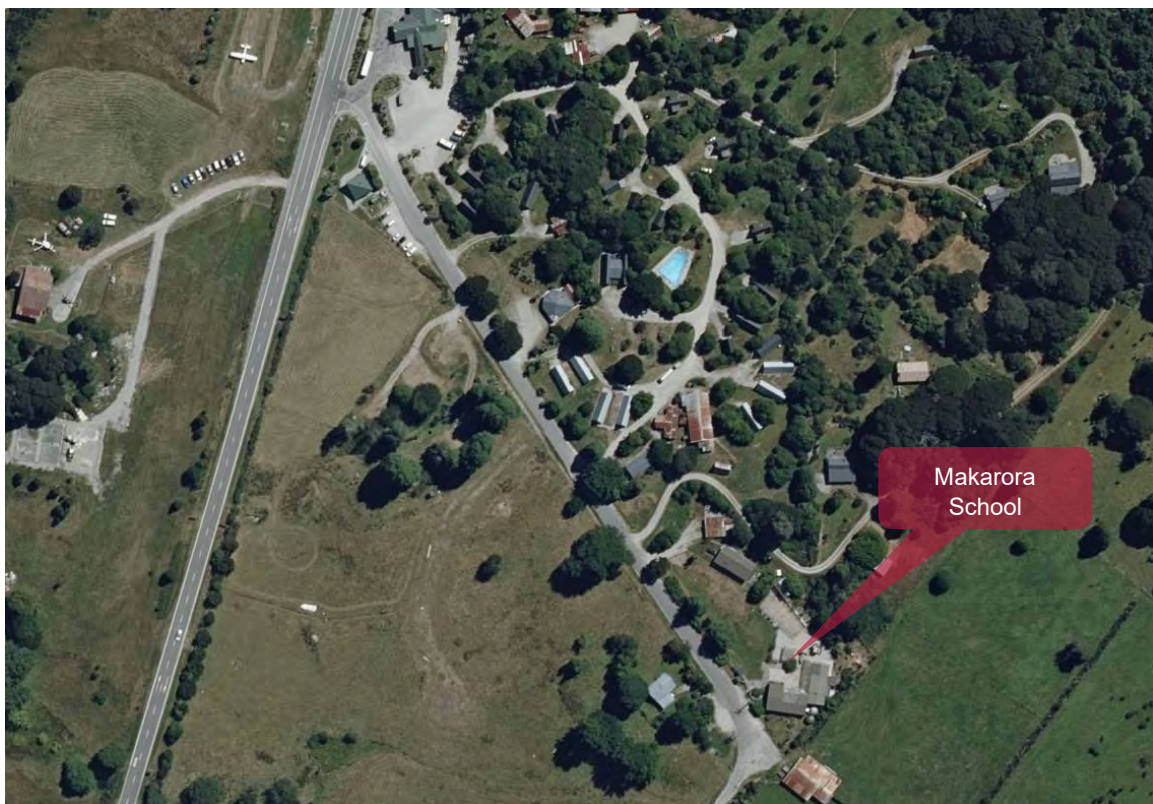


Figure 4.29 Aerial Photo of Makarora Village

Recommendations

It is recommended that two static 40 km/h permanent speed zone signs be installed where Rata Road begins off State Highway 6. This will be a permanent speed reduction for the village, rather than a specific school reduction. This is why 40km/h is recommended to be consistent with other residential villages and towns in the district. The existing speeds are low, so this is just reinforcing the low speeds.

The change in speed limit signs do not indicate the presence of a school. Since this school was not visited it is unknown if any advisory signs are located near the school. If not, then advisory signs should be installed to warn the driver there is a school on the road.

The permanent speed signs are high priority, and the advisory sign is a low priority and could be added at a later stage to indicate the presence of the school.

Cost

Table 4.22 Makarora School Estimate

Recommendation	Cost	Priority
40km/h Permanent Speed Zone – 2 x static sign	\$2,000	High
School Advisory Signs x 1	\$200	Low
TOTAL	\$2,200	

4.12 Wanaka Primary School

Existing Information

Wanaka Primary School is located on Koru Way, which is a dedicated 10km/h road for the school. This road has two entrances on both Totara Terrace and Kings Drive, which are local (Access) 40 km/h roads. Both entrances have access to car park areas and drop off areas. There is a one-way link along this road which has school bus bays. The school backs on to Mt Aspiring College and has access to the Wanaka Football Club grounds. The main school fronting is on the Kings Drive side of Koru Way.

Pedestrians can access the school from Koru Way or through Mount Aspiring College.

Traffic survey data taken on Totara Terrace in February 2019 shows that during the AM and PM peak the average speed 29.9-35.4 km/h. Totara Terrace had a speed limit of 50km/h when this survey was undertaken. The traffic data for Kings Drive was more recent when the speed limit had changed to 40km/h. The mean speeds for both roads are very similar.

Table 4.23 Totara Ter and Kings Drive Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Totara Ter	35.4	36.4	29.9	34.7	35.9	37.8	Low
Kings Drive	34.7	39.4	34.8	37.4	36.9	38.3	Low

Existing Treatments

On the surrounding streets, there are multiple static signs to indicate the presence of a school, located on Kings Drive, Totara Terrace, and McLeod Avenue, see **Figure 4.30**. These are advisory signs, not speed advisory signs. There are three schools in this area and a lot of school signage to warn drivers of each school which could confuse drivers as they may not be expecting that many schools in the area.



Figure 4.30 School sign and electronic variable children crossing sign.

At the Kings Drive access to the school a kea crossing is operated on the southern arm of the roundabout. This is a 3-legged roundabout and having a crossing at this location means that students only need to cross this road to get direct access to the school.



Figure 4.31 Kea Crossing

Along this access into the school is a raised table to slow speeds and create a pedestrian crossing platform, see **Figure 4.32**. Further along this road is a cul-de-sac head that operates as a drop off area. Parents park on the outside of the head to drop their children off and then use the island in the middle to turn and exit the way that they came. Buses use this entrance to access their bus bays which are located in the one-way link through to Totara Terrace, see **Figure 4.33**.



Figure 4.32 Raised crossing



Figure 4.33 Drop off Zone

The entrance from Totara Terrace also has a raised pedestrian platform which is also a good speed management device, see **Figure 4.34**. The Totara Terrace entrance accesses a large car park where parents can drop their children. This also has good pedestrian links, with an area in the middle of the car park for people to walk and raised tables through the car park, see **Figure 4.35**. Both these entrances to the school provide good parking opportunities for parents and avoid school parking congestion on Totara Terrace and Kings Drive.



Figure 4.34 Entrance from Totara Terrace



Figure 4.35 Totara Terrace Car Park

Recommendations

It is recommended that four static 30 km/h variable school speed zone signs are installed, with two on Totara Terrace and two on Kings Drive. Pedestrians use these entrances to the school and speeds near these intersections should be low. At each static sign red school banner markings should be installed. These will help reinforce the presence of the school at all times. These recommendations are high priority as they will reinforce the slow speeds in the area.

The static 30km/h variable signs will be a formal trail approved by NZTA.

Cost

Table 4.24 Wanaka Primary School Estimate

Recommendation	Cost	Priority
30km/h Variable School Speed Zone – 4 x static	\$4,000	High
SCHOOL road marking and red backing x 4	\$11,000	High
TOTAL	\$15,000	

4.13 Hawea Flat School

Existing Information

Hawea Flat School is located on the corner of Kane Road which is a 100 km/h Secondary Collector rural road Camphill Road, which is a 50km/h Secondary Collector rural road. The Hawea Community Centre is located adjacent to the school on St Ninians Way. St Ninians Presbyterian Church is also located at the southern end of the school on St Ninians Way. There is a kindergarten on St Ninians Way next to the church as well. The main school fronting is on Camp Hill Road.

Camphill Road has vehicle access into the school car park and bus parking along the frontage of the school. There is also a small area for pick-up/drop-off on St Ninians Way and also staff parking along the school frontage on Kane Road. There are no footpaths just wide grass berms.

The average PM and AM peak speeds on both Kane Road and Camp Hill Road are high and not currently conducive to a 30km/h school speed zone.

Table 4.25 Kane Road and Camp Hill Road Speed Counts

Road	8:00am		3:00pm		Daily		Priority
	Mean Min	Mean Max	Mean Min	Mean Max	Mean Min	Mean Max	
Kane Road	72.6	78.1	72.3	85.6	75.2	81.5	Medium-High
Camp Hill Rd	43.2	55.2	48.1	52.6	49.4	51.8	Medium-High

Existing Treatments

There are static advisory 40 km/h zone signs on Camp Hill Road, Kane Road and Gladstone Road. There are also static signs on St Ninians Way indicating the presence of the school.



Figure 4.36 Advisory School Speed zone on Kane Road

There are two crossing locations on St Ninians Way which frame the school frontage along this road. There are no dedicated pedestrian facilities on this road (or the surrounding roads), but these crossing points indicate to pedestrians where to cross the road. They also create a narrowing of the road with the hazard marker posts at the carriageway edge, see Figure 4.37.



Figure 4.37 Pedestrian Crossing on Camp Hill Road

Recommendations

It is recommended that three VMS 30km/h school speed zone signs be installed, two on each of Camp Hill Road and one on St Ninians Way. A static sign would also be required on Partridge Road. This would create a 30km/h school speed zone around the active frontages of the school. The speeds on Kane Road are too high to propose a 30km/h school speed zone. A 60km/h rural school speed zone should be considered for this area. Although the car parking on this road is for staff only and generally they will arrive and depart outside of school start and finish times.

Red school banner marking could be considered for this area. Camp Hill Road is a collector road and some through traffic will likely use this road. School road marking will alert drivers to the presence of the school at all times.

The 30km/h school speed zone signage is the highest priority. The school road marking should be considered in consultation with the school.

Cost

Table 4.26 Hawea Flat School Estimate

Recommendation	Cost	Priority
30km/h Variable School Speed Zone – 3 x VMS and 1 x static	\$38,500	High
SCHOOL road marking and red backing x 3	\$8,250	Low
TOTAL	\$46,750	

5. Priority Cost Summary

Table 5.1 outlines the costs associated with the high, medium and low priority recommendations for each school.

Table 5.1 School Estimate Summary Table

School	High	Medium	Low	Total
Arrowtown Primary School	\$39,500	\$28,250	\$15,000	\$82,750
Glenorchy Primary School	\$32,500	\$20,000	\$0	\$52,500
Kingsview Primary School	\$9,500	\$0	\$20,000	\$29,500
Queenstown Primary School	\$30,500	\$0	\$0	\$30,500
Remarkables Primary School	\$11,250	\$0	\$0	\$11,250
St. Josephs School	\$12,250	\$0	\$0	\$12,250
Shotover Primary School	\$8,000	\$5,500	\$40,000	\$53,500
Wakatipu High School	\$3,000	\$0	\$0	\$3,000
Holy Family School	\$44,000	\$20,000	\$0	\$64,000
Mount Aspiring College	\$30,500	\$20,000	\$0	\$50,500
Makarora Primary School	\$2,000	\$0	\$200	\$2,200
Wanaka Primary School	\$15,000	\$0	\$0	\$15,000
Hawea Flat School	\$38,500	\$0	\$8,250	\$46,750
TOTAL	\$276,500	\$93,750	\$83,450	\$453,700

6. Conclusions

The existing data and concerns from the school's support 30km/h school speed zones within QLDC. Of the 13 schools assessed in this report 30km/h variable school speed zones are presently viable for all the schools except Makarora School. Some schools already having low speeds and no additional speed treatment would be required to install the 30km/h school speed zone. As explained in **Section 4**, Makarora village speed limit should be permanently changed to 40km/h to make this village consistent with the surrounding villages and towns.

Preliminary discussions have been undertaken with Waka Kotahi to gauge support for these unapproved 30km/h variable school speed zones. Waka Kotahi are interested in a trial of variable 30km/h school speed zones and would be supportive of QLDC installing them.

Two different types of school speed zones have been recommended in this report – a electronic (VMS) variable school speed zone and a static variable school speed zone. The schools that are recommended to have a static 30km/h school speed zone are Kingsview Primary School, Remarkables Primary School, St Joseph's Primary School, Shotover Primary School, Wakatipu High School and Wanaka Primary school. The installation of a static variable school speed zone requires a formal trial by QLDC for Waka Kotahi.

The schools recommended to have VMS school speed zones are Arrowtown Primary School, Glenorchy Primary School, Queenstown Primary School, Holy Family School, Mount Aspiring College and Hawea Flat School. The installation of a VMS school speed zone requires Waka Kotahi's approval.

By installing the VMS and static signs at the same time, QLDC and Waka Kotahi can compare the effectiveness of these signs for speed management. A static sign is significantly cheaper than a VMS sign and data showing the difference in effectiveness of these signs will be helpful for any future speed management treatments, both for QLDC and other Councils in New Zealand.

To proceed with the 30km/h school speed zones in the QLDC district a budget of \$276,500 (plus traffic management) is required. This is the budget for the installation of the variable school speed signs (static and VMS) and the associated high priority treatments. There will also be additional monitoring costs for each school sites. QLDC will also require formal approval from Waka Kotahi to proceed and to follow the consultation process as set out in the Setting of Speed Limits Rule (2017).

Appendix A School Concerns

A1 School Concerns

School	Concerns (from the school)	Comments (as part of this assessment)	Speed	Accessibility	Parking
Arrowtown Primary	1. Yellow line parking is an issue and not enforced, school proactive at moving people	School should work with QLDC enforcement officers to reinforce good parking behaviour around the school. The speed limit change will not address this concern.			✓
	2. Visibility aggravated by angle parking by school fence at drop off and pick up	Work with QLDC to change parking arrangement/layout to increase visibility. Could be achieved by lowering the number of angle parks or increasing the spacing between. The speed limit change will not address this concern.			✓
	3. Footpath does not continue on which results in children weaving round vehicles, accessibility and safety needs addressed	It is unclear which footpath this comment refers to, however there is a new grit footpath along the school side of Centennial Ave which links Potter Ave to the school entrance on Centennial Ave.		✓	
	4. Change traffic flows through school	This issue has been addressed by the school and MoE. Slower speeds on Centennial Avenue will assist traffic turning into the school car park and drop off zone.		✓	
	5. Traffic growth around AT including campers	Slower speeds within Arrowtown and around the school will assist in maintaining safety for people actively travelling to school even with volumes increasing.	✓		
	6. Need for review of signage and road painting to alert vehicles that a school is located nearby	Installing a variable 30km/h school speed zone with the associated signs and road markings will highlight the schools presence.	✓		
	7. Review of vegetation and stationary car parking sightlines for safe access to and from school	School should work with QLDC on how to solve this. The speed limit change will not affect this.			✓

School	Concerns (from the school)	Comments (as part of this assessment)	Speed	Accessibility	Parking
	8. Education as well as environmental changes would be helpful	School to work with QLDC school officers.		✓	
	9. No pedestrian crossing, a safety refuge island on Centennial Ave but one of the main roads into Arrowtown	A kea crossing operates on Centennial Avenue. Reducing speeds adjacent to the school will make the road environment safer but if there are additional pedestrian desire lines to cross Centennial Ave, these should be assessed separately to this report.		✓	
	10. A change to the school drop off and pick up area (map provided)	The map was not provided to Abley however, the school and MoE have recently made changes and it is assumed this change has been implemented.			✓
	11. Drop off area on Cotter Ave	There is a P15 on Cotter Avenue that could operate as a drop off area. Arrowtown school was not visited during school drop off or pick up times so it is unsure how this area is used.			✓
	12. Future option for buses to be located on Centennial Ave	Internal car parking and bus drop offs have been changed by the school and MoE. There????.			✓
Glenorchy Primary	1. School is located on the main road into Glenorchy – road markings and signage needs reviewed to ensure drivers know a school is located there	Installing a variable 30km/h school speed zone with the associated signs and road markings will highlight the schools presence.	✓		
	2. Parking outside of school on main road and side road affects sightlines and safe road crossings for pupils	School should work with QLDC to reinforce good parking behaviour around the school. Dedicated crossing locations should be considered. The speed limit change will not directly address this concern.		✓	✓
	3. Cycling to school is popular but limited footpaths or safe trails	Lowering the speed limit will help cyclists feel safer on the road.		✓	

School	Concerns (from the school)	Comments (as part of this assessment)	Speed	Accessibility	Parking
	4. School role is growing and future proofing for additional buses and parking needs to be considered and planned for now	The school should work with QLDC and MoE to identify parking opportunities in the area.			✓
	5. Traffic calming measures on side roads to help reduce vehicles speeds	The proposed 30km/h speed limit will extend on the side roads that border the school. This will assist in slowing speeds around the school zone.	✓		
	6. Sightlines on main road (vegetation)	School should work with QLDC to decrease amount of and/or height of vegetation to increase sight lines.		✓	
Kingsview Primary	1. Have been in discussions with Council on the introduction of speed humps on Lake road to assist with slowing vehicles and reducing the road use as a short cut/rat run	A lower speed limit and associated signs and line marking will help slow vehicles on Lake Rd.	✓		
	2. Need for review of signage and road painting to alert vehicles that a school is located nearby	The speed limit signage proposed will help achieve this.	✓		
	3. Speed limit needs to be reduced (potentially less than 40km)	This is likely to be addressed by the proposed 30 km/h speed limits being assessed.	✓		
	4. Review of vegetation and stationary car parking sightlines for safe access to and from school	School should work with QLDC to possibly lower the amount and/or height of vegetation to help sight lines. Limit the number of car parks or increase the spacing to increase visibility.		✓	
	5. No pedestrian crossing nearby	The pedestrian desire lines should be considered in this area. A speed limit reduction during school pick up and drop off will increase safety for vulnerable road users		✓	
	6. Collaborative relationship with Pub next door which allows parent parking for pick up and drop off	No comment			✓

School	Concerns (from the school)	Comments (as part of this assessment)	Speed	Accessibility	Parking
	7. Education as well as environmental changes would be helpful	School to work with QLDC school officers		✓	
Queenstown Primary	1. Review of how to prevent south bound traffic completing a U-Turn at the Camp Street and Isle Street junction	Lower speeds will not address this issue.		✓	
	2. Sightlines for pupils crossing roads, getting on buses and getting in cars with vehicles stopped	Lower speeds will help with reaction times for drivers, however it will not improve inappropriate sightlines.		✓	
	3. Traffic volumes and flow/behaviours of traffic down Robins Road to Gorge Road intersection	Lower speeds will not address this issue.		✓	
	4. Right turning out of pick up drop off area on to Robins Road (perhaps some temporary measures in the very short term to prevent)	Lower speeds will not address this issue.		✓	
	5. Robins Road used as a rat run by locals but also congestion via campervans and tourists following google maps	Lowering speed limit will help reduce car speeds through this rat-run, but will not stop this occurring.	✓		
	6. Signage and road marking review to assist in notifying drivers they are approaching a school zone	The speed limit signage proposed will help achieve this.	✓		
	7. Width of road with parking on both sides causing congestion and sightline issues	Lowering the speed limit will not address this issue.			✓
	8. Need for enforcement to continue to keep improving- improvement over last 12 months	School should work with QLDC to provide enforcement for the area round the school.			✓

School	Concerns (from the school)	Comments (as part of this assessment)	Speed	Accessibility	Parking
	9. Review function of traffic islands north of the school on Robins Road which require vehicles to swing wide when existing the pickup drop off zone	Lowering the speed limit will not address this issue.		✓	
	10. Bus stops and bus rest stops for tour buses located in close proximity to the school (behaviour issues requiring referral to police)	Lowering the speed limit will not address this issue.			✓
	11. Rental cars are not towed away when they have overstayed allocated times	School should work with QLDC enforcement officers and rental car companies to provide better instruction to tourists about the function of school drop off and pick up zone rules.			✓
	12. School land is pick up drop off only but Council side is 15mins during that time and 60 mins at other times- would help is was pick up and drop up also	School should work with QLDC enforcement officers to reinforce good parking behaviour around the school. The speed limit change will not address this concern.			✓
	13. High school moving has not changed volumes	Lowering the speed limit will not address this issue.		✓	
	14. Extend the island by fire station to prevent people from turning right	Lowering the speed limit will not address this issue.		✓	
	15. Campervan parking area by Recreation Ground has added to congestion issues as was a place parents would park	Lowering the speed limit will not address this issue.			✓
Remarkables Primary	1. Vehicles coming from state highway onto McBride Street have no indication of a primary school	The speed limit signage proposed will help achieve this.		✓	
	2. School bus parking is just off the SH, this is where pupils get on and off the bus and where	Lower speeds will address other vehicles using the road.		✓	

School	Concerns (from the school)	Comments (as part of this assessment)	Speed	Accessibility	Parking
	vehicles come off SH and locals use the road as a shortcut/rat run				
	3. Need more visual cues (signs, road paint) of the schools location	The speed limit signage proposed will help achieve this.	✓		
	4. Sightlines surrounding school but especially Boyd crescent	Slower speeds will improve reaction times for drivers. There appear to be changes to Boyd Crescent recently completed to tighten intersection		✓	
	5. Lake Ave, signage and school environment measures needed	Lowering the speed limit will not address this issue.		✓	
	6. Speed vehicles travel on Lake Road and McBride Street	The speed limit signage proposed will help achieve this.	✓		
	7. School has kiss and drop open in the morning but has closed it for afternoon pick up due to safety of pupils	Lower speed limits will not address this.		✓	
	8. The lake front loop needs to be assessed as how best it can be used to create a safe environment. E.g. Alan Crescent- one way road	Lower speed limits will not address this.		✓	
	9. Cars parking off a roadway down Lake Ave causing sightline issues	Lower speed limits will not address this.			✓
	10. Connectivity to main public buses and key activity places such as Queenstown Event Centre and Remarkables Park.	Lower speed limits will assist to create safer routes for students.		✓	

School	Concerns (from the school)	Comments (as part of this assessment)	Speed	Accessibility	Parking
	11. No safe walking or cycling routes to and from school for pupils	Lower speeds within the residential area will assist to create safer routes for pupils to use		✓	
	12. Parking of vehicles on lake front inappropriately causing sightline issues	Lower speed limits will not address this.			✓
	13. Footpath ends up by church, resulting in pupils needing to cross road twice	Lower speed limits will not address this.		✓	
	14. Complete review of function and safety of kiss and drop	Lower speed limits will not address this.		✓	
St. Josephs School	1. General sight lines around Beetham and Hallenstein Streets	Lower speeds will help with reaction times for drivers, however it will not improve inappropriate sightlines.		✓	
	2. General pedestrian access to and from school	A reduction in speed should assist in making pedestrians feel safer walking on the footpath but will not assist in accessibility for pedestrians.		✓	
	3. Lack of footpath on north side of Hallenstein Street, unlikely an easy solution but does prevent connectivity	A reduction in speed should assist in making pedestrians feel safer walking on the footpath but will not assist in accessibility for pedestrians.		✓	
	4. Intersection safety with car parking Beetham and Melbourne Street	Lower speeds will help with reaction times for drivers, however it will not improve inappropriate sightlines.			✓
	5. Full day parking in surrounding streets, perhaps 120-time limit would assist in vehicle turn over and availability for pick up and drop off	Lower speed limits will not address these parking concerns.			✓
	6. Extension of kiss and drop area.	Lower speed limits will not address these parking concerns.			✓

School	Concerns (from the school)	Comments (as part of this assessment)	Speed	Accessibility	Parking
Shotover Primary	1. Increased signage and road marking leading up to school from Stalker Rd and Jones Ave to ensure driver awareness	The speed limit signage proposed will help achieve this.		✓	
	2. Kiss and drop turn left only review	Lower speed limit will not address this.			✓
	3. Footpath issue at kiss and drop where council ground and school ground meet	Lower speed limit will not address this.			✓
	4. Public bus timetable at certain times causes congestion for busy school times (pick up and drop off)	Lower speed limit will not address this.		✓	
	5. Future proofing for the continued growth of the school e.g. future pedestrian crossings or connectivity for cycle and pedestrian access	Lower speed limit will not address this.		✓	
	6. School buses pick up and drop off from both Stalker rd and Jones ave and this needs to continue to cater for increased demands	Lower speed limit will not address this.			✓
Wakatipu High	1. Parking issues for pick up and drop off – attempted enforcement with Council but was unsuccessful due to parents verbal abuse to enforcement officers (need solution, e.g. power solution for CCTV)	Lower speed limit will not address this.			✓
	2. Parking over the cycleway- sightline issues for pupils crossing the road	Lower speed limit will not address this		✓	

School	Concerns (from the school)	Comments (as part of this assessment)	Speed	Accessibility	Parking
	3. Red Oaks drive traffic flow and pedestrian environment needs reviewed e.g.: - bus pickups and drop offs, - crossing to additional bus stops - crossing of road via accessway road to	A reduction in speed should assist in making pedestrians feel safer walking on the footpath but will not assist in accessibility for pedestrians.		✓	
	4. Remarkable shopping centre - sightlines - not enough vehicle volume for pedestrian crossing	A reduction in speed should assist in making pedestrians feel safer walking on the footpath but will not assist in accessibility for pedestrians		✓	
	5. Signage and road painting review to occur- need to highlight it is a school	The speed limit signage proposed will help achieve this.	✓		
	6. Only way to cross Hawthorne Drive is via pedestrian crossing near new World (approx. 800m)	A reduction in speed should assist in making pedestrians feel safer walking on the footpath but will not assist in accessibility for pedestrians.		✓	
	7. Busy and area of growth (additional hotels opening end of 2021)	No comment		✓	
	8. Cycle lane boundaries bus parks	No comment			✓
	9. Pedestrian and cycle connectivity to trail network needs reviewed	Lower speed limit will not address this.		✓	

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