Whenuakite School

Traffic Management Recommendations

April 2024

Carpark Entry & Exit Signage

- Current signage that controls entry into and exit from the carparking area is non-standard and not as explicit as it could be.
- Existing signage at the entry point to the main carparking area is as below. Note that from the road there is no signage, and within the site there is only an "Entry Only" sign to indicate that exiting is not permitted.

Existing signage at carpark's eastern end

- Existing signage at the entry point to the main carparking area is as below.

Existing signage at carpark's western end

- It is recommended that the entry driveway be provided with new back-to-back signs either side of the driveway that show:
  - "ENTRY" signs (RG99 142) facing the road that identify the driveway as the main point of entry (which while well-known to locals may not be so obvious for visitors).
  - "NO EXIT" signs (RG97 142) facing into the site from the entry driveway are placed on either side of the driveway.

- It is recommended that the exit driveway be provided with new "NO ENTRY" signs (RG97 142) either side of the driveway facing the road.

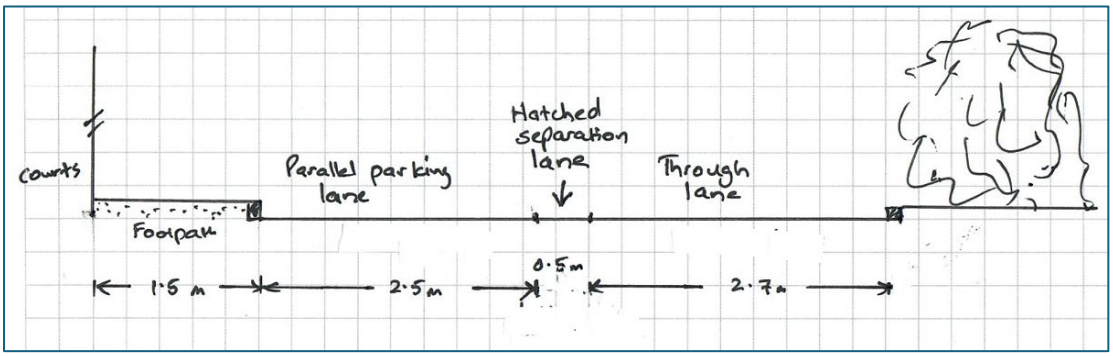
- It is recommended that a regulatory "STOP" sign (RG-5) be placed at the exit driveway facing into the site. This sign would need to be supported by painted limit lines on the pavement as are described further below.

Carpark Layout

Existing PUDO and carparking area (looking west)

- The broken yellow 'no stopping' lines along the whole length of the right (i.e. northern) side of the one-way aisle needs to be re-instated for its whole length; and one-way pavement arrows need to be re-pained at each end adjacent to the points of entry and exit.
- The one-way nature of the aisle, and the angle parking at the far (i.e. western) end of the carpark, are both appropriate and acceptable as they are.
- If not already in place, it is recommended that staff be either encouraged or required to park in the western-most angle parking spaces (nearest to the exit) to enable pick-up and drop-off (PUDO) activities and short-term parking demands to occur closest to the school.
- It is recommended that consideration be given to widening the section of the parallel parking area adjacent to the courts. This would require shifting the fence adjacent to the courts further into the site. (There would be little value in attempting to gain further space on the northern side of the parking aisle, given the presence of power poles and the desirability of retaining the dense landscaped separation of the parking aisle from the frontage roadway). At present, the parking aisle has insufficient width to safely and conveniently accommodate PUDO activities from parked vehicles, while other vehicles are passing to the right. Widening would help to ease both.
- If existing and/or projected demands for PUDO and/or parking is likely to exceed the existing available supply, then consideration could be given to removing the parallel spaces and replacing them with angled spaces. This would require even further intrusion into the courts area to the extent that the new angled spaces would align with the existing angles spaces further to the west.
- For widening to enable more space for the existing parallel spaces, this would best be achieved by providing a minimum 1.5m width for the footpath, 2.5m for the parallel parking lane, desirably a 0.5m hatched separation area beside the parking lane, and

a 2.7m wide through lane for passing vehicles. The hatched area would ensure a safe separation area between the pick-up / drop-off activities that would occur from parked cars, and moving vehicles travelling past.



Recommended cross-section for the parallel parking lane

Pavement Marking

- There have obviously been attempts in the past to achieve pavement marking on-site (including “no stopping” broken yellow lines etc). However these are now mostly illegible due to either pavement surface deterioration, or have been covered by loose stones and gravel that have found their way onto the paved areas from the highway shoulder.
- In order to achieve permanence with any future pavement marking, it is likely that re-sealing of most existing areas used by vehicles will be required. This especially includes the bus turning area; and the vehicle aisle that links between the bus turning area and the PUDO area.

Bus Turning Area

- While the extent that access into the bus turning area by vehicles other than buses is not known, it is recommended that “BUS ONLY” parking markings be considered, which would also require the bus turning area to be sealed. The addition of an appropriately placed “BUS ONLY” sign would also assist to reinforce that it is not a PUDO area for parent use.

Vehicle Link Between Bus Turning Area and Main Access Point

- The vehicle aisle that runs between the bus turning area and the area where most cars enter the school site appears to be all outside of school property and within the State highway. Therefore, any works undertaken within this area must have the prior approval of Waka Kotahi NZTA. The recommendations made below in relation to the link are therefore made on the basis that this will be undertaken as a prerequisite.

- It is recommended that this area be sealed.
- It is recommended that broken yellow ‘no stopping’ lines be established on both sides of the link. This is important, as there is insufficient width to enable a parked vehicle to be passed by another vehicle. The existing sign indicating that no-parking is permitted on the link is currently insufficient without the ‘no stopping’ lines to reinforce it.
- Due to moving vehicles on the link being in close proximity to any pedestrians who may be using the footpath, consideration should be given to the use of speed humps along the link in order to restrict vehicle speeds to walking pace.
- It is recommended that white directional pavement arrows (facing westbound) are painted at either end of the aisle.
- The recently installed pavement wands appear to be successfully discouraging vehicles from stopping on the side of the highway (which was presumably their intent). However, given that the link would require sealing if pavement markings were to be established, then consideration should be given to engaging with Waka Kotahi NZTA about achieving a potentially more robust treatment that is able to reinforce the function of the pavement wands. This could include, for examples, a raised kerb to clearly demarcate the northern edge of the aisle from the southern edge of the highway shoulder; and sealing and mounding of the shoulder to accentuate the function of the pavement wands in separating highway vehicles from school vehicles.

Area Adjacent to Main Entry Point

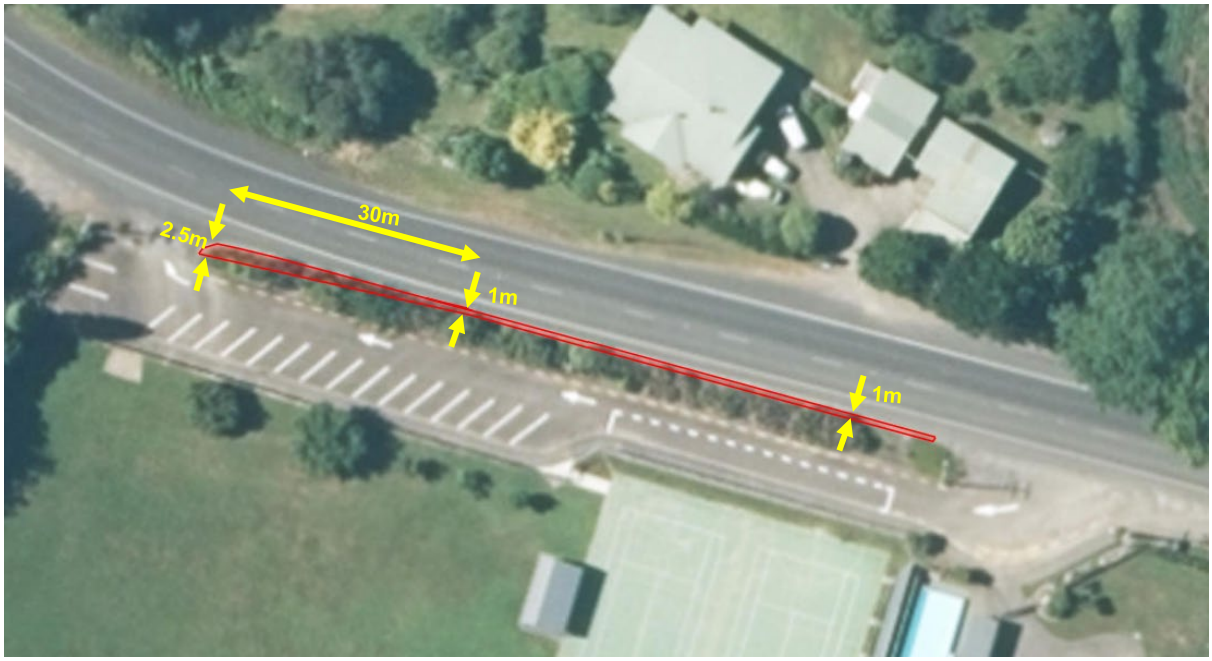
- Adjacent to the main entry driveway, the area next to the swimming pool is currently a convenient place to stop or park (as in the photo to the right). However, this area is important to enable right-turners into the site to have sufficient space to accommodate the vehicle swept path while turning in, especially for larger passenger vehicles. It is recommended therefore, that the broken yellow 'no stopping' markings that previously existed be reinstated. This may require re-sealing within that area, as well as sealing of the highway shoulder to prevent the intrusion of gravel and stones into the turning area as currently occurs.

Sight Distances at The Exit Driveway

- The sight distance to the right from the exit driveway from the carpark is presently dangerously deficient, and should be remediated as a matter of urgency by cutting back of the vegetation within the landscape strip to the right (i.e. east of) the driveway.
- The ideal sight distance to achieve is at least 175m as measured from a point 5m back into the driveway from the centre of the westbound lane. [1]

- In order to best achieve an appropriately safe sight distance to the right from the exit driveway, it is recommended that:
  - a triangular wedge of the landscaping strip that has a base of 2.5m (measured back from the front edge of the landscape strip) and a length of 30m east of the driveway, be either cleared of landscaping, or replaced with plants that do not grow above 1m in height; and
  - the planting along the remaining front edge of the landscape strip closest to the highway be trimmed back by about 1m, over the full length of the planting strip. The planting within that 1m strip should either be regularly trimmed to a height of less than 1m, or replaced with plants that do not grow above 1m.

[1] Land Transport Safety Authority (now Waka Kotahi NZTA) "*Guidelines for Visibility at Driveways – RTS6*" Page 9



- Further, to assist emerging drivers, double yellow ‘stop’ lines should be painted on the driveway at a location that maximises visibility from a position that does not create a risk of intrusion into the traffic lane while waiting.

Summary

- Much of what has been recommended in this paper has previously existed, but has been lost due to pavement deterioration and the intrusion of stones from the highway. This will necessarily require re-sealing in some areas, and repainting of pervious pavement markings.
- Improving visibility from the exit driveway is critical, as visibility is currently well below safe operational requirements. It is however, easily remedied by way of trimming back of vegetation and/or replanting with lower-growing specimens.
- Improving the narrow section of the carpark adjacent to the courts that currently accommodates parallel parked pick-up and drop-offs is substandard. It is potentially hazardous to children if they enter or exit from the driver’s side of a vehicle. Widening will however require some loss of space from the existing courts area.
- The link between the bus turning area and the main carpark area is on State highway land. Early engagement with Waka Kotahi NZTA, (perhaps through the Ministry of Education), will be critical before contemplating any further improvements within that area.
- The remaining recommendations are predominantly around measures that further inform and direct the movement of vehicles on-site, and which reinforce the traffic controls that are either already in place, or were previously in place.

Brett Harries

2/4/24