



SAFE SCHOOL STREETS

WILLOW PARK SCHOOL TRIAL EVALUATION

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EXECUTIVE SUMMARY

Introduction

- **Willow Park School** has been involved in **Auckland Transport's (AT) Safe School Streets (SSS)** programme trial since 2017. Infrastructure changes on streets around the school's entrances have been trialled, with the aim of improving road safety and encouraging active school travel.
- Baseline and post-intervention ('follow-up') data was collected to assess efficacy and guide decisions about the next steps.
- This report presents the findings from the follow-up data collection, with results compared to baseline as appropriate.
- Note that COVID and other factors may have contributed to differences between baseline and follow-up results. Traffic volumes around the school reduced at follow-up and COVID is likely to have contributed to this. Travel patterns to and from school are also likely to have been impacted. Also note the school roll in 2021 was 676, an increase of 36 students since baseline.

Road user behaviour and interactions

- There was a large reduction at follow-up in the total number of risky **road user behaviour and interaction** events observed and coded through video analysis. The reduced traffic volume may have contributed to this. Incident rates (i.e., percentage of events by total number of vehicles) cannot be provided.
- Follow-up video analysis shows that crossing the road while not using a crossing remains an issue. However, there was little evidence this was risky or dangerous behaviour. This behaviour may also indicate that the perceived safety of the roads has increased. On Eban Ave, parking at the bus stop and shop car parking was relatively common behaviour.

Vehicle speed

- For almost all **vehicle speed** measures, locations, and directions, speed was lower at follow-up from baseline. In some cases, the reduction was significant.
- It is important to note that baseline speeds were collected before the installation of a speed table on both Eban Ave and Compton St. It is likely that the speed change reduction is not solely attributed to the temporary changes for this trial.
- Considering the lower traffic volume at follow-up, these results can be encouraging as it might be hypothesised that reduced traffic volume could encourage higher speeds.

Mode

- At follow-up, 52% of respondents reported an active mode (walking, biking, or scootering) as the mode used most often by their children for the greatest part of their school journey. A further 19% reported using the designated park and walk zones.

- Comparing results for all modes used (i.e., not just the main mode) shows small increases from baseline in the percentage of students using active modes as well as travelling by car (including those using a park and walk).

Perceived safety

- At follow-up, 91% of respondents reported it was **safe or very safe** for students to **walk near the school entrances** during school drop-off/pick-up times. There was a significant increase at follow-up in the proportion reporting very safe (36% vs 7%). The perceived safety of **cycling** at follow-up remained similar to baseline, however, there was a decrease in the proportion reporting it as unsafe (8% vs 21%).
- At follow-up, there were **significant reductions** in the proportion of respondents reporting they had seen **unsafe parking or drop-off/pick-up** practices outside the school always or often. About a third of follow-up respondents reported never seeing this.
- At follow-up, there was a **marked increase** in the proportion of respondents agreeing or strongly agreeing that **traffic at school drop-off/pick-up times is well managed**. There were corresponding **decreases** in the proportion of agreeing or strongly agreeing that **drop-off/pick-up times were stressful** and that it was **difficult to get to other places** because of the school traffic.

Effectiveness of the interventions

- On all interventions examined at follow-up, about 60% or more of the school community and resident respondents aware of the changes rated the intervention as either **effective or very effective** at achieving the **intended safety outcome**. More common areas of concern raised were not agreeing with or seeing breaches of the one-way system, speed bumps, including vehicle acceleration between the bumps, and unsafe or illegal parking and driving behaviour.
- On all drop-off/pick-up behavioural issues examined at follow-up for **Eban Ave**, about a third or more of the school community and resident respondents aware of the changes rated the issue as either much better or a bit better than before. Almost 70% of respondents reported this for vehicles travelling at excessive speed. Illegal or unsafe parking was an ongoing concern, and a small proportion reported the one-way system had caused congestion in surrounding streets.
- Results were similar for **Compton Street** with about 40% or more of the school community and resident respondents aware of the changes rating the issues as either much better or a bit better. Sixty-two percent of respondents reported this for vehicles travelling at excessive speed. Illegal or unsafe parking was again an area of ongoing concern.
- For both **Eban Ave** and **Compton Street** the majority of the school community and resident survey respondents aware of the changes agreed the temporary changes had made the school drop-off/pick-up times **more safe for children** (68% and 69% respectively).
- Reflecting the above, the majority of these respondents for both streets reported either **never or only sometimes seeing** each behavioural/illegal issue examined. The only exception for both streets was for drivers not obeying parking time restrictions, with the majority reporting seeing this often, always, or not sure

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1. INTRODUCTION

Auckland Transport's (AT) Safe School Streets (SSS) programme trials physical infrastructure changes on streets around primary school entrances to improve safety and promote walking and cycling. The programme uses a tactical urbanism approach and phases of engagement, testing, and delivery – usually, a demonstration event followed by 'interim' treatments and potentially permanent treatments, contingent upon evidence of success. Throughout the programme, physical infrastructure developments are complemented by social infrastructure initiatives.

Willow Park School participated in SSS to improve road safety outside and around the school's entrances and to encourage active transport to and from school. Following consultation and engagement with the school community and local residents between 2017-2019, temporary street changes began in April 2021, and refinements were completed in January 2022. While the temporary street changes were largely concentrated on the streets with school entrances (Compton Street and Eban Avenue), changes were also made to other streets near the school – specifically, the installation of speed bumps on Moore Street and Sylvia Road. Figure 1 below highlights the project area of the trial in the streets surrounding the school.

Figure 1: Map of school streets



Baseline and post-intervention ('follow-up') data was collected for the Willow Park trial. The results will help Auckland Transport determine whether further adjustments are needed and if the temporary changes should be upgraded and made permanent. The trial is focused on four areas of impact from the interim treatments:

- perceptions of safety and attractiveness regarding the school gate area, and how acceptable the treatments are to students, the school community, and local residents
- parking compliance, driver behaviour and the behaviour of other road users (i.e. pedestrians, cyclists, buses) near the school entrance
- frequency of incidents or near-misses in the vicinity of the school gate
- impact on the wider network and unintended consequences.

This report presents the evaluation findings from the follow-up data collection. The data is compared to the baseline where appropriate. The data includes speed monitoring, video observations of road user behaviours and interactions, surveys of the Willow Park School community and local residents, and follow-up interviews with Willow Park School staff and students

2. SCHOOL BACKGROUND

2.1 School information

The Willow Park roll has increased by 6% since baseline data was collected in 2018.

Table 1: School Information

Willow Park School		
Location	13-17 Compton Street, Hillcrest, Auckland	
	2018	2021
School Roll	640	676
Decile	9	9
Ethnic Composition	European/Pākehā – 48% Māori – 5% Pasifika – 3% Asian – 39% Middle Eastern, Latin American and African – 5% Other – 0%	European/Pākehā – 38% Māori – 8% Pasifika – 3% Asian – 45% Middle Eastern, Latin American and African, and/or Other – 6%

Source: Education Counts - May 2018 (pre) and July 2021 (post). Middle Eastern, Latin American, and African students were included with Other in 2021

2.2 School motivations for participating in the trial

The Willow Park SSS trial baseline report shows the following reasons for the school's participation in the trial.

- To encourage more active transport.
- School and community concerns regarding parent parking behaviour and car movements near the school entrances.

2.3 School environment

The school has two main entrances on Compton Street and Eban Avenue.

Table 2: School street information

	Eban Avenue	Compton Street
Road type (ONRC)	Secondary Collector	Access Road
Posted Speed Limit	50km/h with 40km/h Variable Speed Limit	50km/h with 40km/h Variable Speed Limit
Public Transport Routes/Access points	Bus stop outside the school on Eban Avenue	
Cycling routes, walkways	None known that link to school entrances – possible walkways through Linley Reserve to the north of the school	

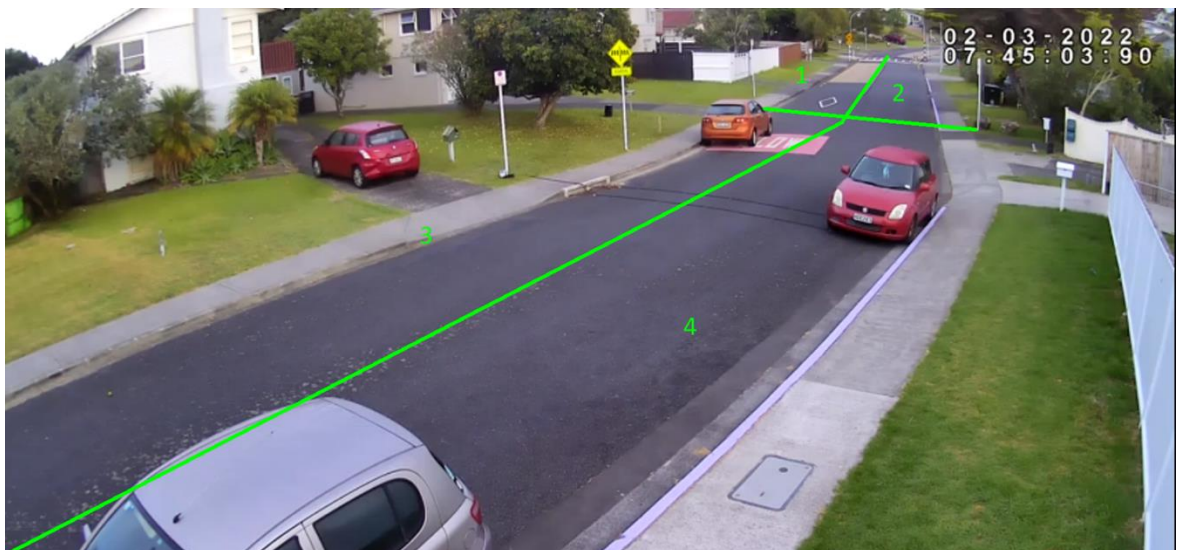
3. ROAD USER BEHAVIOUR AND INTERACTIONS

Follow-up video data of road user behaviour and interactions was collected over two consecutive days (Wednesday, March 2nd and Thursday, March 3rd, 2022). Camera 1 was located in Compton St and Camera 2 in Eban Ave (see following). The follow-up data was coded during the morning and afternoon drop-off/pick-up times - 7:45 to 9:15 am and 2:30 to 4:00 pm.

The follow-up data was compared to the 2018 baseline, however, note that comparisons should be treated with caution due to the four years between data collection and the likely impacts from COVID. The volume of traffic around the school reduced at follow-up (see later) and this is likely to be due to COVID. The pandemic is also likely to have impacted travel patterns (e.g., due to staggered school start times). Such factors may explain or contribute to any observed differences in coded events between baseline and follow-up (e.g., as the frequency of events may correlate to traffic volume).

There was a large reduction in the number of events coded at follow-up compared to baseline. This could be due to a reduction in traffic volume at follow-up compared to baseline.

Figure 2: Camera 1 – Compton St



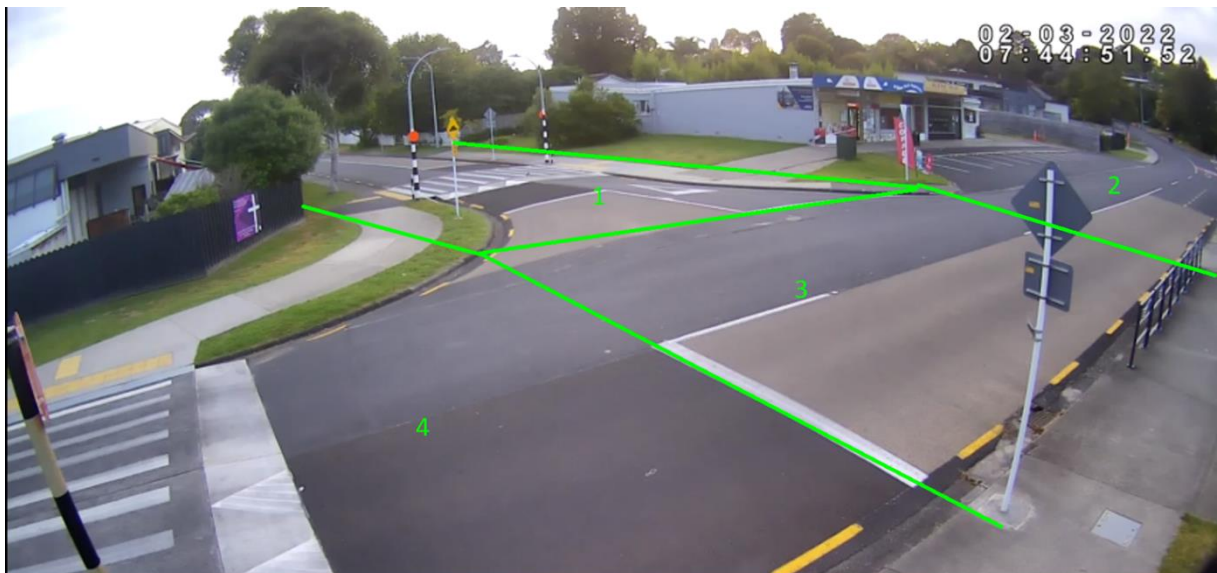
Key findings from Compton St

- A low number of dangerous vehicle manoeuvres were observed at follow-up. This was observed particularly with vehicle movements over footpaths to drop-off children, which was highlighted as problematic in Zone 2 at baseline.
- Pedestrians were observed crossing the road while not using the crossing at follow-up, particularly in Zone 2 and Zone 4.

Key findings by zone

- Zone 1: Six vehicles driving on the wrong side of the road to avoid parked cars in Zone 2.
- Zone 2: Eleven cases of either pedestrians or a group of pedestrians crossing the road not using the crossing and a few instances of cars parking in front of driveways.
- Zone 3: Five cases of either pedestrians or a group of pedestrians crossing the road not using the crossing.
- Zone 4: Eight cases of either pedestrians or a group of pedestrians crossing the road not using the crossing.

Figure 3: Camera 2 – Eban Ave



Key findings from Eban Ave

- A low number of dangerous vehicle manoeuvres were observed at follow-up. At baseline, there was frequent u-turning, three-point turning, and vehicle movements across the footpath.
- At baseline, vehicle parking obstructing a driveway or entrance was the primary parking infringement observed. At follow-up, this behaviour was not observed, however, cars were observed parking at the bus stop in Zone 2.
- The crossing on Sylvia Rd has resulted in safer crossing behaviours observed in this location compared to baseline. However, there was frequent crossing of the road while not using the crossing in Zone 2.

Key findings by zone

- Zone 1: Only one instance of a vehicle not complying with the rules of the pedestrian crossing.
- Zone 2: Fifteen vehicles parking either at the bus stop or in the shop car parking to drop children off. There were also nine instances of u-turning or three-point turning in this zone. Twenty-four cases of either a pedestrian or group of pedestrians

crossing the road while not using the crossing, however, there was no indication this was executed in a dangerous manner.

- Zone 3: A few instances of u-turning or three-point turning.
- Zone 4: No problematic or unusual behaviours noted.

4. VEHICLE SPEED

Vehicle speeds and volumes were measured using speed tubes placed on the road near the school entrances on Compton St and Eban Ave.

Baseline data was measured from 27 April to 3 May 2018. Follow-up data was measured from 28 February to 6 March 2022.

Speed tube locations were the same at both baseline and follow-up, shown below.

Figure 4: Speed tube location - Compton St



Figure 5: Speed tube location - Eban Ave



The following tables compare baseline and follow-up vehicle counts and speeds for Compton St and Eban Ave respectively.

The data is presented for:

- a total seven-day period and for the school morning and afternoon peak periods
- both directions and single directions respectively
- 85th percentile speed
- the percentage of vehicles exceeding 30km/h
- total vehicle counts.

Table 3: 7-Day Vehicle Speeds

Compton St		Baseline	Follow-up
Both Directions	85 th percentile speed (km/h)	39.5	34.3
	% vehicles exceeding 30km/h	60%	35%
	Vehicle count	3627	2266
Eban Ave		Baseline	Follow-up
Both Directions	85 th percentile speed (km/h)	53.3	42.9
	% vehicles exceeding 30km/h	84%	81%
	Vehicle count	15495	13837

Table 4: School AM/PM Peak Vehicle Speeds

Compton St		AM Peak		PM Peak		Change	
		Baseline	Follow-up	Baseline	Follow-up	AM Peak	PM Peak
Direction 1: Towards Eban Ave	85 th percentile speed (km/h)	34.2	34.5	36.1	34.2	+0.3km/h	-1.9km/h
	% vehicles exceeding 30km/h	36%	0%	44%	32%	-36%	-12%
	Vehicle count (over 5-days)	561	20	324	19		
Direction 2: Towards Moore St	85 th percentile speed (km/h)	41.4	30.0	40.2	33.7	-11.4km/h	-6.5km/h
	% vehicles exceeding 30km/h	57%	15%	58%	31%	-42%	-27%

	Vehicle count (over 5-days)	266	431	159	415		
Both Directions	85 th percentile speed (km/h)	37.8	32.2	38.2	34.0	-5.6km/h	-4.2km/h
	% vehicles exceeding 30km/h	43%	15%	49%	31%	-28%	-18%
	Vehicle count (over 5-days)	827	451	483	434		
Eban Ave		AM Peak		PM Peak		Change	
		Baseline	Follow-up	Baseline	Follow-up	AM Peak	PM Peak
Direction 1: Towards Compton St	85 th percentile speed (km/h)	49.4	35.5	48.8	38.9	-13.9km/h	-9.9km/h
	% vehicles exceeding 30km/h	78%	39%	76%	58%	-39%	-18%
	Vehicle count (over 5-days)	897	809	459	1268		
Direction 2: Towards Moore St	85 th percentile speed (km/h)	41.2	40.5	48.7	44.5	-0.7km/h	-4.2km/h
	% vehicles exceeding 30km/h	52%	61%	62%	72%	+9%	+10%
	Vehicle count (over 5-days)	850	553	1118	610		
Both Directions	85 th percentile speed (km/h)	45.3	38.0	48.7	41.7	-7.3km/h	-7km/h
	% vehicles exceeding 30km/h	65%	48%	66%	63%	-17%	-3%

	Vehicle count (over 5-days)	1747	1362	1577	1878		
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- Note that baseline data was collected before the installation of a speed table on both Compton St and Eban Ave in April 2019. The speed change reductions identified in this analysis are likely to also be attributable to these speed tables, which were not related to the trial.
- At Eban Ave, nearly three times more vehicles were noted between 2:00 and 4:00 pm at follow-up compared to baseline in vehicle-count peak data. This increase could be attributed to the one-way entry to Compton St which has changed pick-up/drop-off behaviour. This increase in traffic on Eban Ave was also reported by Willow Park School staff interviewed (see later).

5. SCHOOL COMMUNITY AND RESIDENT SURVEYS

This section presents the findings from surveys conducted with staff and parents of children at Willow Park ('school community survey') and residents living in the streets surrounding the school ('resident survey').

The school community survey was conducted at baseline and follow-up. The follow-up survey repeated some baseline questions, and the results are compared. Note the follow-up survey also included some new questions only asked at follow-up.

The resident survey was only conducted at follow-up. Given the limited number of respondents to this survey, results for some questions have been combined with the school community results where appropriate.

Unless otherwise specified, 'no responses' are not included in base totals.

5.1 Survey respondents

Table 5: School community survey respondents

	Baseline (%)	Follow-up (%)
Parent/caregiver of a Willow Park School student	88	96
Staff member at Willow Park School	5	2
Both of the above	0	2
Other	7	0
No response	0	0

n=200 (Baseline). n=187 (Follow-up).

Table 6: Resident survey respondents

	Number of respondents (n)
Local resident near Willow Park School	12
Parent/caregiver of a Willow Park School student	1
Both local resident and parent/caregiver	3
Staff member at Willow Park School	0
Other	1
No response	1

n=18.

5.2 Mode to/from school

Table 7: How does your child (or children) usually get to and from Willow Park School? (Follow-up only)

	(%)
Dropped off/picked up in car close to a school entrance	45
Dropped off/picked up in car using a park and walk zone	32
Walking with the Walking School Bus	13
Walk the whole journey independently or with an adult	48
Bike	10
Scooter	9
Public transport	1
Motorbike (e.g. pillion passenger)	0
Other	3

Question asked to Parents/caregivers, Both, and Other respondents at follow-up only. n=184 (Follow-up). Respondents could select multiple options.

- To compare these figures with baseline, follow-up respondents who selected either “Dropped off/picked up in a car...” option were grouped together, and respondents who selected either “Walk...” option were grouped together.

Table 8: How does your child (or children) usually get to and from Willow Park School?

	Baseline (%)	Follow-up (%)
Dropped off/picked up in car	61	66
Walk	51	56
Bike	4	10
Scooter	7	9
Public transport	0	1
Motorbike (e.g. pillion passenger)	0	0
Other	4	3

Question asked to Parents/caregivers, Both, and Other respondents. N=189 (Baseline) n=184 (Follow-up). Respondents could select multiple options.

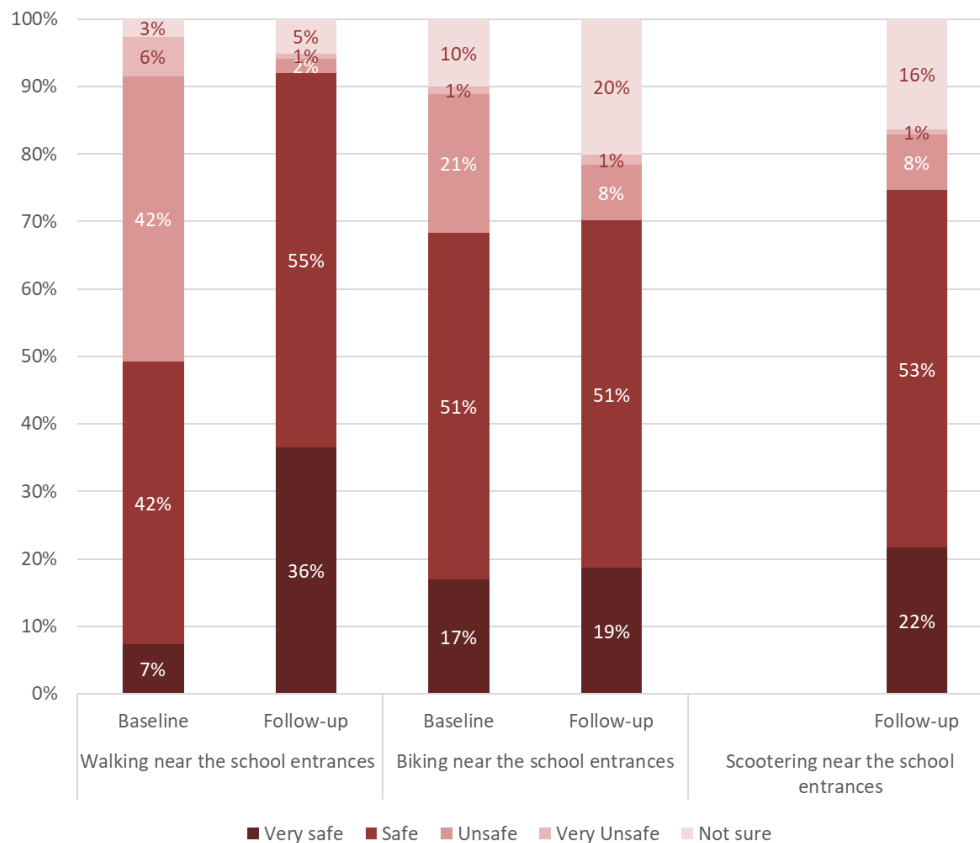
Table 9: Please select the mode of travel used most often for the greatest part of your child’s trip (Follow-up only)

	(%)
Dropped off/picked up in car close to a school entrance	29
Dropped off/picked up in car using a park and walk zone	19
Walking with the Walking School Bus	6
Walk the whole journey independently or with an adult	40
Bike	4
Scooter	2
Public transport	0
Motorbike (e.g. pillion passenger)	0
Other	0

Question asked to Parents/caregivers, Both, and Other respondents at follow-up only. Primary mode selected for each child at school. n=251 (total number of children reported by respondents).

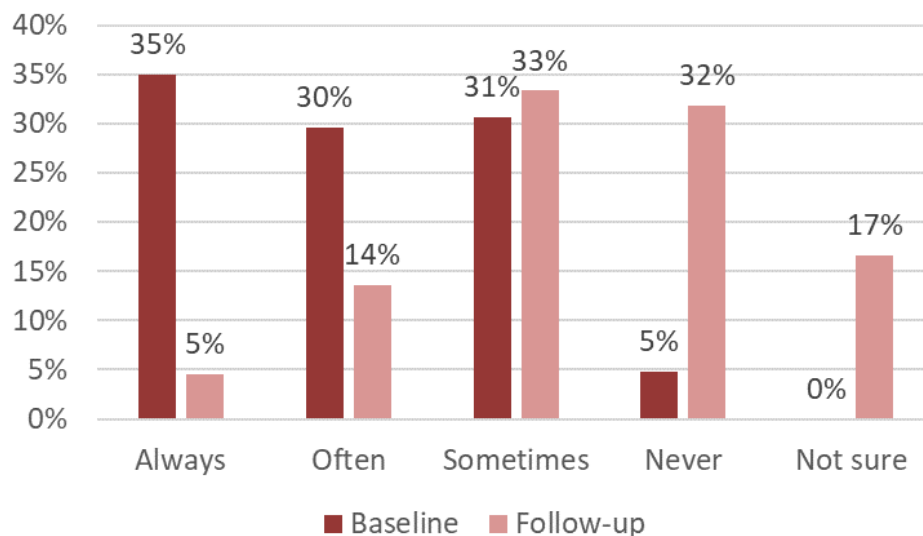
5.3 Perceived safety

Figure 6: How safe or unsafe overall is it for students to walk, bike or scooter near the school entrances during school pick-up/drop-off times?



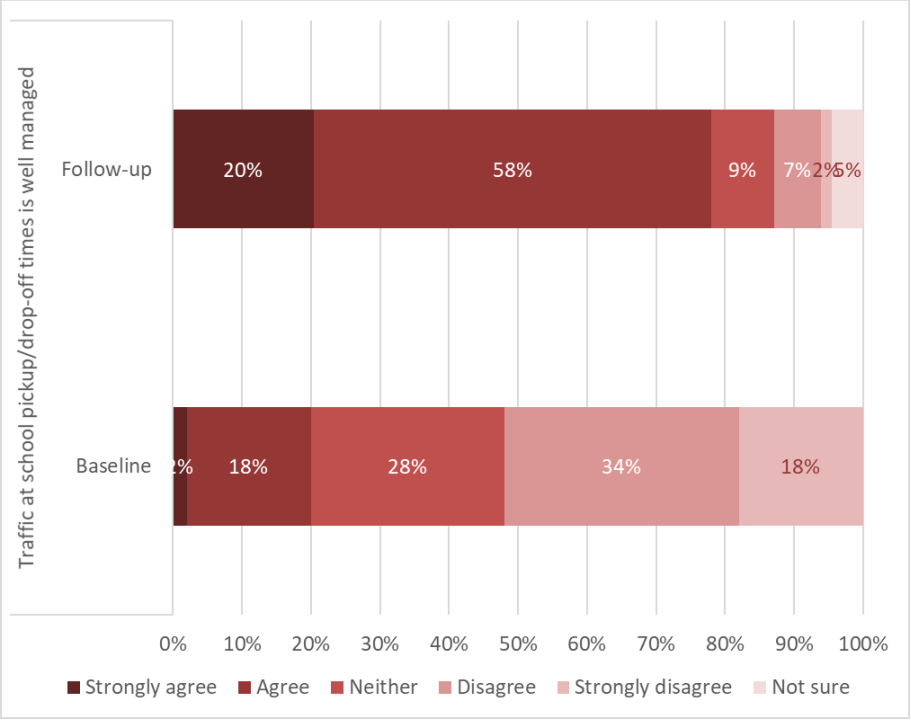
Scooting was only asked at follow-up. $n=189$ (Baseline) $n=137$ (Follow-up).

Figure 7: Thinking about the last two weeks, how often have you seen unsafe parking or drop-off/pick-up practices outside the school?



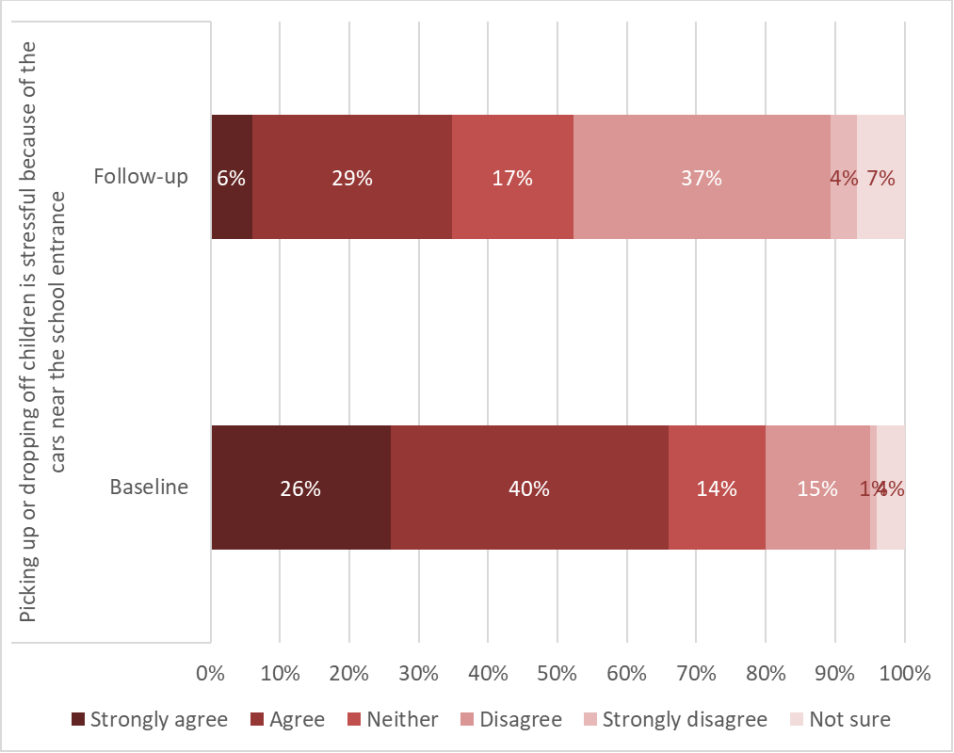
$n=189$ (Baseline) $n=132$ (Follow-up). Note: wording at Baseline was "How often do you see..."

Figure 8: Thinking about the last two weeks, how much do you agree or disagree with the following statement? - *Traffic at school pick-up/drop-off times is well managed*



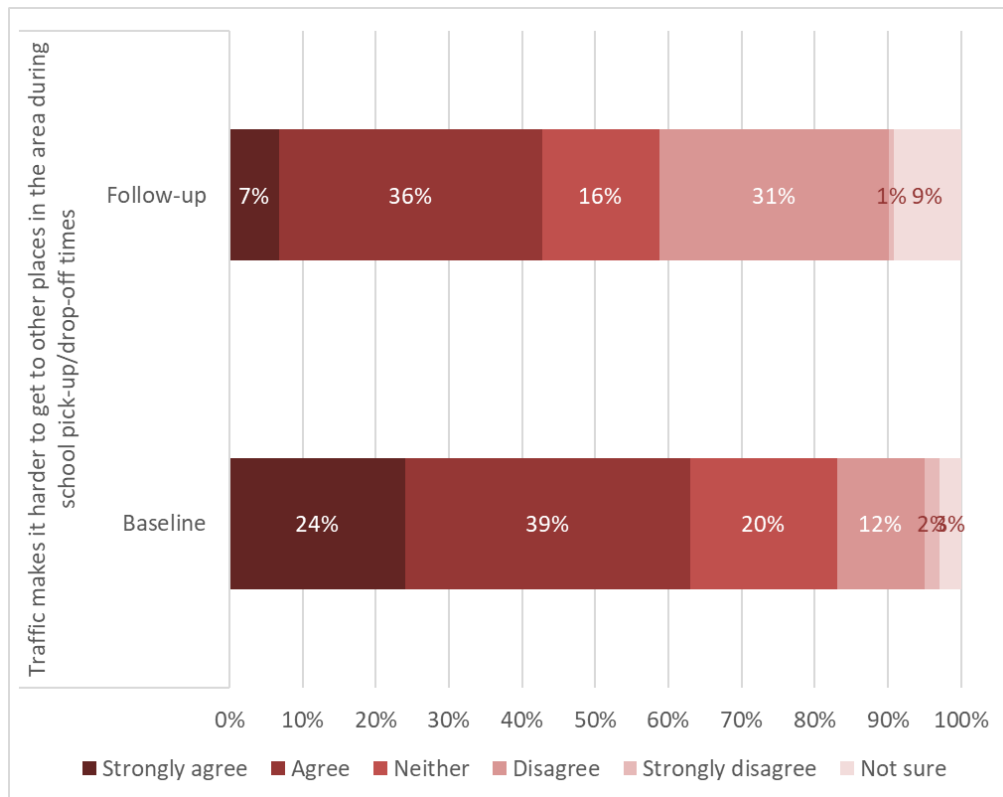
n=187 (Baseline) n=132 (Follow-up).

Figure 9: Thinking about the last two weeks, how much do you agree or disagree with the following statement? - *Picking up or dropping off children is stressful because of the cars near the school entrance*



n=186 (Baseline) n=132 (Follow-up).

Figure 10: Thinking about the last two weeks, how much do you agree or disagree with the following statement? - *Traffic makes it harder to get to other places in the area during school pick-up/drop-off times*



n=187 (Baseline) n=131 (Follow-up).

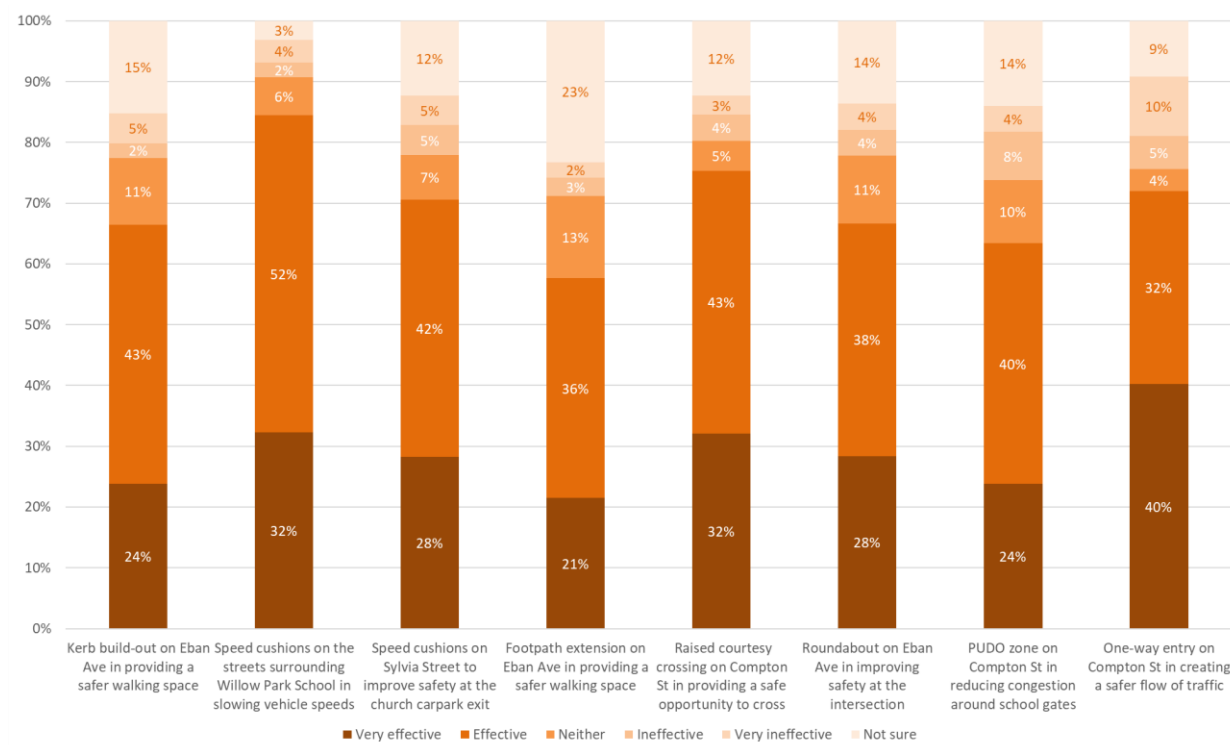
5.4 Effectiveness of changes

Table 10: Have you noticed any changes to the streets around Willow Park School since April 2021?

All respondents (%)	
Yes	87
No	3
Not sure	7
No answer	3

School community and resident survey respondents are combined (n=205).

Figure 11: Please rate the effectiveness of the following changes on the streets around Willow Park School:



School community and resident survey respondents are combined (n=164). Question only asked to survey respondents who reported awareness of changes to streets around Willow Park School.

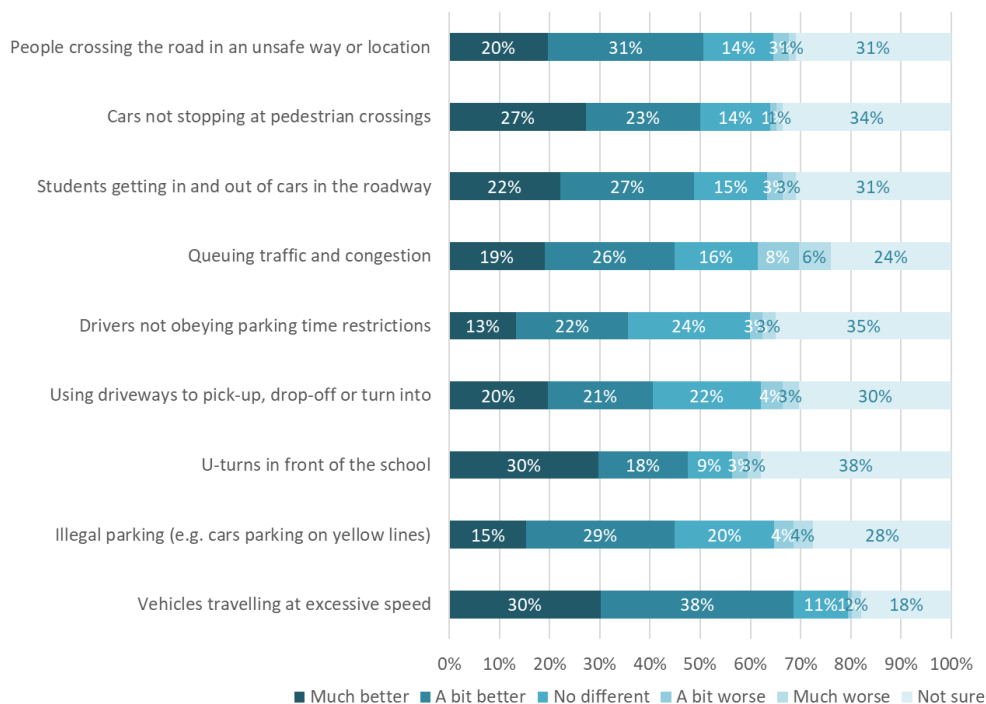
Sixty-five people explained their answers further. Sixty-six percent of these respondents described issues they had with the changes, while 23% percent of respondents liked the changes.

The most common change mentioned was the one-way entry into Compton Street. Of the 65 respondents, 31% reported either not liking this change or seeing vehicles ignoring the one-way system. A further 15% reported that they liked it or that it had positively altered traffic or driver behaviour.

Of the respondents giving further explanation:

- 15% reported issues with the speed bumps. Common complaints included vehicles accelerating excessively between the speed bumps to make up lost time—resulting in an increase in noise and emissions. A further 6% reported they liked the speed bumps or that they were working well to slow traffic.
- 12% reported they had noticed vehicles were driving more slowly around Willow Park School.
- 12% reported they had seen unsafe or illegal parking (including parking facing the wrong way).
- 12% mentioned witnessing unsafe driving manoeuvres (including U-turns in driveways).

Figure 12: Thinking about school drop-off and pick-up times, are the following issues now worse, better, or no different than before the changes were made? (Eban Ave)

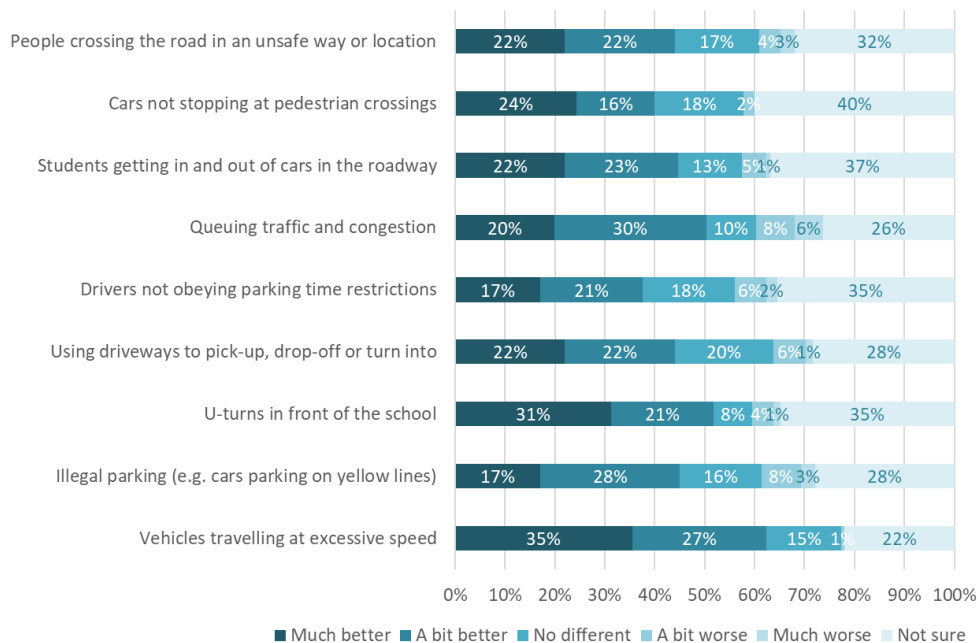


School community and resident survey respondents are combined (n=158). Question only asked to survey respondents who reported awareness of changes to Eban Ave.

Forty-two people explained their answers further. Of these respondents:

- 19% reported still seeing vehicles parking illegally. The reported parking violations included people parking on yellow lines, parking in the drop-off zone, idling at the bus stop, and double parking.
- 14% reported noticing changes in traffic and congestion. Five percent said that the one-way entry into Compton Street had caused congestion in surrounding streets.
- 9% reported congestion had eased, however, there was a consensus that shifts in travel behaviour caused by COVID-19 may have contributed to this change.

Figure 13: Thinking about school drop-off and pick-up times, are the following issues now worse, better, or no different than before the changes were made? (Compton St)

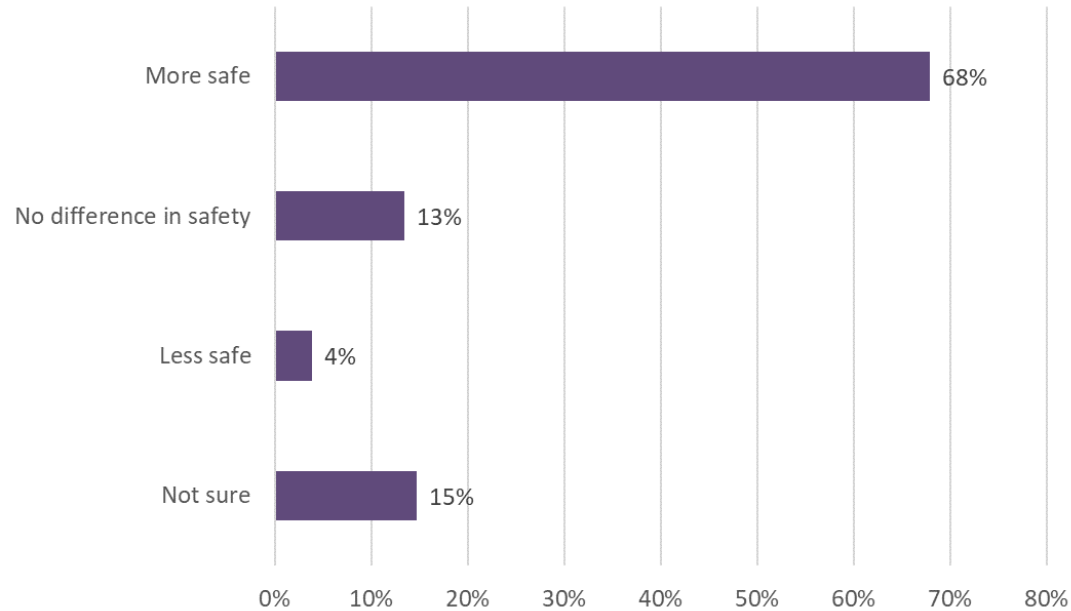


School community and resident survey respondents are combined (n=141). Question only asked to survey respondents who reported awareness of changes to Compton St.

Twenty-eight people explained their answers further. Of these respondents:

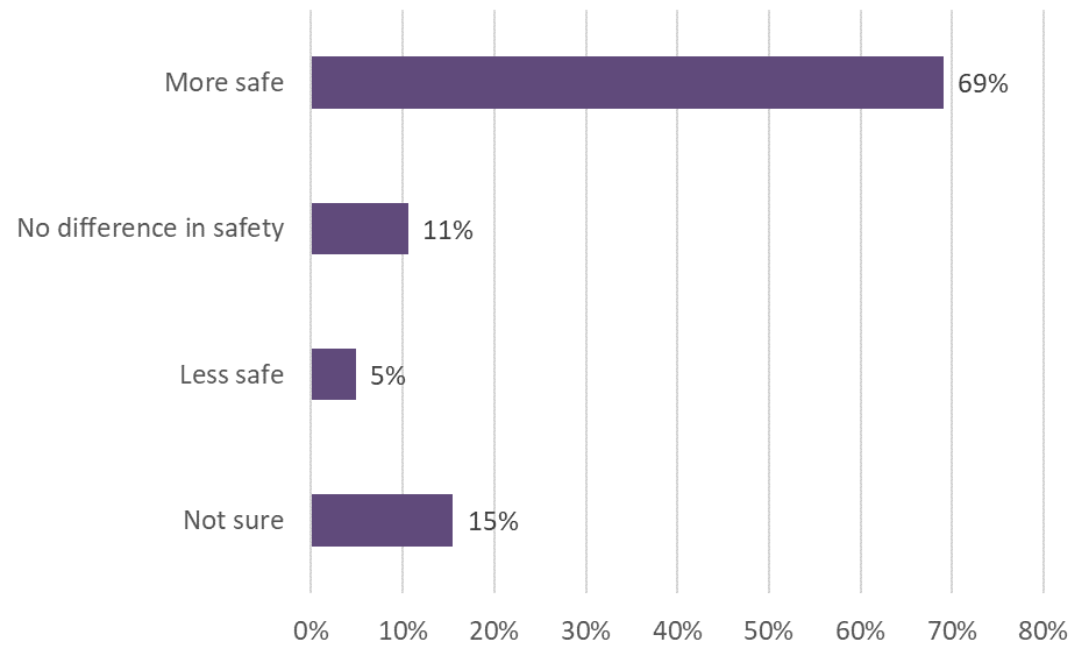
- 21% reported still seeing parking issues. The parking issues included parking facing the wrong way and prolonged parking in the drop-off zone.
- 11% reported that the one-way entry into Compton Street had improved driver behaviour. Improvements included a reduction in the number of vehicles using residents' driveways to make U-turns.

Figure 14: Thinking again about the school drop-off and pick-up, would you say the temporary changes have made these times more safe for children, less safe or is there no difference in safety? (Eban Ave)



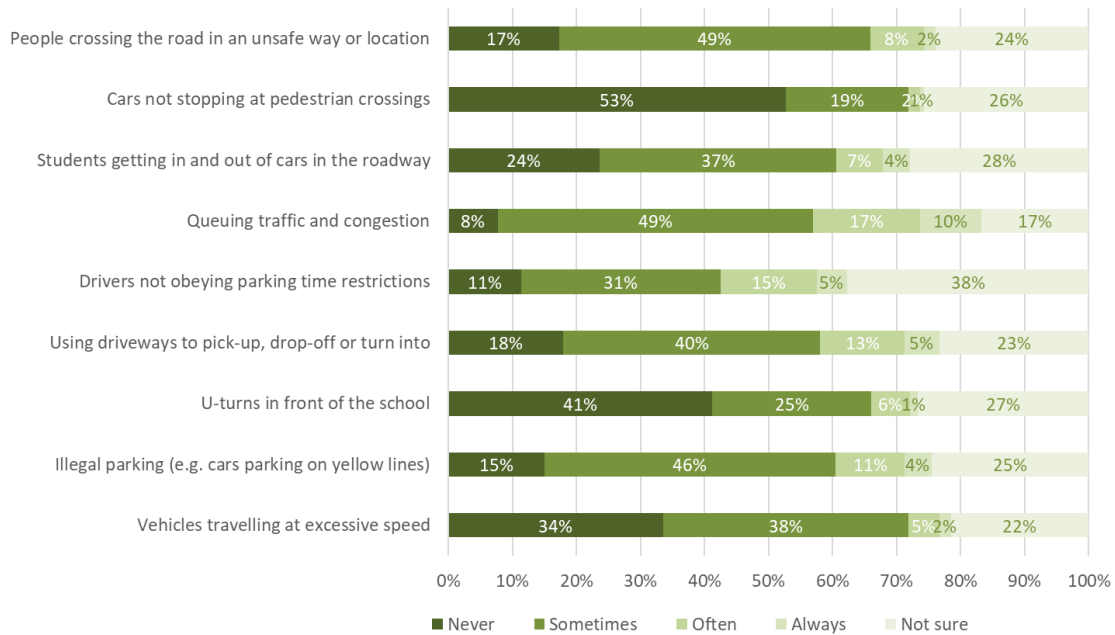
School community and resident survey respondents are combined (n=156). Question only asked to survey respondents who reported awareness of changes to Eban Ave.

Figure 15: Thinking again about the school drop-off and pick-up, would you say the temporary changes have made these times more safe for children, less safe or is there no difference in safety? (Compton St)



School community and resident survey respondents are combined (n=142). Question only asked to survey respondents who reported awareness of changes to Compton St.

Figure 16: How often do you currently see the following during school drop-off and pick-up times? (Eban Ave)

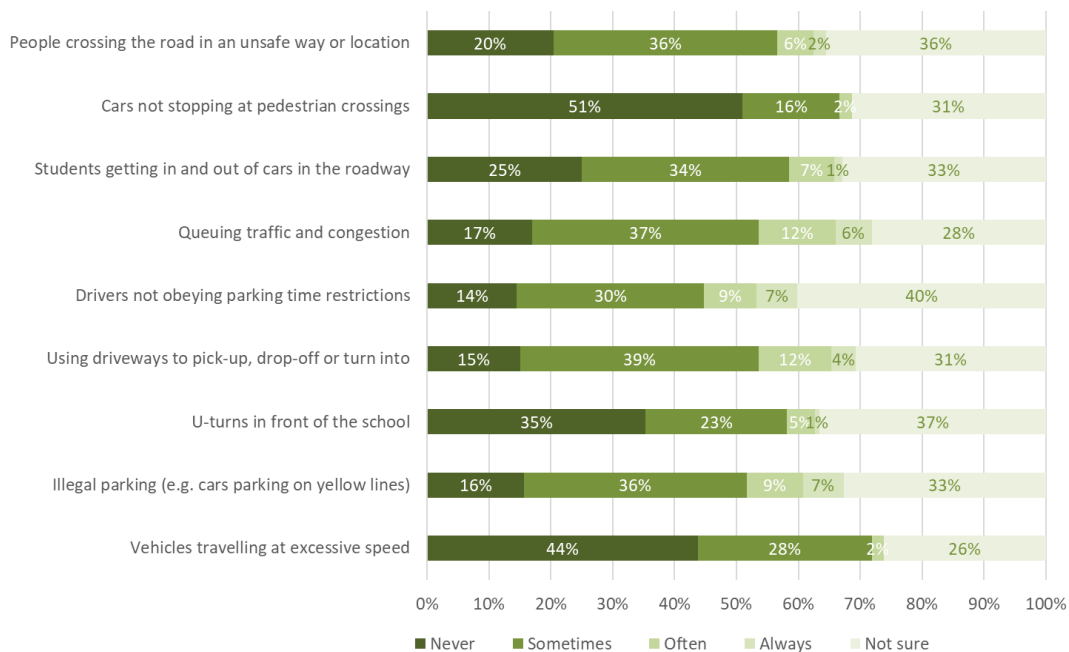


School community and resident survey respondents are combined (n=167). Question asked to all survey respondents.

Twenty-nine people explained their answers further. Of these respondents:

- 17% reported seeing parking issues. The issues included people parking on yellow lines and idling at the bus stop.
- 10% reported issues with traffic and congestion. A common issue that people noticed was people avoiding the changes around Willow Park School and dropping their children further away, including in the Northcote Baptist Church carpark.
- One respondent reported that more children exiting cars onto the road had directly contributed to slower traffic and increased congestion.

Figure 17: How often do you currently see the following during school drop-off and pick-up times? (Compton St)



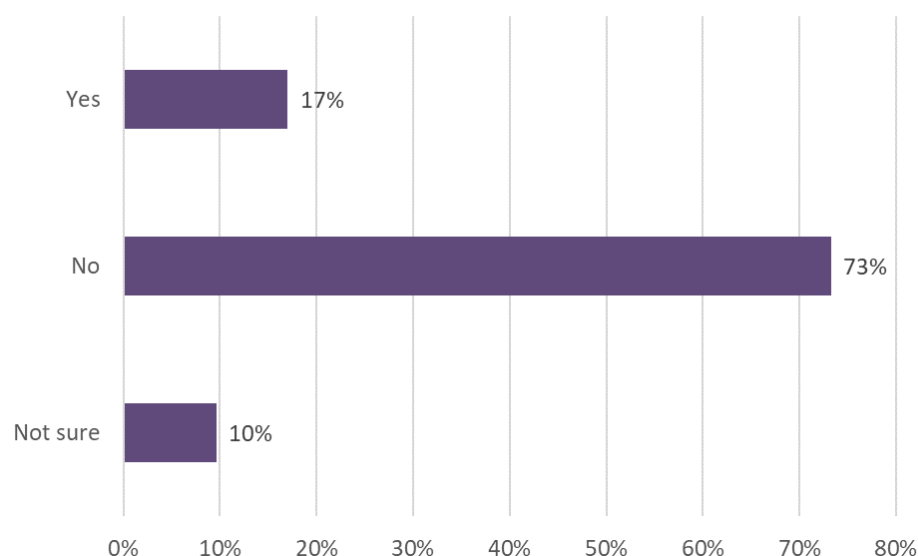
School community and resident survey respondents are combined (n=153). Question asked to all survey respondents.

Seventeen people explained their answers further. Of these respondents:

- 11% reported seeing illegal driving or parking.
- One respondent reported that the changes had made drivers frustrated and had led to an increase in the number of people breaking road rules.

5.5 Travel Mode Shift

Figure 18: Have the changes to Eban Avenue and Compton Street had any impact on the frequency your child (or children) use any mode to get to/from school?



Question only asked at follow-up to school community survey respondents (n=135).

Thirty-three people explained their answers further. Of these respondents, 21% reported that the changes had made the surrounding streets more safe.

- 9% reported that the changes to safety had resulted in their child starting to walk or bike to school. One respondent specifically mentioned that the speed cushions reducing vehicle speed had contributed to their child's mode change.
- 12% reported that their child had already been walking to school, but the changes had made either them or their child feel much safer about their journey to and from school.

An additional 9% of respondents reported that their child had begun to walk or bike to school but did not mention if this was due to their perceived safety of the area. Of this group, one respondent mentioned that they had stopped driving their child because the street changes had made it too difficult to drop them off close to the school.

5.6 Further impacts

Forty-nine people reported experiencing further impacts of the changes. Of these respondents:

- 10% reported liking some of the changes including the one-way entry to Compton Street and the speed cushions.
- 47% reported issues with some of the changes including the roundabout, the planter boxes, and the one-way entry to Compton Street.
 - 16% percent reported that the roundabout was difficult to navigate, with one respondent stating that they had seen larger vehicles perform 3-point turns to manoeuvre around it.
 - 10% percent reported that they did not like the one-way entry into Compton Street as it was inconvenient. Many respondents reported that they were frustrated that the restrictions applied 24/7 when most of the issues with driver behaviour were occurring in the 15 minutes before or after school.
 - 10% percent reported that they did not like the planter boxes, with most respondents stating that they did not like the aesthetic of the planters. Many respondents also reported that the plants had been left to die and that people had thrown rubbish into the planters and tipped them over.
- 22% reported noticing issues with congestion. Common complaints included vehicles using nearby streets to avoid the changes. People also reported that the Northcote Baptist Church carpark had become a common area to drop off children to avoid the changes. This issue was also raised by a respondent who works for the church. Respondents also said that the increased congestion had made traffic noise worse and that idling vehicles had increased emissions.
- 14% mentioned that the changes had made the area less safe, while 12% reported that the changes had increased safety.
- 20% offered future suggestions for changes around Willow Park School. Suggested changes included adding chicanes, installing a pedestrian crossing on Moore Street, adding yellow lines on one side of Compton Street, and installing road signage including speed limits and signs encouraging vehicles to not idle while waiting. Other suggested changes included incentivising students to use active transport modes, encouraging walking school buses, and increasing the enforcement of drop-off zones and no parking areas.

5.7 Resident feedback forms

Residents on the streets surrounding Willow Park School were also given the option to provide feedback on the trial via a mail feedback form. Overall, 28 residents provided feedback through these forms. This section presents the key findings from these residents' feedback.

When asked if the changes have improved safety for children getting to and from school, 15 residents responded "Yes", seven responded "No", and six were "Unsure". Of these, 15 residents provided comments when asked for further suggestions to improve safety:

- Four residents believed that the changes had been ineffective. In particular, they highlighted the planter boxes and roundabout as unnecessary.
- Three residents noted that unsafe driver behaviour still occurred.
- Four residents were pleased with the changes. These residents highlighted that the speed bumps had slowed traffic. One resident supported making changes permanent; two wanted similar changes in other streets.
- Four residents suggested refinements and areas for further improvement; these were restricting the one-way to only be during school pick-up/drop-off, adding flashing speed limit signage, crossing signage, and the removal of a tree on the Compton St-Eban Ave intersection to improve visibility.

When asked if the changes have improved congestion around the school during school drop-off/pick-up times, 12 residents responded "Yes", 10 responded "No", and six were "Unsure". When asked to provide suggestions to improve congestion, 13 residents provided further comments:

- Three believed that congestion had reduced around the school gate, particularly during school pick-up/drop-off times.
- Three suggested increasing restrictions on Compton St, such as increasing the yellow lines or making the whole street one-way.
- Two highlighted the impact of staggered school start times on reducing congestion.
- Three believed that either the changes had no impact on congestion or had increased it. One resident said the one-way entry on Compton St was increasing congestion, and another resident noted that the changes had increased congestion elsewhere.

When asked if the changes had affected their journey time, 17 residents responded "Yes", 11 residents responded "No", and no residents reported being "Unsure". Eighteen residents further explained their answers:

- Eight highlighted the no-entry into Compton St had caused delays and frustration to their journeys.
- Seven noted that their journeys were now longer and slower. However, two said the increase in journey length was worth it as the environment was now safer for children.
- Two residents felt that their journey time has not been affected by the changes. One resident felt it was only affected during school times.

Finally, 25 residents provided overall feedback on the changes:

- Five felt that the roundabout on Eban Ave was ineffective.
- Five found the no-entry on Compton St to be inconvenient and causing congestion.

- Five believed the speed bumps were ineffective on certain streets. Of these, three felt the speed bumps on Moore St were not needed; two felt the installations on Eban Ave were having little effect.
- Four believed the planter boxes were ineffective and should be removed; three expressed a desire for the planter boxes to be better maintained.
- Three believed the changes were an improvement and the environment was now safer for children.

6. SCHOOL STAFF AND STUDENT INTERVIEWS

Feedback on the trial was gathered from school staff and students through two focus group interviews conducted in August 2021. One group was held with staff (n=5) and one with Year 5 and 6 students (n=6).

Staff focus group:

- Pleased with the changes and felt that the road environment was now safer for children. In particular, the one-way on Compton Street has worked well to reduce speed and improve driver behaviour.
- The roundabout and speed bumps worked effectively to reduce speed and to indicate you were now entering a school zone.
- Overall, were happy for the changes to be made permanent.
- Felt that the project was well communicated with the school community and had worked to increase the general knowledge of safety around schools, leading to improved driver behaviour.
- The street changes have worked in tandem with the school's active travel programmes (e.g. Walking School Bus) to increase mode shift towards active modes.
- Due to the implementation of the one-way on Compton St, there is increased traffic and congestion at the Eban Ave entrance. It was unclear whether the area was any less safe than before as a result.
- The temporary nature of the design had resulted in some negative comments from the community about the aesthetic quality of the changes, but there is an understanding that the changes will be made permanent and are effective.
- Planter boxes have been difficult to maintain and could potentially add time and resource pressure on the school to upkeep.
- There is still some evidence of poor driver behaviour, however, this was much less than before the changes.

Student focus group:

- Noticed all the changes and displayed some understanding of their purpose, for example, speed bumps slowed vehicle speed and planter boxes restricted parking.
- Happy with the changes and reported that the walking environment was "more comfortable."
- Enjoy the look and feel of the planter boxes.

7. DISCUSSION

Vehicle speeds measured on Compton St and Eban Ave following the treatments were reduced considerably since baseline in 2018 – with 85th percentile speeds reducing by around 5km/h on Compton St and 10km/h on Eban Ave. Baseline speeds were collected before the installation of speed tables, unrelated to the trial, on both streets. It is likely that speed reductions found are not solely attributable to this trial.

However, the follow-up survey data from the school community and residents show that the trial speed cushions are perceived to be effective in slowing vehicle speeds by the majority. The majority also reported that the issue of vehicles travelling at excessive speeds had also improved on both streets. While the speed tables on both streets are likely to be contributing to the speed reduction at follow-up, it is clear that the installations from the trial are both contributing to and enhancing the perceptions of a slower environment around the school.

The number of risky road user behaviour events and interactions observed through video analysis reduced at follow-up. However, note that the lower number of events coded may also be due to the large reduction in traffic volume. Other factors making it difficult to interpret this finding include the four-year period between baseline and follow-up video data collection and the impact of COVID on travel behaviour. Nevertheless, the video data provides a good description of current road user behaviour and indicates a comparatively safer environment than at baseline.

Key issues at baseline including dangerous vehicle manoeuvres (e.g., U-turning, three-point turning and vehicle movements over the footpath) on both streets, and vehicle parking obstructing a driveway or entrance on Eban Ave, were not observed to be particularly problematic at follow-up. Follow-up video indicates that the crossing on Sylvia St has resulted in safer crossing behaviours and vehicle-pedestrian interactions. The school community and residents generally noted an improvement in all drop-off/pick-up behavioural issues examined at follow-up. However, they also highlighted that illegal or unsafe parking still occurred on both streets. The school community, residents, staff focus group, and vehicle volume data all confirm the increased congestion on Eban Ave following the implementation of the one-way entry on Compton St. While some residents reported frustration at increased commute times as a result, there does not appear to be an increase in unsafe behaviour, and rather the whole environment appears to be slower and safer.

Perceptions of the safety of the streets surrounding Willow Park School at school drop-off and pick-up times were examined through the school community and resident surveys. The majority of respondents to both surveys indicated that the interventions had made the environment safer for children. The majority of respondents reported all of the interventions examined in the survey had been effective in achieving their safety outcomes. However, comments were made about the logistics of the one-way system on Compton St, the aesthetic quality of the planter boxes, and the difficulty in navigating the roundabout for larger vehicles.

School staff reported that the communication about the trial had increased community knowledge and awareness about road safety, which in turn had improved driver behaviour. The physical changes made to the streets had worked well with existing active travel programmes,

such as the Walking School Bus, to encourage active travel and mode shift. Survey results indicated that mode shift towards active modes to/from school may be occurring. For example, there were increases at follow-up in all active modes (walk, bike, and scooter) used to travel to school reported. While there was also an increase in those dropped off/picked up in a car, this follow-up figure includes those that now use the park and walk zone. Seventeen percent of survey respondents reported a shift in their primary mode used as a result of the changes, with these respondents highlighting the safer environment for children. These results indicate that the combination of measures adopted - robust active travel plan, street improvements, and effective communication - are having a collective positive impact on creating a slower speed environment, improving perceived safety, and overall, developing a more supportive environment for behaviour change.