greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

Wellington Region School Travel Plan programme 2014

Contents

1. Executive summary

The School Travel Plan programme (STP programme) is a partnership between schools, local councils and Greater Wellington Regional Council (Greater Wellington), which aims to improve road safety and promote the use of sustainable travel to and from school.

At the start of 2014, 38% of all the region's primary and intermediate schools had joined the programme – 72 schools in total.

Seventy-four percent of children at schools in the programme travelled to school by active means at least once in the week surveyed. This is especially significant as it indicates that children are both able and allowed to travel to school actively, at least some of the time.

Comparing the 2006-2009 period to the 2010-2013 period, the percentage of trips to schools in the programme made by active modes, increased from 32% to 40%. The majority of this increase has come from the growing number of children travelling by bicycle and scooter.

The Pedal Ready programme and the Scooter School Safety Skills programme, both supported by Greater Wellington, are instrumental in providing safety guidance to these scooting and cycling children, and providing support and encouragement to schools and parents.

Local councils have made significant steps to provide safe speeds and improve crossing facilities around schools. These roading improvements result in both improved safety and increased participation in active travel when combined with promotional activities, such as Movin'March, Walk & Wheel events and active travel reward programmes.

The distance a child must travel to reach their school has a significant relationship with their mode of travel. Sixty-four percent of the children attending schools in the programme live within 2km of their school, and an additional 24% live within 2-5km of their school. Surprisingly it is the children living 2-5km from school which have recorded the biggest increase in active mode use; increasing from 11% of trips to 19%. This increase is likely to be the result of the growing popularity of bicycles and scooters which allow children to comfortably travel longer distances.

In the STP programme parents' survey 71% of parents felt that children were safe walking to their children's school, and 42% thought children were safe biking to their school. Ninety seven percent of parents were confident teaching road safety to their own children.

Across the region, serious injuries to child pedestrians have decreased by 41%, and minor injuries have decreased by 17%. Child cyclist injuries have also decreased; serious injuries have fallen 57% and minor injuries have decreased 29%. Although the STP programme cannot take credit for all these reductions, the activities of the programme contribute to them, and these reductions are an encouraging sign that there are improvements being made for children in this region.

*PERCENTAGES IN THE EXECTIVE SUMMARY COMPARE THE 2006-2009 PERIOD TO THE 2010-2013 PERIOD OF DATA COLLECTION. THIS DIVISION OF DATA IS NECESSARY IN ORDER TO HAVE SUFFICIENT SAMPLE SIZES FOR ANALYSIS. ONLY SCHOOL WHICH HAVE COMPLETED BOTH A BASELINE AND EVALUATION SURVEY ARE INCLUDED IN THE ANALYSIS.

Despite this trend of improvement in the Wellington region, from 2010-2013, 53 child cyclists were injured, 128 child pedestrians were injured and one child pedestrian was killed.

2. Introduction

The School Travel Plan programme (STP programme) is a partnership between schools, local councils and Greater Wellington Regional Council (Greater Wellington). The programme supports schools in developing and implementing action plans to improve road safety and promote sustainable travel to and from school. The programme has received funding from the New Zealand Transport Agency (NZTA) since 2006.

School-age children are over-represented in the region's road safety casualty statistics. In 2010–2013, 15–19-year-olds and 10–14-year-olds were the most common age groups in cyclist and pedestrian casualties, respectively. Road safety data also shows that 15–19-year-olds are the second most common age group for 'at fault' drivers in crashes in the Wellington region, behind 20–24-year-olds.

Schools offer a unique opportunity to reach young people with road safety education. Young pedestrians and cyclists learn behaviours that they will carry with them throughout their life. Under *Safer Journeys*, a road safety strategy for the period 2010–2020 (Ministry of Transport, 2010), young drivers are a group of high concern, and cyclist and pedestrians are a group of medium concern.

This report presents information about the school travel patterns of children in the Wellington region who attend schools with travel plans. It looks at how children travel to school, how far children have to travel to school and perceptions of route safety. This information is not necessarily applicable to the entire region's schools, but as increasing numbers of schools become involved in travel planning, the data collected through school travel plans will become valuable sources of information for the region. The report also includes regional road safety information for children of primary and secondary school age.

Data from the New Zealand Household Travel Survey (NZHTS) shows that travel to school makes up around 4% of total trip legs in New Zealand (Ministry of Transport, 2012a). Since the early 1990s there has been a decrease in the proportion of children walking to school, and a corresponding increase in the proportion travelling by car. In particular, the proportion of primary/intermediate age children travelling to school by car increased from 31% to 58% between 1989/90 to 2008–2011 (Ministry of Transport, 2013). Given this, the aim of the School Travel Plan programme for primary/intermediate age children is to reduce the proportion of students travelling to school by car and increase the proportion using active modes or public transport.

This report also presents results for the regional level evaluation of the School Travel Plan programme. It only looks at the change in school travel behaviour (due to survey question changes, road safety perception data are currently not presented) for those schools in the region that have participated in both the baseline and evaluation data collection phases of the travel plan process.

3. Method

3.1 School travel plans

The STP programme is a partnership between schools, local councils and the Regional Council which supports school communities in developing and implementing action plans to improve road safety and promote sustainable travel to and from school. A school travel plan is a document which outlines these actions.

Every school's travel plan is unique and should result in benefits for students, parents and the wider community. It assists students and parents in identifying safe, healthy and sustainable transport travel practices and helps reduce the number of cars on the road at peak times. It also contributes toward improving the schools' physical surroundings.

In the Wellington region just over 78,800 children (Ministry of Education, 2012) travel to school every morning (see Table 1). Of these students around 63% are of primary and intermediate age. The national picture for school travel for children aged 5–12 years, shows that around 56% of trips to school are by car (Ministry of Transport, 2013). If we conservatively assume that there are two primary/intermediate age students in every car, and we assume 56% of trips to school in the region are by car, in 2013 there would be around 14,000 car trips to school for primary/intermediate age children every morning in the Wellington region.

Table 1. Number of students in the Wellington region by school year level, 2010–2013

	Student numbers by year			
Year level	**2010**	**2011**	**2012**	**2013**
Year 1 to Year 8 (primary/intermediate age)	49,682	49,754	49,733	49,860
Year 9 to year 15 (secondary age)	29,390	29,346	28,944	28,950
Total	**79,072**	**79,100**	**78,677**	**78,810**

The Wellington Region Land Transport Strategy 2010–2040 sets the following targets for the programme:

94, or 41%, of primary and secondary/intermediate schools and 26,761, or 34% of school children exposed to school travel plan activities by June 2013.

As of 31 December 2013, 72 Wellington region schools with a combined roll of 22,174 school children[1] had, or were developing school travel plans.[2] Figure 1 and Figure 2 show how the programme fared towards its 2013 target numbers of schools and students exposed to school travel plans, respectively.

Unfortunately, the number of schools enrolled in the STP programme as well as the number of students in the region exposed to school travel plan activities has fallen short of the targets. One Wellington school which had developed a school travel plan, Strathmore Community School, was closed, effective at the end of 2012, so while seven

[1] Based on March 2013 roll counts from the Ministry of Education school roll returns
[2] For primary and intermediate schools only these figures a 66 schools with a combined roll of 17,147 children.

new schools joined the programme in 2013 the net gain into the programme was six schools.

The number of schools participating in the STP programme steadily increased since the introduction of the programme in 2006; however, the increase was not enough to meet the goal set out in the Wellington Regional Land Transport Strategy. The strategy team will need to develop new targets in the years ahead, so that we can measure the effectiveness of the STP programme into 2014 and beyond.

Figure 1. Number of schools that have, or are developing travel plans, 2006–2013

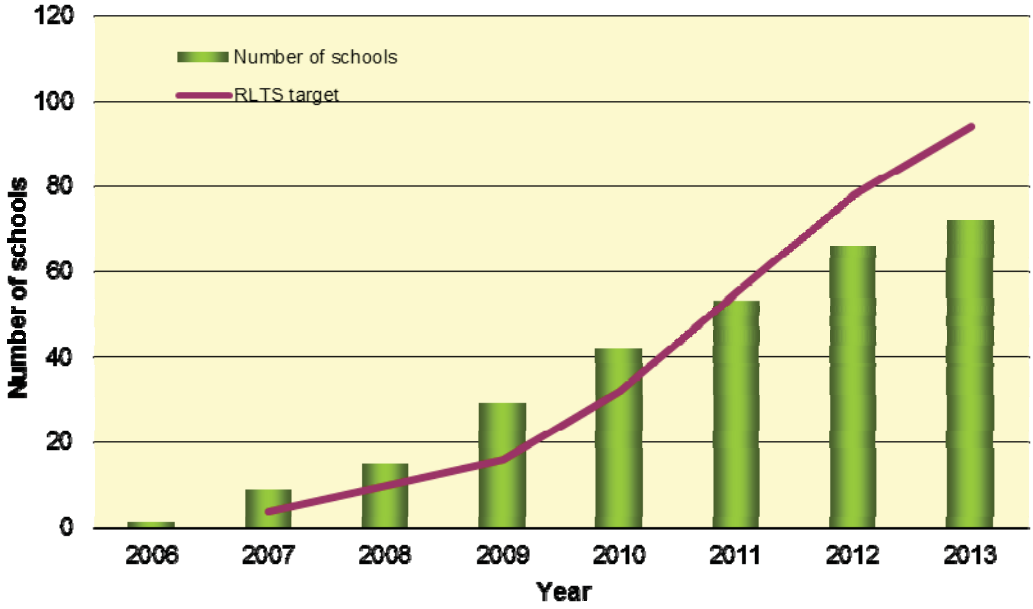
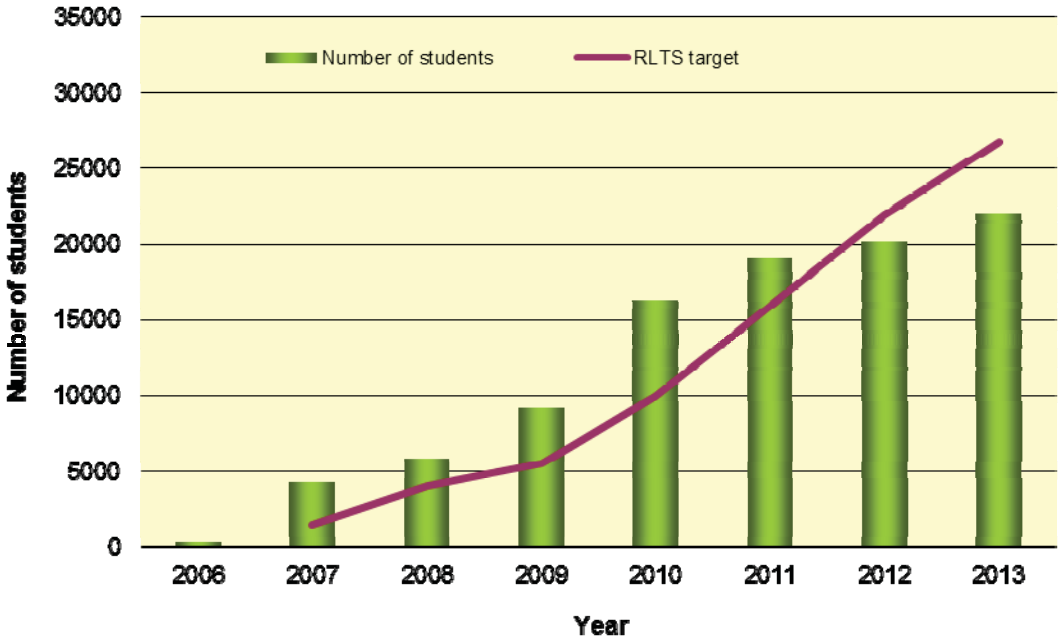


Figure 2. Number of students involved in, or exposed to, STP activities, 2006–2013



3.2 Data collection phases

Schools involved in the STP programme participate in data collection and monitoring. This involves using baseline surveys conducted at each participating school which gather information from students and parents around current school travel methods, road safety and ideas for improving travel to the school. Once travel plan activities are implemented, students and parents at the school are typically re-surveyed a year after implementation. Students participate in annual surveys of their travel modes to track progress of their travel plan, refine its implementation and provide data on regional trends in travel behaviour (detailed in section 2.4).

Data from parents survey have been collated into one dataset. As there have been changes to the survey questions since the start of the STP programme, only the questions that have remained consistent, or can be meaningfully recoded are included in the dataset. There is another dataset for class survey data.

Parents survey

The parents survey was redesigned for use with the 2011 school year onwards. It is much shorter than previous versions of the parents survey. The survey continues to collect information from parents on how their children travel to school and what would encourage their children to walk or cycle to school more often. The rest of the survey focuses on safety, looking at perceptions of route safety, and what safety concerns they have about travel to school. The safety information collected from parents is used in the analysis of this report.

Class survey

The class survey records the year level of the students and how they travel to school over a one week period. The survey also collects home address information so routes taken from home to school can be mapped to calculate distance travelled alongside travel mode. Each classroom of students was also interviewed to ascertain their perceptions of safety on their route to school and their road safety concerns.

3.3 Calculation of kilometres travelled

The home addresses supplied by survey respondents, and the school addresses are geocoded and used in a customised ArcGIS template to calculate kilometres travelled (KT) based on travel mode.

To calculate KT the main dataset needs to be broken down into smaller datasets for the individual schools, and then each school dataset is broken down further by usual travel mode.[3] The template is then used to run each analysis which involves one school point shapefile and one home address shapefile by travel mode. The template calculates KT values based on the shortest route.[4] Once KT values for all respondents with geocoded home address information had been processed, these were exported into Excel and then joined to the main dataset.

[3] The usual modes used for KT calculations are: car (friends' cars, family car), active (walk, cycle, use a scooter and skateboard, walking school bus), PTbus (bus, school bus, private bus), and PTother (train, ferry and other).

[4] Some criticise this as unacceptable and/or inaccurate because people often do not take the shortest or quickest route, however, recent analysis has shown that assuming direct routes is reasonably accurate (NZTA, 2009).

3.4 Regional travel behaviour – primary/intermediate

We used data from both baseline and evaluation surveys to look at the regional travel-to-school behaviour. We then pooled data together over four years to provide a large enough sample for analysis. This year, we compared data from two different time periods: 2006–2009 and 2010–2013. Trends in regional travel-to-school behaviour were then examined by looking at data across these time periods.

Participating schools

Table 2 shows the total number of schools included in the parents and class datasets over the 2006–2009 and 2010–2013 periods. It also shows the number of parents and student survey responses received across participating schools. Over the 2010–2013 period, included are responses from 24,102 students across 58 schools.

Table 2. Number of schools and survey responses used in the Wellington region travel-to-school behaviour analysis and the STP programme evaluation

	Regional		STP evaluation	
	06-09	**10-13**	**Baseline**	**Evaluation**
Number of schools*	27	58	64	31
Number of parent responses	-	3,055[#]	-	-
Number of student responses	9,303	24,102	14,803	9,233

*Not all schools that are enrolled in the STP programme have data included in the class or parent datasets, so totals do not equal the total number of schools enrolled in the programme

[#]Only includes data for 2011 onwards, as the redesigned survey questions do not allow comparisons with previous years' data

Table 3 shows the number and percentage of schools with students across the region and included in the 2010–2013 STP programme regional analysis. It also shows the percentage of schools within each territorial authority (TA) that are included in the class STP programme analysis for 2010–2013.

Table 3. Number and percentage of schools with students in the Wellington region, and in the 2010–2013 STP programme regional analysis by territorial authority

	Region		STP 2010-2013		Share of region's schools in STP prog 2010-13 (%)
TA	**Number of schools**	**Share of schools (%)**	**Number of schools**	**Share of schools (%)**	
Carterton District	6	2.4	1	1.7	16.7
Kapiti Coast District	20	8.1	16	27.6	80.0
Hutt City	54	21.8	13	22.4	24.1
Masterton	21	8.5	3	5.2	14.3
Porirua City	35	14.1	3	5.2	8.6
South Wairarapa District	9	3.6	2	3.4	22.2
Upper Hutt City	22	8.9	7	12.1	31.8
Wellington City	81	32.7	13	22.4	16.0
Total	**248**	**100**	**58**	**100**	**23.4**

Each TA has at least one school in the programme and one school included in the 2010–2013 analysis. However, some TAs are over-represented and some are under-represented compared to the regional picture.

In particular, primary/intermediate schools in Wellington City (22% of the number of schools in the dataset compared to 33% of the number in the whole region) and Porirua City (5% in dataset compared to 14% in region) are under-represented and Kapiti Coast District and Upper Hutt City schools are over-represented (28% and 12% in dataset compared to 8% and 9% in the region, respectively).

3.5 STP programme evaluation

The sample sizes of parent and student surveys make it difficult to evaluate individual school travel plans. Whilst a number of individual schools have observed shifts in their students' mode of travel, it has not been possible to assess whether these are statistically significant changes or a result of sampling error.

To overcome this issue and evaluate the STP programme, data from all schools that have completed both their baseline and evaluation surveys has been pooled together. We then compared the results of baseline surveys for all schools in this pool to the results of the evaluation survey for all schools to provide a quantitative measure of the effects of the programme across the region.

To date, 31 schools in the region have been in the programme long enough to have implemented travel plan activities and have conducted both class baseline and evaluation surveys (see Table 2).

3.6 Crash Analysis System

The Crash Analysis System (CAS) is an integrated computer system developed by NZTA which provides tools to collect, map, query, and report on road crash-related data. It contains data from all traffic crashes reported by police. The information provided by CAS is used to determine and analyse trends, which help to direct recommendations around road safety funding allocations, to target road safety programmes and to monitor their performance.

Data from CAS relating to crashes involving school age pedestrians and cyclists, and resulting injuries, are presented in this report.

3.7 Important points to keep in mind when reading this report

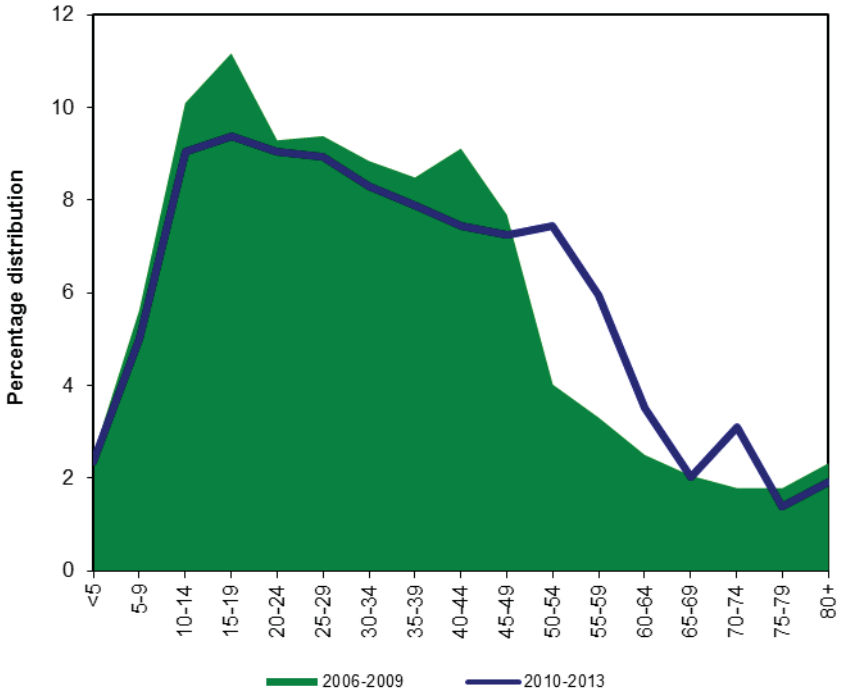
Data collected through the STP programme around travel to school behaviour and issues currently involve around a third of schools with primary/intermediate age children in the region. Schools involved are not representative of the distribution of schools across the region; however, there is an expectation that as more schools join the programme, this type of analysis will provide a rich source of information about the region's travel-to-school behaviour.

In addition, the current evaluation of the STP programme is based on a limited number of schools. The number of schools will increase each year making changes in travel behaviour easier to measure.

4. Road safety of school age children

School age children are over-represented in the region's road safety casualty statistics. CAS data shows in Figure 4 that in 2010–2013, 15–19-year-olds and 10–14-year-olds were the first and second most common age groups, respectively, in cyclist and pedestrian casualties.

Figure 4. Age distribution of pedestrian and cyclist casualties on the road, 2006–2009 and 2010–2013



These data also show that in 2010–2013, 20–24-year-olds were the most common age group for at-fault drivers (including motorcyclists) in Wellington regional crashes.

Increasing the safety for school age pedestrians and cyclists is crucial for increasing active mode use for travel to school. In 2010-2013 just under one-third of all crashes involving school age pedestrians and cyclists occur during the commute to/from school between the hours of 7:00–9:00am and 3:00–5:00pm. This suggests that improving safety during the commute to/from school period could have a significant impact on road safety statistics.

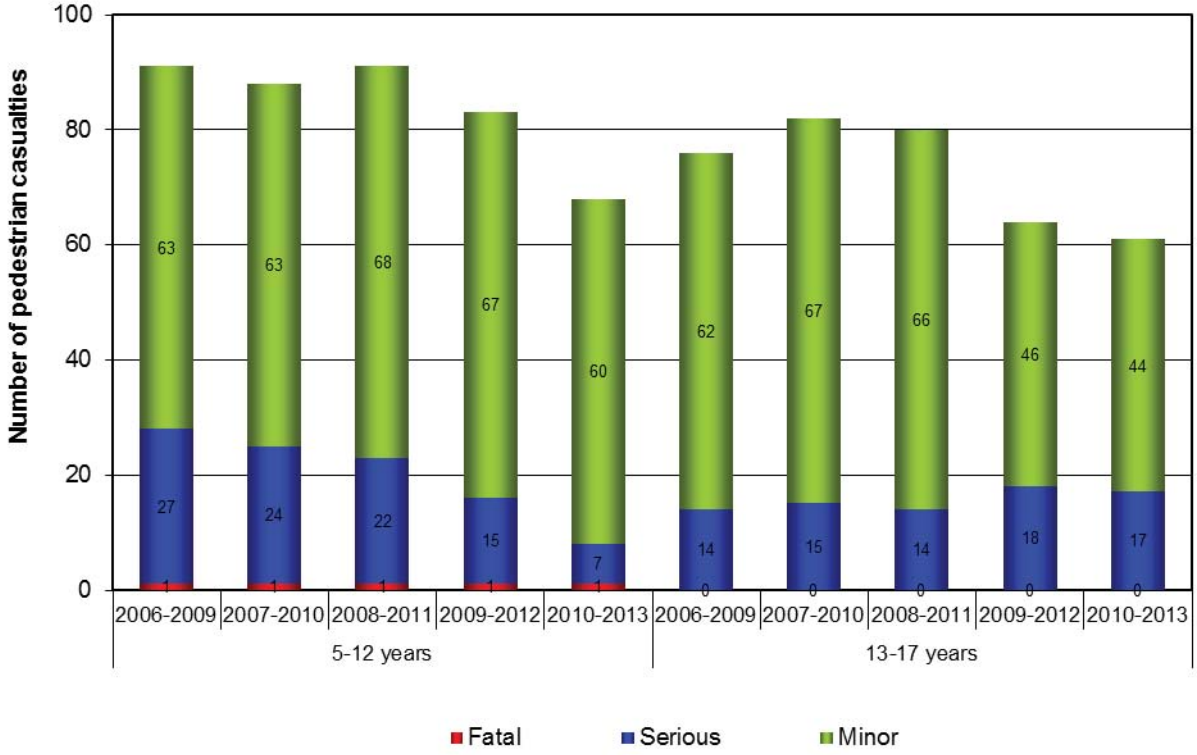
The following sections take a closer look at pedestrian, cyclist and driver casualties as reported in CAS. For this work primary age children are defined as being 5–12 years old, while college age includes all 13–17-year-olds. Eighteen-year-olds were excluded from the college age group for analysis as approximately half of this age group will no longer be in college and, having reached the legal drinking age, their crashes include factors that cannot be generalised to other ages.

4.1 Pedestrian casualties

Figure 5 shows four-year moving averages between 2006–2009 and 2010–2013 for school-age pedestrian casualties in the Wellington region. In the 2010–2013 period there were 129 school-age pedestrian casualties, making up 25% of the region's total

number of pedestrian casualties. Fifty-three percent of these casualties (n=68) involved 5–12-year-olds and 47% (n=61) involved 13–17-year-olds. Of these casualties, one was fatal, 24 were serious and 104 were minor.

Figure 5. Number of school-age pedestrian casualties by injury severity, 2006–2009 to 2010–2013



More 5–12-year-old pedestrians have been injured than 13–17-year-old pedestrians. In 2010–2013, 53% of school-age pedestrian casualties involved 5–12-year-olds. Although the majority of these injuries were minor, there was one fatality and seven serious injuries. Since the first measurement period in 2006–2009, there has been a 25% decrease in pedestrian casualties involving 5–12-year-olds, with serious casualties decreasing by 7% (from 27 in 2006–2009 to seven in 2010–2013).

A slightly different trend is observed for 13–17 year old pedestrian casualties. Although there has been an overall decline of 12% in the number of casualties, the number of serious injuries has increased (from 14 in 2006–2009 to 17 in 2010–2013), whereas the number of minor injuries has decreased (from 62 to 44).

The factors contributing to crashes involving 5–12-year-old pedestrians and 13–17-year-old pedestrians are similar. The most frequently noted causes[5] of school-age pedestrian casualties are:

- Poor observation (42% for ages 5–12 and 43% for ages 13–17)
- Failing to give way or stop (15% for both age groups)
- Poor judgement (7% for both age groups)

[5] Please note that a single crash can have more than one cause attributed to it.

Figure 6. Number of pedestrian crashes of school-age pedestrians in the Wellington region by crash cause, 2006–2009 to 2010–2013

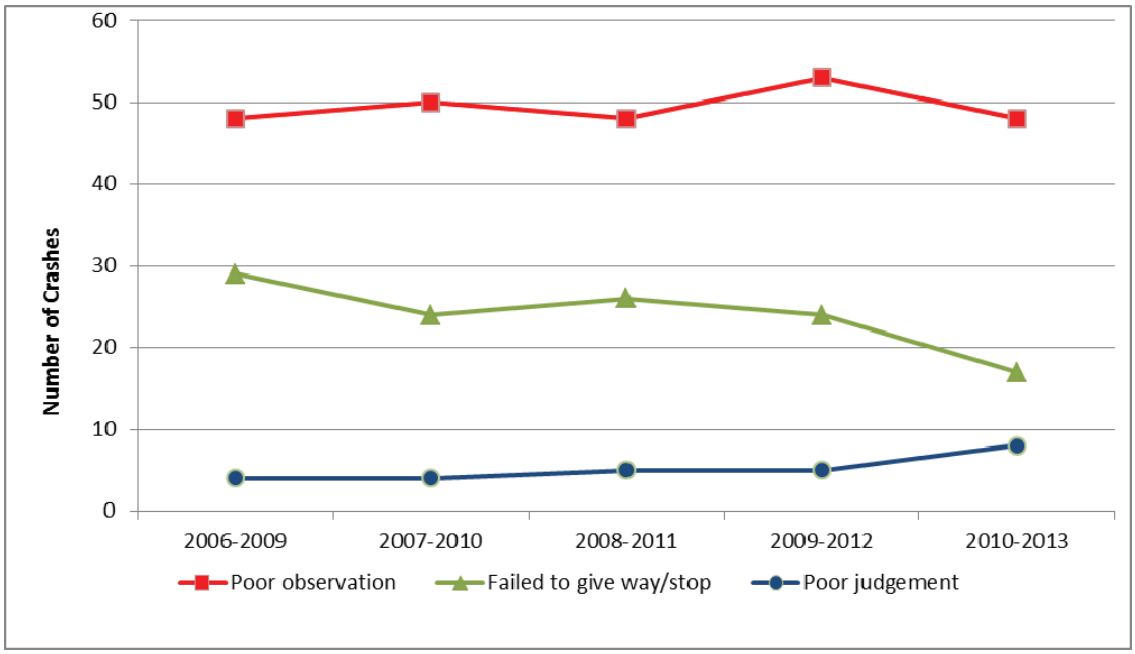
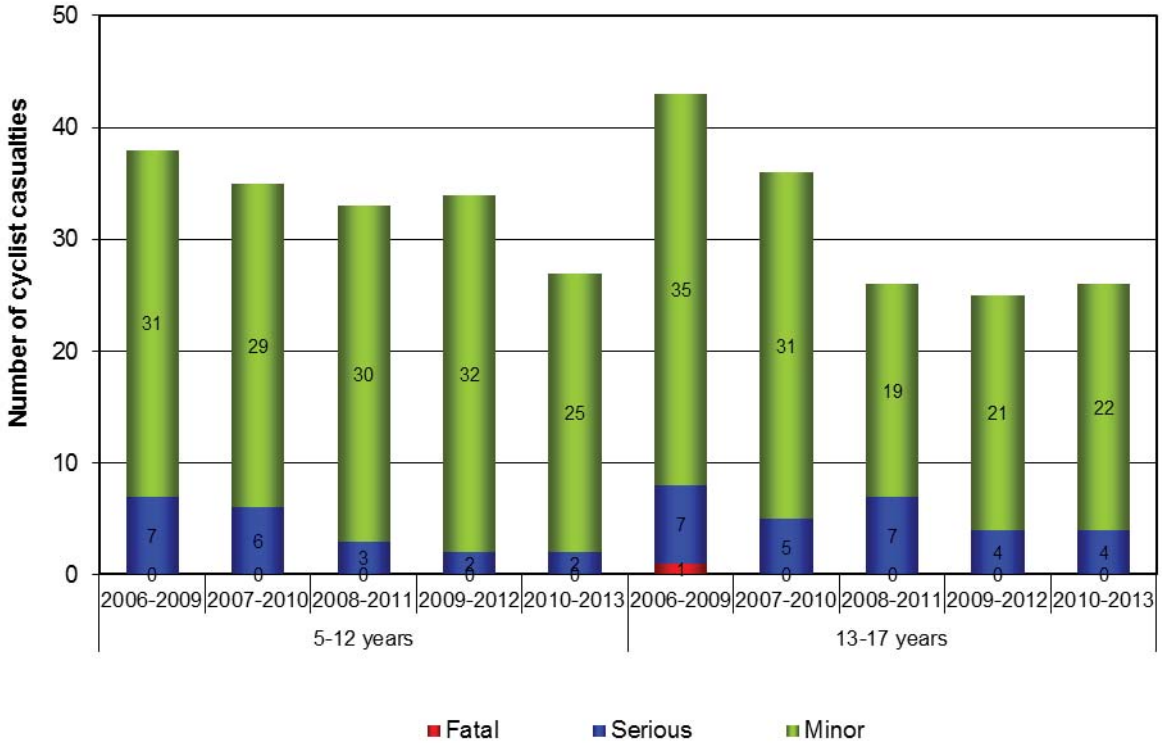


Figure 6 shows how the three main causes of pedestrian casualties for school-aged children have changed through time. Poor observation crashes make up more on their own than crashes in the other two categories combined. Poor observation crashes occur when drivers fail to see a pedestrian entering a street, usually from the side. This can often be a result of on-street parked cars restricting the view of children from the road or both children and drivers assuming they have the right-of-way at a crossing point. In either case, the smaller of the two road vehicles, the pedestrian, will usually come off worse after a collision.

4.2 Cyclist casualties

In the 2010–2013 period there were 53 school-age cyclist casualties in the Wellington region (Figure 7), making up 12% of the region's total number of cyclist casualties. The locations of these casualties across the region are shown in Figure 8 (see maps in Appendix 2 for a more detailed look at the locations by TA). Fifty one percent of these casualties (n=27) involved 5–12-year-olds and 49% (n=25) involved 13–17-year-olds. Of these casualties, there were no fatalities but 47 minor and six serious injuries.

Figure 7. Number of school-age cyclist casualties by injury severity, 2006–2009 to 2010–2013



Between the 2006–2009 and 2010–2013 periods there has been a 35% decrease in school-age cyclist casualties, with serious injuries decreasing by 57% (from 14 in 2006–2009 to six in 2010–2013) and minor injuries decreasing by 20% (from 66 in 2006–2009 to 47 in 2010–2013).

In 2006–2009 there were more cyclist casualties aged 13–17 than aged 5–12; however, in 2010–2013 the two groups were similar in their number of casualties. Another notable difference between the two age groups is that there were fewer serious injuries for children aged 5–12 than aged 13–17 in 2010–2013. From 2006–2009 to 2010–2013 there has also been a 19% drop in minor injuries for 5–12-year-olds and a drop of 37% for 13–17-year-olds.

The most frequently noted causes[6] resulting in school-age cyclist casualties are:

- Poor observation (27% for ages 5–12 and 31% for ages 13–17)
- Failing to stop or give way (20% for ages 5–12 and 22% for ages 13–17)
- Incorrect lane position (20% for ages 5–12 and 10% for ages 13–17)

Other causes of crashes among school-age cyclists include speed, various road factors and poor handling of vehicles.

[6] Please note that a single crash can have more than one cause attributed to it.

Figure 8. Number of school-age cyclist casualties in the Wellington region by crash cause, 2006–2009 to 2010–2013

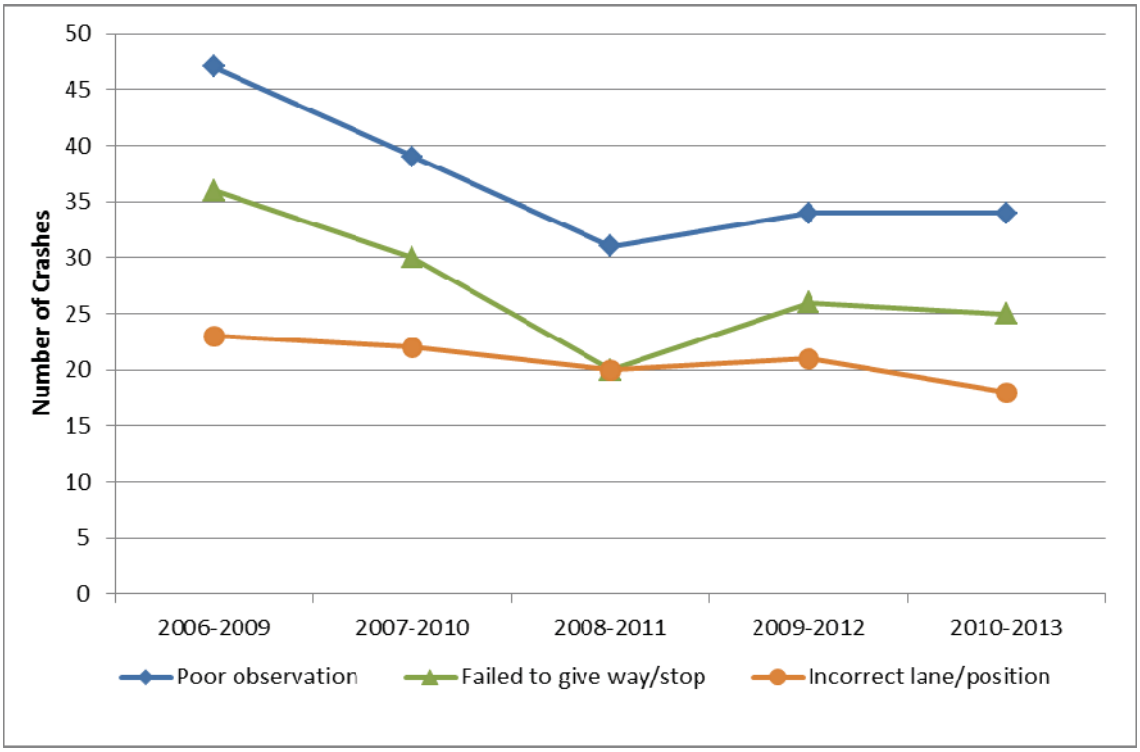
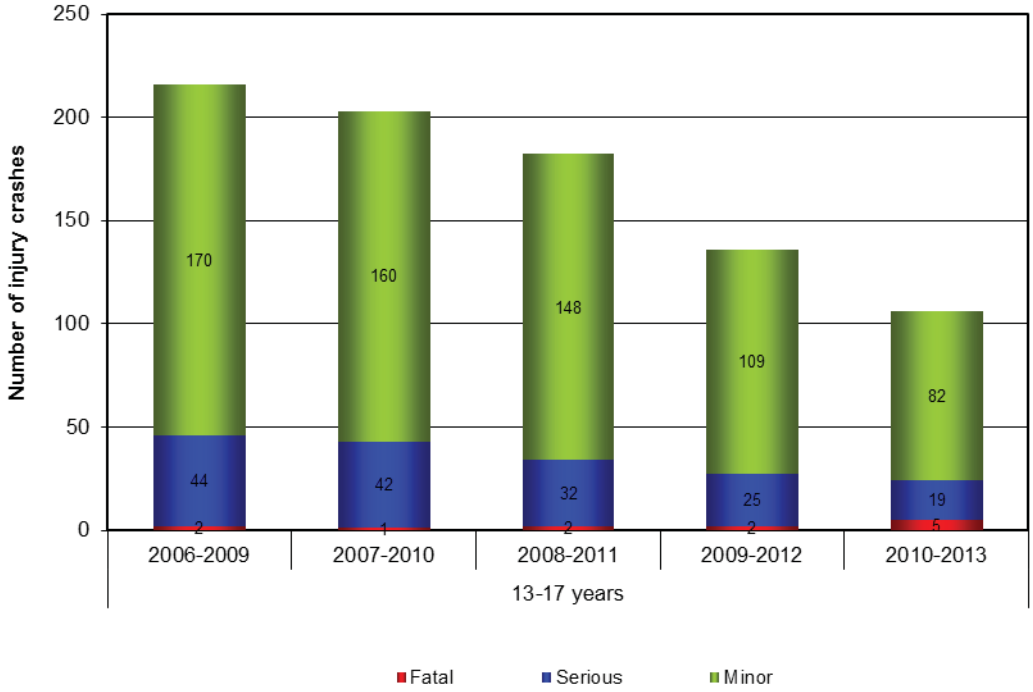


Figure 8 shows the number of school-age cyclist crashes by crash cause from 2006–2009 to 2010–2013. The factor contributing most to school-age cyclist casualties was poor observation. The other two factors were also significant. The overall number of student cyclist crashes declined over the period shown. The most recent declines occurred primarily with regard to incorrect lane/position crashes.

4.3 At-fault driver injury crashes

The number of crashes, by crash severity, as a result of a driver (includes car, SUV, truck, moped and motorcycle) being at fault is shown in Figure 9. In the 2010–2013 period there were 106 injury crashes on the region's roads that were primarily the fault of a 13–17-year-old driver, making up 7% of the region's driver at-fault crashes. Of these crashes, five were fatal, 19 resulted in serious injuries and 82 resulted in minor injuries.

Figure 9. Number of at-fault driver crashes by crash severity, 2006–2009 to 2010–2013



Since 2006–2009 there has been a decline in both serious and minor injury crashes where drivers aged 13–17 years were at fault. Serious injury crashes have decreased by 43% (from 44 in 2006–2009 to 19 in 2010–2013) and minor injuries by 36% (from 170 in 2006–2009 to 82 in 2010–2013). Despite this decrease in injury crashes, this age group remains one of the most common age groups for at-fault drivers in crashes in the Wellington region.

4.4 Summary

It is widely accepted that CAS under-reports the number of road crashes and casualties; but nonetheless, the data presented in this section provide a valuable picture of road safety trends for school-age children.

School-age children are over-represented in the region's cyclist and pedestrian road casualty statistics. Increasing the safety for school-age pedestrians and cyclists is crucial for increasing active mode use for travel to school. In 2013 just under one-third of all crashes involving school-age pedestrians and cyclists occurred during the commute to/from school in the hours of 7:00–9:00am and 3:00–5:00pm. This suggests that improving safety during the commute period could have a significant impact on road safety statistics.

In 2010–2013, higher numbers of pedestrian casualties were of primary age (aged 5–12) than college age (aged 13–17), while about the same number of cyclist casualties were among primary- and college-aged children. In general there was a decline in the number of school-age pedestrian and cyclist casualties from 2006–2009 to 2010–2013, although the increase in pedestrian casualties caused by poor judgement is of concern.

Drivers not observing pedestrians crossing the road and failing to give way to a pedestrian are two main factors contributing to school-age casualties. These incidents are concerning.

The leading cause of cyclist casualties is also poor observation on the part of drivers and cyclists. All road users need to be attentive to other road users and follow the rules of the road. Riding on the footpath, whilst legal for younger children on bikes with wheels of less than 355mm in diameter, can also lead to crashes with pedestrians if cyclists are not paying attention or well supervised. Due to a lack of segregated cycling infrastructure in general, cyclists are often forced to either share space with motor vehicles, including buses, or pedestrians. Conflicts are often a result of road users of different speeds sharing the same physical constrained space. The speed differential is greater for child cyclists than for adult cyclists on the same road, as children are generally slower.

During the 2010–2013 period, teenage children aged 15–19 were no longer the worst age group in at-fault driver crashes in the Wellington region, but had dropped to the second worst. It is encouraging to see a steady decline since 2006–2009 in both serious and minor injury crashes where drivers aged 15–19 years were at fault. In 2010–2013 this age group trailed the 20–24-year-old age group who contributed 16% of the region's at-fault driver crashes, while 15–19-year-olds made up 15% of the crashes.

5. Activities of the STP Programme 2013/14

5.1 STP activities by territorial authority

Each school's action plan initiatives for their school travel plans are selected by working parties which consider the results of the parents and class surveys in the context of the local environment. The working party members can be parents, school staff, police, road safety coordinators, community members or other organisations. The composition of these groups varies between schools as do the actions that the working parties select. The working party groups are facilitated by the TAs' school travel plan coordinators.

5.1.1 Wairarapa

Greater Wellington supports seven schools, collectively with over 1,500 students, in the Wairarapa. It contracts Wairarapa Road Safety Council to undertake the school travel plan activity in Wairarapa. For these schools, some of the highlights of have been:

- Schools took part in Walk & Wheel in the Wairarapa. Walk & Wheel is an incentive programme that aims to get students excited about walking and wheeling to school.
- Eight schools participated in Movin'March 2014. (Some non-STP programme schools participate in Movin'March.)
- Pedal Ready cycle skills training was run in two schools
- Scooter School Safety Skills programme was delivered at three schools to all children 5–8 years old.

5.1.2 Lower Hutt

Hutt City Council's (HCC) school travel plan coordinator currently supports 14 schools in the programme with over 3,400 students. These schools have implemented a variety of initiatives including:

- Three schools added 'safe drop-off Pou' (posts) decorated by schools and installed in the community at locations from which children can safely walk to their school
- 30 walking school buses in 16 schools
- Fancy Feet Days (walking to school in decorated shoes)
- Seven schools participated in Movin'March 2014
- Two schools have run Pedal Ready cycle skills training
- Scooter School Safety Skills programme in three schools was delivered to all 5–8-year-olds

- Road safety education was provided through curriculum work in mathematics classes with traffic speeds measured by pupils using a radar device in one school

- Ongoing programme of parking enforcement at schools. HCC parking wardens visit all schools on a rotating basis, plus on request if there are particular problems

- Changes to parking at two schools (road markings across driveways and on corners to reduce unsafe/illegal parking. Time restrictions of five and ten minutes improves turnover and enables wardens to enforce)

- One new kea crossing (Kea crossings provide children with a safe place to cross the road. They're installed around schools so school patrols can control traffic and safely guide children across the street.)

- Two new mini roundabouts for schools. These enable parents to u-turn safely when dropping off and picking up children

- One new school entrance constructed at Fernlea School which is a large school with only one entrance. Congestion at this entrance is a problem so the HCC created a new entrance for the school across adjoining Council reserve land to help reduce this congestion

- New slow zone (LATM) constructed outside Epuni School – request initiated during travel plan process

- One of the council's travel plan schools was a site for a new school safety zone (40km/h variable speed limit)

- Walk to school promotion days – 'Milo Day' where students walking to school are rewarded with a cup of milo

- The Council also constructed two other new 40km/h zones and one new safety zone with active warning signs - these were not travel plan schools, but still contribute to the safety of Hutt City's children.

5.1.3 Kapiti Coast

Kapiti Coast District Council's (KCDC) school travel plan coordinator works with 17 local schools, with over 4,800 students. Some of the initiatives KCDC has implemented in these schools include:

- School zone sign automation upgrades in six schools

- Slowing speed down outside three schools – synthetic red painting, signage

- Speed radar gun work with students at five schools. This involves students capturing car speeds with radar guns, analysing the information and developing a speed reduction campaign in their area

- Eight new pedestrian crossings and upgrades of existing pedestrian crossings

- Two new footpaths outside schools

- Repair and replace crossing patrol arm and stop discs for five schools

- Winter bike safety equipment and lights for seven schools. Hi viz gear including back packs, slap bands for ankles and front and rear lights were given out to students who cycle.

- Five schools participated in Movin'March

- Six active travel promotional events (such as breakfasts)

- Student lead initiatives:

    - Kenakena School – student council worked on a safe parking plan, encouraging good parental behaviour re active travel via newsletter, created safe walking routes with an anti-graffiti campaign on one route and encouraged active travel with Friendly Friday breakfasts

    - Paekakariki School undertook a speed radar gun survey outside the school and presented the results to the Paekakariki Community Board with recommendations as to what the students thought should happen

    - Paraparaumu School undertook a mapping exercise to determine safe routes to school, developing questionnaires, surveying students and analysing results, planning random events with prizes. All events encouraged and rewarded active travel

    - Raumati South School undertook a buddy day active travel breakfast and walking parent appreciation breakfast

    - Raumati South School – students attended a 'sustainable film' course entitled The Outlook Some Day, and as part of this they completed a film about active travel which they entered into two competitions.

- Pedal Ready cycle skills courses were run in four schools

5.1.4 Upper Hutt

Upper Hutt City has nine schools, with over 2,100 students taking part in the STP programme in 2013. Some of the initiatives Upper Hutt City Council (UHCC) has helped implement in these schools include:

- Six schools participated in Movin'March
- Scooter School Safety Skills programme in three schools delivered to all 5–8-year-olds
- Young Cyclist competition – road safety and bicycle control skills
- Produce 'Walk and Wheel' maps for one school
- Implementation of Park & Stride posts for one school
- Walk and Wheel promotions at travel plan schools
- All UHCC schools participated in a Walk to Work Day scavenger hunt

5.1.5 Porirua

Porirua City has three schools, with almost 1,000 students, which are taking part in the STP programme despite there not being a school travel plan coordinator in Porirua City. Across Porirua:

- Four schools participated in Movin'March
- Two schools took part in Pedal Ready cycle skills training
- Scooter School Safety Skills programme in one school, delivered to all children 5–8 years old

5.1.6 Wellington

Wellington City has 24 schools in the STP programme, with over 8,200 students taking part. Some of the initiatives Wellington City Council (WCC) has helped implement in these schools include:

- Pedal Ready cycle skills training in five schools
- 13 schools participated in Movin'March
- Scooter School Safety Skills programme in seven schools delivered to all 5–8-year-olds
- Student forum to present road safety findings to council and stakeholders
- Drop-off zones developed for two schools

- Roading improvements outside three school frontages to improve pedestrian safety
- Two school surveys undertaken
- Improvements to one secondary school entrance to reduce potential conflict between vehicles and pedestrians
- Installation of active warning signs around one school

5.2 Regional active transport week: Movin'March 2014

Movin'March 2014 was the Wellington region's fifth annual active travel week for schools. In 2014, 42 schools with over 9875 children registered to participate.

The Movin' March theme for this year was Sensory Discovery. This theme encouraged students to celebrate the outdoor aspect of making active journeys to school by focussing on what they saw, smelt, felt and heard on their way to and from school.

Schools received a resource booklet, with details of competitions, links to other programmes and ideas for celebrating the week. Those who registered on-line, or with the School Travel Plan coordinator or Road Safety Coordinator from their TA, received additional resources to use for their events. Schools were invited to take part in Movin'March in a way that suited their community – being able to choose from a list of activities or create their own Movin'March event.

The resource booklet which went to all schools promoted on-line resources for safe and sustainable travel initiatives. The focal event of the Movin'March week was an 'All in Day' on the Wednesday, which encouraged schools to have every student walk or wheel at least part of their way to school. Four schools took part is this event, resulting in a total of 4350 students travelling actively to those schools on that day.

The Fancy Feet Parade event had the highest participation rate with 50% of schools taking part. This activity involves the decorating of shoes and walking to school which takes place on the way to or from school. Some schools chose to have an organised fashion parade through the front gate or in the playground at morning tea or lunch. The Fancy Feet Parade provides an opportunity for school communities to celebrate active travel and promote its uptake in a fun and inclusive way.

For two schools Movin'March was not timed in a way that worked in well with their plan for the term. One school held an Active April instead, and the other created Movin'May.

5.3 Summary

Schools in the region participating in the STP programme used the survey results to plan activities that were appropriate to the local community. Schools from the majority of TAs tend to involve people from outside the school in activity planning to ensure that activities get support from the wider community.

Analysis of mode of travel to school for those students who live within 5km of their school showed significant increases in the proportion of students using active modes to travel to school since the schools became involved in the STP programme.

Initial findings from the schools included in this evaluation are encouraging and show positive shifts towards achieving the programme's aims.

The move away from a dependence on car travel suggests that parents are becoming increasingly aware of other travel-to-school options and are beginning to use them.

6. Regional travel-to-school safety and behaviour

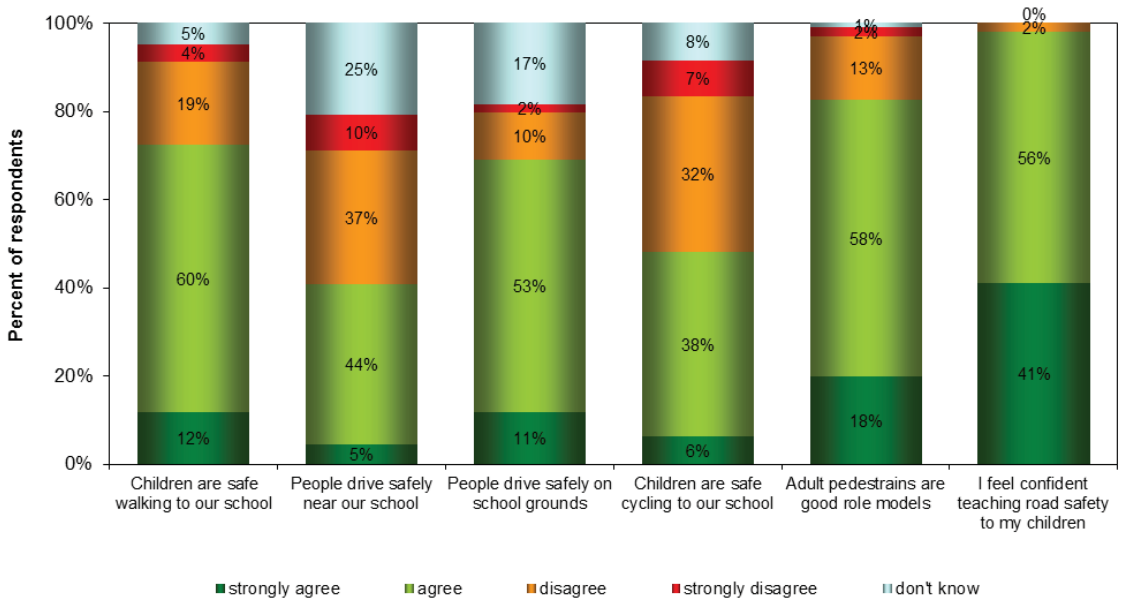
6.1 Safety

The parent school travel plan survey was rewritten for the 2011 school year and now collects perception information across six aspects of safety. As the new safety questions are different from those asked in previous versions, 2011 was the first year of data available for monitoring regional school safety. Data from 2011–2013 parent surveys have been pooled together and are reported here. As more data become available on parents' perceptions of safety it will become possible to look at changes in perceptions over time.

Figure 10 shows the extent to which responding parents at schools surveyed from 2011 –2013 agree or disagree with six aspects pertaining to safety. The vast majority (97%) of parents feel confident teaching road safety to their children, with 41% saying they *strongly agree* and a further 56% saying they *agree*.

Results show that parents are much more likely to agree that children are safe walking to their school (71% selecting a rating *strongly agree* or *agree*), compared to cycling to their school (44% selecting a rating of *strongly agree* or *agree*). In fact, 39% of responding parents *disagree* or *strongly disagree* that children are safe cycling to school. Parents' perceptions of cycling safety may also be connected to the relatively high proportion of parents disagreeing that people drive safely near their school. The information from 2011–2013 shows that around half of responding parents *disagree* (37%) or *strongly disagree* (10%) that people drive safely near their school.

Figure 10. Extent to which parents agree or disagree with six aspects of safety, 2011–2013



Data from the Greater Wellington Transport Perceptions Survey, conducted in June 2012, align with these findings. In 2012 it was found that 45% of respondents thought children in their local area were safe (selecting a rating of *very safe* or *safe*) if they cycle to school, compared to 76% thinking children are safe if they walk to school.

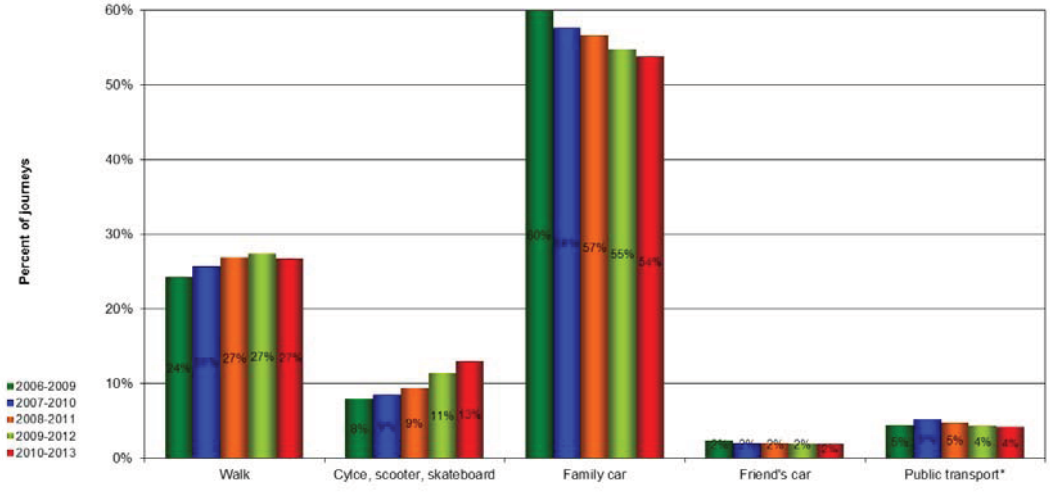
6.2 How the region's children travel to school

The STP surveys collect information from children about how they travel to school, including travel by vehicle, on foot, by bike and by public transport. Four years of STP data, from 2010–2013, for primary and intermediate age children have been pooled together to explore the school travel patterns in the Wellington region. Data for the 2006–2009, 2007–2010, 2008–2011, and 2009–2012 periods are also presented for comparison.

6.2.1 Travel mode

Figure 11 shows the percentage of journeys to school in the region (n=108,820) by different modes over the 2006–2013 period. Data collected over the 2010–2013 period show that around 56% of trips to school were by car (family car or friend's car), 27% were on foot, 13% by cycle, scooter or skateboard, and only 4% by public transport.

Figure 11. Proportion of journeys to school by mode, 2006–2009 to 2010–2013



**Public transport includes bus, train and ferry

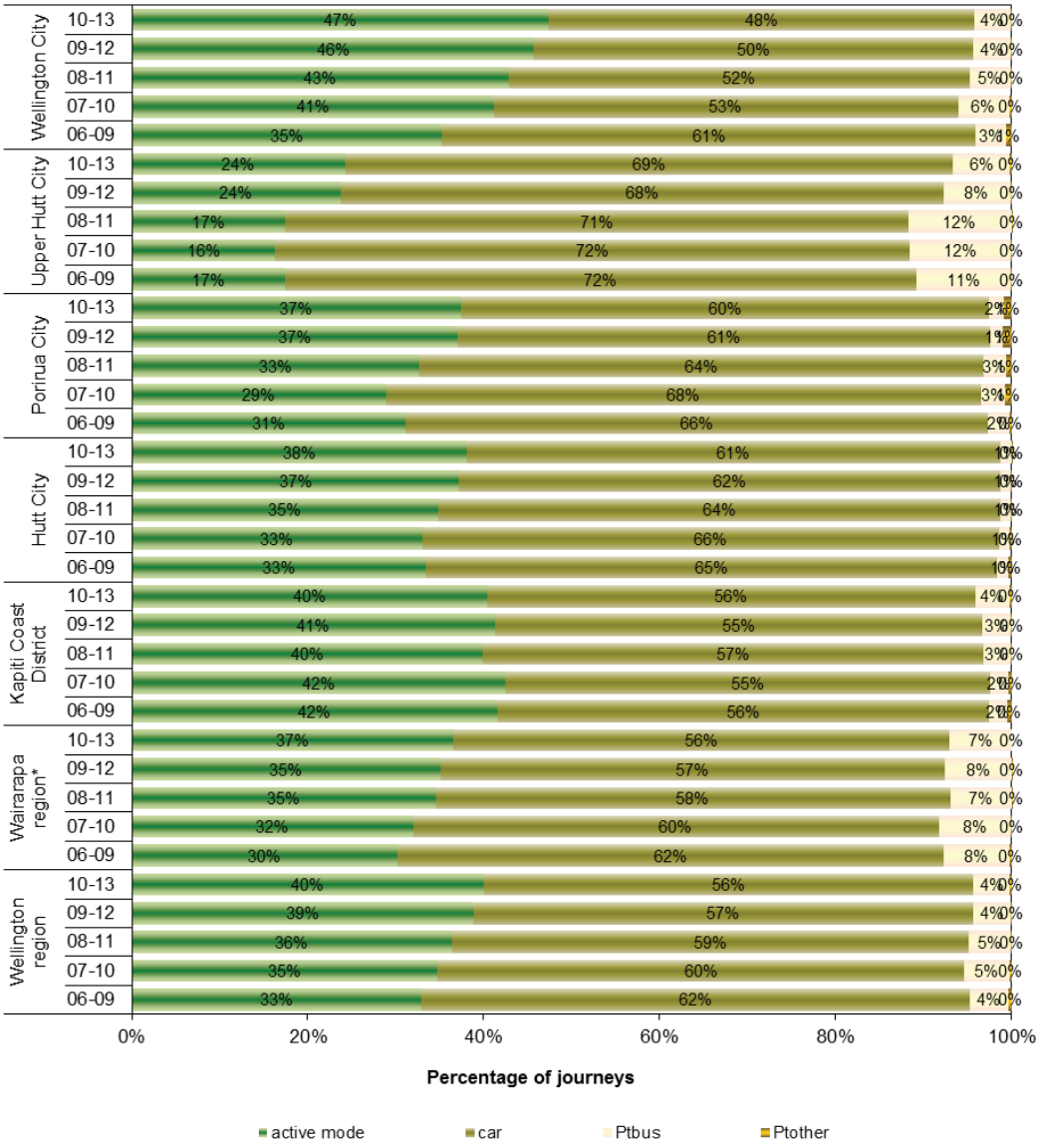
Comparing pooled data over time, there has been a substantial decrease in the percentage of trips to school across the region by car, and a substantial increase in the percentage of trips by active modes. The percentage of car trips decreased from 62% in 2006–2009 to 56% in 2010–2013, whereas active mode trips (including walk, cycle, scooter and skateboard) increased from 32% to 40% over the same period.

Regional data from the New Zealand Household Travel Survey (NZHTS) (Ministry of Transport, 2012) over the 2008–2012 financial year period found that 59% of primary school children were driven to school, 30% walked and one percent travelled by bike. Comparing the data from the STP programme and the NZHTS shows that lower proportions of students at schools in the STP programme were driven to school and higher proportions used active modes compared to the overall regional picture.

The mode share of travel to school for the individual TAs in the Wellington region is shown in Figure 12. Compared to the total region, there are a number of differences by TA for the 2010–2013 period. Children attending STP participating schools in Upper Hutt were less likely to use active modes to travel to school, whereas children going to participating schools in Wellington City and the Kapiti Coast were most likely to use

active modes to travel to school. Children attending schools in the Wairarapa were more likely to travel to school by bus compared to the total region. Children attending schools in Upper Hutt were most likely to travel to school by car, followed by children attending schools in Hutt City and Porirua City. A similar pattern of mode use has been present since 2006–2009.

Figure 12. Proportions of journeys to school by mode[7] for the individual TAs, 2006–2009 to 2010–2013



*Wairarapa region includes the Carterton District, Masterton District and South Wairarapa District.
Note: percentages not clearly visible are generally below 2%

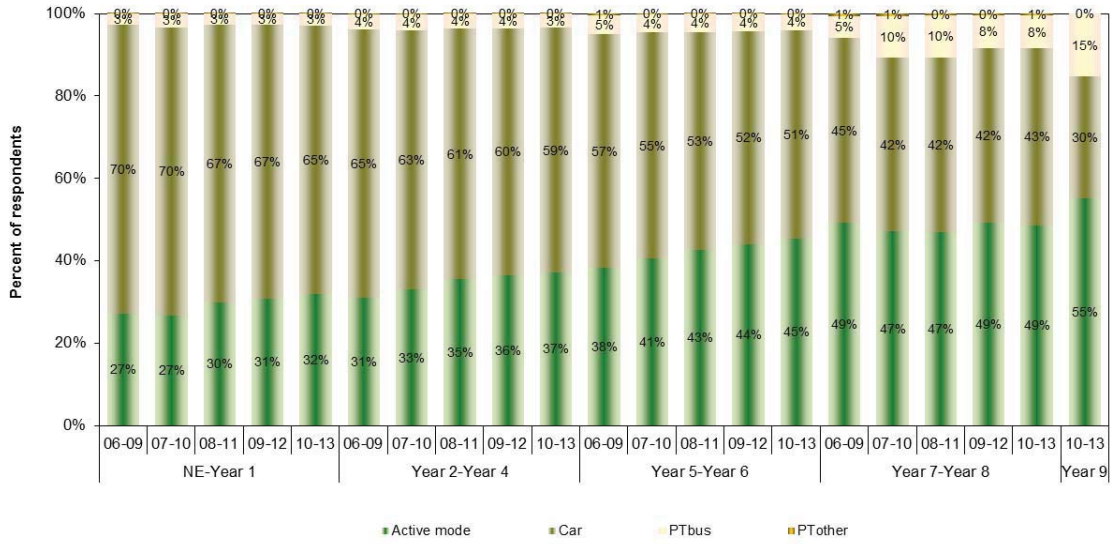
Looking at the trends in mode share within individual TAs the majority have experienced positive shifts, with an increase in active mode use and a decrease in car use. The largest increases were observed in Wellington City, where active mode use at participating schools increased from 35% in 2006–2009 to 47% in 2010–2013, and car use decreased from 61% to 48%. There were also notable changes in Wairarapa and Upper Hutt City which each saw a 7% increase in active mode use across the 2006–

[7] Active mode includes walk, cycle, scooter, skateboard and walking school bus; car includes family car and friend's car, PTbus includes school and public bus; Ptother includes train, ferry and other modes.

2009 to the 2010–2013 period. In the case of Porirua City, while showing a rather high 6% increase, it is not possible to tell how much was due to actual mode shifts or to the travel behaviour of students from one large school which surveyed in 2013 after many years of not having surveyed. As mentioned earlier in this report, as more and more schools join the STP programme this will increase our confidence that the observed mode changes are due to travel choice changes rather than the effect of a new school being added to the regional analysis.

A strong predictor of travel-to-school mode choice is the age of the student (Figure 13). As school-age children get older they become increasingly likely to use active modes or public transport. In 2010–2013, 65% of new entrant –Year 1 students were driven to school, 32% used active modes, and just 3% used public transport; whereas 30% of Year 9 students were driven, 55% used active modes and 15% used public transport.

Figure 13. Mode of travel to school by year level of children, 2006–2009 to 2010–2013



Note: percentages not clearly visible are generally below 2%

Comparing the five periods of pooled data, the largest increases are observed for Year 5 and Year 6 students where active mode use increased from 38% to 45% of trips. There was little change in travel-to-school choice for Year 7 and Year 8 students over this time. Year 9 students have only entered the survey pool starting in 2013.

6.2.2 Travel distance

The typical distances (median, mean and 5% trimmed mean[8]) children in the Wellington region travel to schools with school travel plans are shown in Table 4. The 5% trimmed mean distance to school, over the 2010–2013 period, was found to be 2.09km. Further analysis shows that the 5% trimmed mean distance to school by active modes is 1.15km and 2.65km by car, whereas the median distance is 0.95km by active modes and 1.88km by car.

[8] A 5% trimming removes the largest 5% of values, and the smallest 5% of values before the mean is calculated. This reduces the effect of outlier/extreme values.

The 5% trimmed mean and median distance to school by active modes remained relatively unchanged over the last few measurement periods, until 2010–2013, when the distance increased to 0.95km. This may be due to the increase in children commuting to school by scooter – a mode of travel which allows people to travel distances more easily and at a faster pace than walking, while remaining on the footpath. The growing popularity of the scooter may also account for the large change in travel mode of children living between 2-5km from school (Figure 14).

Other than a spike in the 5% trimmed mean by car in 2008–2011 this remained relatively unchanged at around 2.80km, and dropped to 2.65km in 2010–2013. There was little change in the median distance by car over the first three measurement periods, but this has decreased over the last two measurement cycles.

Table 4. Kilometres travelled to school, 2006–2009 to 2010–2013

	Year	All modes	Car	Active
Number of trips	**2006-2009**	40,926	25,568	13,480
	2007-2010	67,064	40,396	23,314
	2008-2011	79,159	47,124	28,454
	2009-2012	99,590	57,243	38,480
	2010-2013	19,186*	7,492*	10,712*
Median	**2006-2009**	1.51	1.99	0.83
	2007-2010	1.55	2.01	0.90
	2008-2011	1.53	2.00	0.91
	2009-2012	1.42	1.87	0.91
	2010-2013	1.46	1.88	0.95
Mean	**2006-2009**	2.76	3.34	1.17
	2007-2010	2.67	3.29	1.20
	2008-2011	2.79	3.45	1.33
	2009-2012	2.61	3.28	1.27
	2010-2013	2.85	3.46	1.58
5% trimmed mean	**2006-2009**	2.26	2.81	0.98
	2007-2010	2.25	2.80	1.06
	2008-2011	2.33	2.91	1.15
	2009-2012	2.17	2.79	1.12
	2010-2013	2.09	2.65	1.15

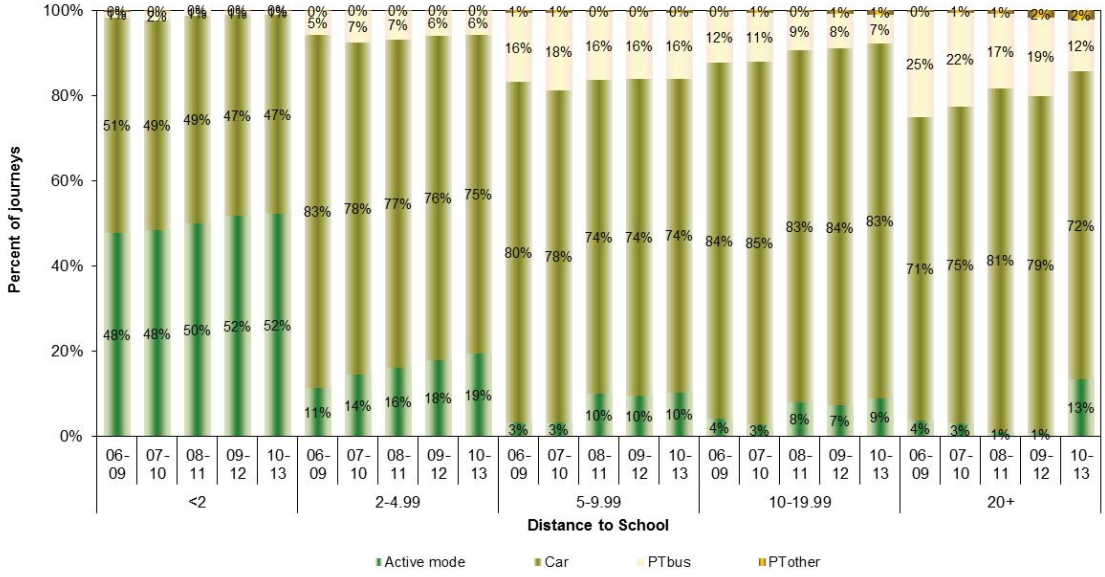
*Trips in 2010–2013 were analysed on just one day of the survey week, so totals are roughly 1/5 of the number of trips from prior datasets.

The shorter distances of less than 2km and less than 5km, from home to school, are of particular interest in school travel planning as these distances are often relatively easy to walk or cycle. Findings from the 2010–2013 class surveys show that 62% of children with school travel plans in the region live within 2km of their school, 24% live 2–4.99km from school, a further 9% live between 5–9.99km and the remaining 4% live 10km or more from school.

The mode of travel to school by distance travelled is shown in Figure 14. From the pooled 2010–2013 data just over half (52%) of students that lived within 2km of school travelled by active modes. This reduces to 19% for students living 2–4.99km from school.

The percentage of short journeys to school by active modes gradually increased since 2006–2009, but there were still large numbers of car trips to school of more than 5km in length. In 2010–2013, 54% of trips less than 5km were by car, and 43% were by active modes.

Figure 14. Mode of travel to school by distance travelled, 2006–2009 to 2010–2013



Note: percentages not clearly visible are generally below 2%

If we assume this information to be representative of the entire Wellington region,[9] as a conservative estimate, in 2013 there could be around 12,600 car journeys to primary/intermediate schools across the region, per day, that are less than 5km in length.

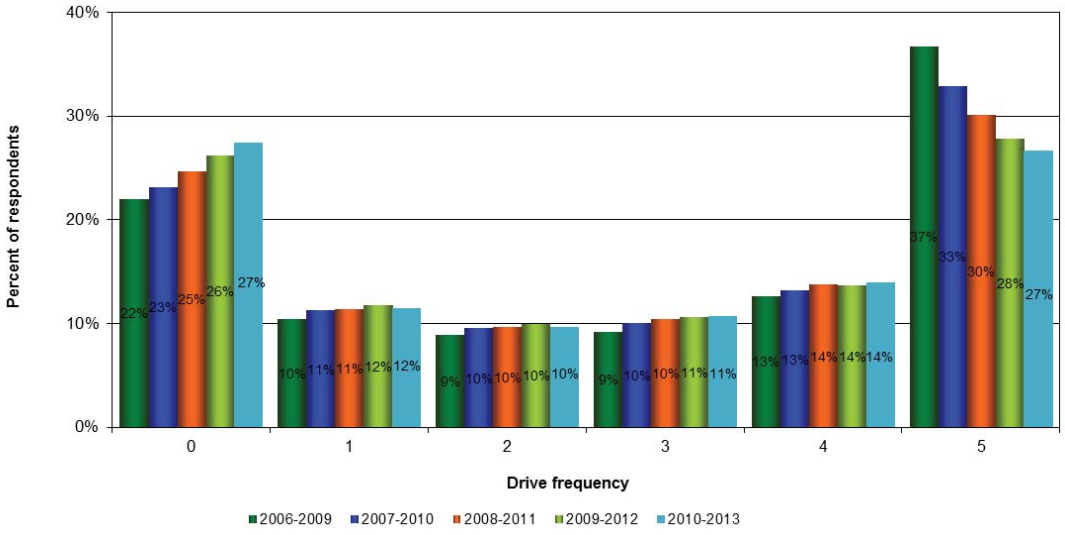
6.2.3 Frequency of travel by car

One of the aims of the STP programme is to reduce the proportion of school children in the region travelling to school by car. Analysis of class survey information from 2010–2013 shows that 74% of children were driven to school at least once a week, while only 28% were driven five times a week, and 46% were driven between one and four times a week (see Figure 15).

At a regional level, based on the observed drive frequencies in 2010–2013 and assuming that each parent drives two children to school, in 2013 there would have been around 58,000 car trips to primary/intermediate schools in the region per week (11,670 per weekday).[10]

[9] Based on the number of primary/intermediate age children in 2013 (Table 1) and assuming (generously) that there are two children in every car journey to school.
[10] This is likely to be an underestimate as there are usually fewer than two children per car.

Figure 15. Weekly drive frequency to school, 2006–2009 to 2010–2013



6.3 Summary

This work continues to provide an annual picture of travel to school in the Wellington region, on a four-yearly moving average basis. To date, analysis has looked at the overlapping time periods, 2006–2009, 2007–2010, 2008–2011, 2009–2012, and 2010–2013 to provide a large enough sample size and a pool of schools that covers the entire Wellington region (all TAs). With five time periods of data available it is possible to examine trends in the region's travel-to-school behaviour. As more schools become part of the region's STP programme this data will become more reliable.

Over the 2010–2013 period, around 55% of travel to school, for primary/intermediate age children in the region, was by car (family car or friend's car), 40% was by active modes (walk, cycle, scooter or skateboard), and 4% was by public transport (bus, train and ferry). Over time, the school travel plan data show that there has been an increase in active mode travel to school (from 32% in 2006–2009 to 40% in 2010–2013) and a decrease in travel to school by car (from 62% in 2006–2009 to 56% in 2010–2013) for primary/intermediate age children. There has been no significant change in public transport use. Comparing the data from the STP programme to data from the NZHTS shows that lower proportions of students at schools in the STP programme are driven to school and higher proportions use active modes compared to the regional picture.

There are a number of differences in travel to school mode choice across the region. Compared to the total region, children in Wellington City and the Kapiti Coast District are more likely to use active modes to travel to school; whereas children in Upper Hutt, followed by Hutt City and Porirua City are more likely to travel by car. Mode of travel to school in the region is also found to be highly dependent on the age of the child, with older children becoming less reliant on being driven and increasingly more likely to use active modes of travel to school.

Short distances of less than 2km and less than 5km, from home to school, are of particular interest in school travel planning as these distances are often relatively easy to walk, cycle, or use a scooter or skateboard. Data from STP schools over the 2010–2013

period shows that around 87% of children lived within 5km of their school. Despite this, in 2010-2013, around 54% of these short trips to school were by car with 43% using active modes. This illustrates that there is plenty of scope across the region for shifting children's mode of travel to school away from car travel.

Of the three factors (student year level, distance to school and TA) that appeared to have a significant relationship with active mode use, regression analysis found that distance travelled to school has the strongest correlation, student year level has a moderate correlation (but is half that of distance travelled), and going to school in a particular TA does not have a significant correlation. These results tell us that the closer someone lives to a school, and the older a student is, the more likely they are to use active modes to travel to school. Although differences by TA are observed when analysed in isolation, these all but disappear when distance to school and student year level are also taken into account.

Also of interest from the regression analysis, was that only 45% of the variation in active mode use could be explained by distance travelled to school and student year level. This suggests there are a number of other factors, not investigated here, that influence whether a child will use active modes to travel to school.

The parent survey questions pertaining to safety were rewritten for the 2011 survey to reflect the changing information needs. As a baseline this information tells us that the vast majority of parents were confident to teach road safety to their children. However, just under half (46%) of parents disagreed (selecting *disagree* or *strongly disagree*) that people drove safely near their school, and higher proportions of parents agreed (selecting *agree* or *strongly agree*) that children were safe walking (71%) to their school, compared to cycling to their school (44%). Regional data from the Transport Perceptions Survey (2012) align with these latter findings showing that respondents are more likely to believe that children are safe walking to school compared to cycling to school.

7. Evaluation of STP schools (?)

Up to the end of the 2013 school year, there were 31 schools that had completed class baseline and evaluation travel surveys. The data from these schools is presented in this chapter to look at the travel-to-school changes for those schools that have implemented STP activities.

7.1 Travel safety

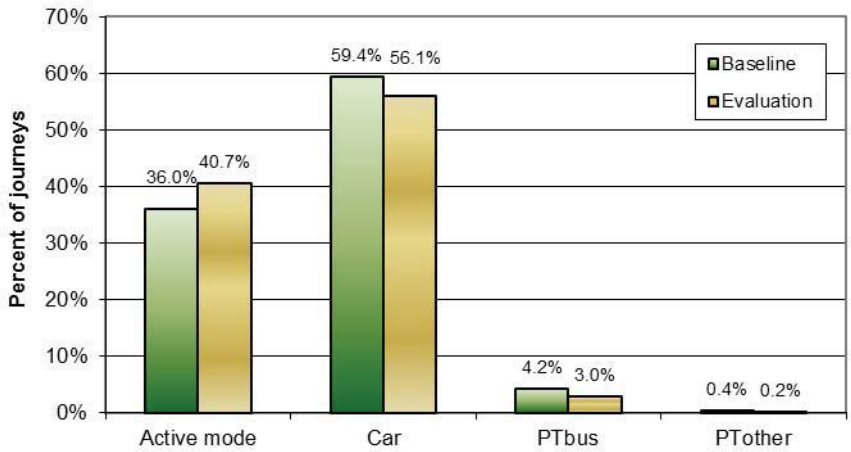
Evaluation of the STP programme in the Auckland region found that stakeholders thought that the success of the programme should be measured on both modal shift change and improved safety for child pedestrians and cyclists (ARTA, 2008). Auckland travel coordinators also commented that shifting parents' perceptions about safety was essential in order to achieve reductions in car use.

The safety questions in the Wellington region's STP programme were rewritten for 2011 to reflect the priorities outlined in New Zealand's Road Safety Strategy (Ministry of Transport, 2010). The rewriting of these questions means that at the time of writing no safety information is available for schools which have completed baseline and evaluation surveys.

7.2 Modal shift in schools with travel plans

From the class travel survey data, the region's schools with travel plans are shown to have achieved a substantial increase (4.7%) in the percentage of journeys to school by active modes (see Figure 16). A corresponding decline (3.3%) in car use is also observed.

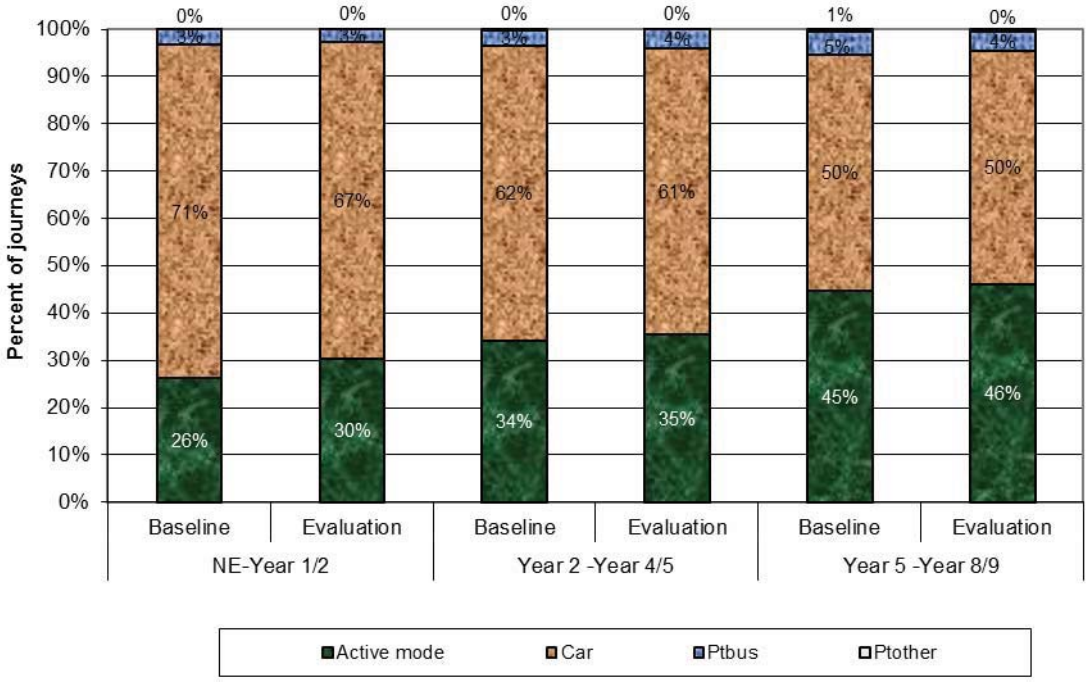
Figure 16. Change in mode of travel to school between class baseline and evaluation surveys



7.3 Mode shift by year level

The age of the student has been found to be a predictor of mode of travel to school in the Wellington region (see section 5.2.1). This is also evident for other regions (ARTA, 2008) and New Zealand nationally (Ministry of Transport, 2009). Figure 17 shows the change in mode of travel to school between class baseline and evaluation survey data by student year level.

Figure 17. Change in mode of travel to school between class baseline and evaluation surveys, by student year level



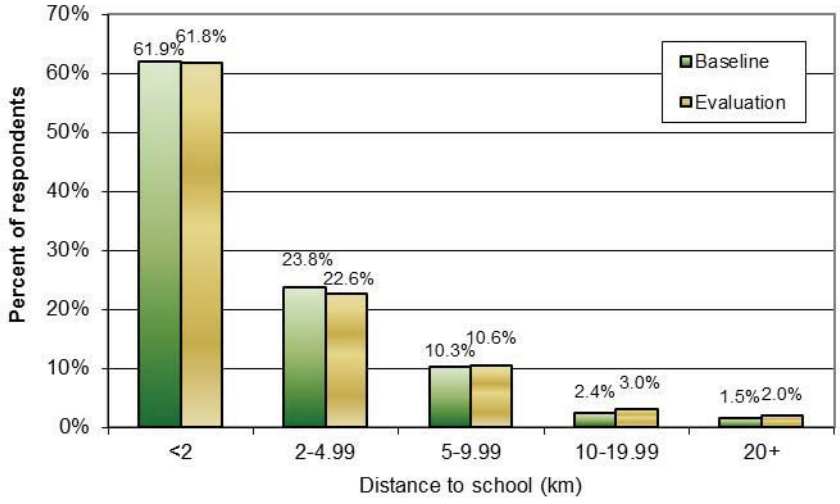
All age groups that have implemented STP activities showed an increase in their active mode use for school travel, particularly in the new entrant (NE) to Year 2 level. A corresponding decrease in journeys by car was observed for all age groups with the exception of Year 5–Year 8/9 which remained flat. Public transport use remained flat in the NE–Year 1/2 groups, but declined slightly in the older age groups.

7.4 Modal shift by distance travelled to school

Short distances of less than 2km and less than 5km, from home to school, are of particular interest in school travel planning as these distances are often relatively possible to walk, cycle, or use a scooter or skateboard to travel. Therefore, mode of travel to school is also influenced by the distance between a child's home and their school, with active modes of transport becoming less feasible for longer journeys to school.

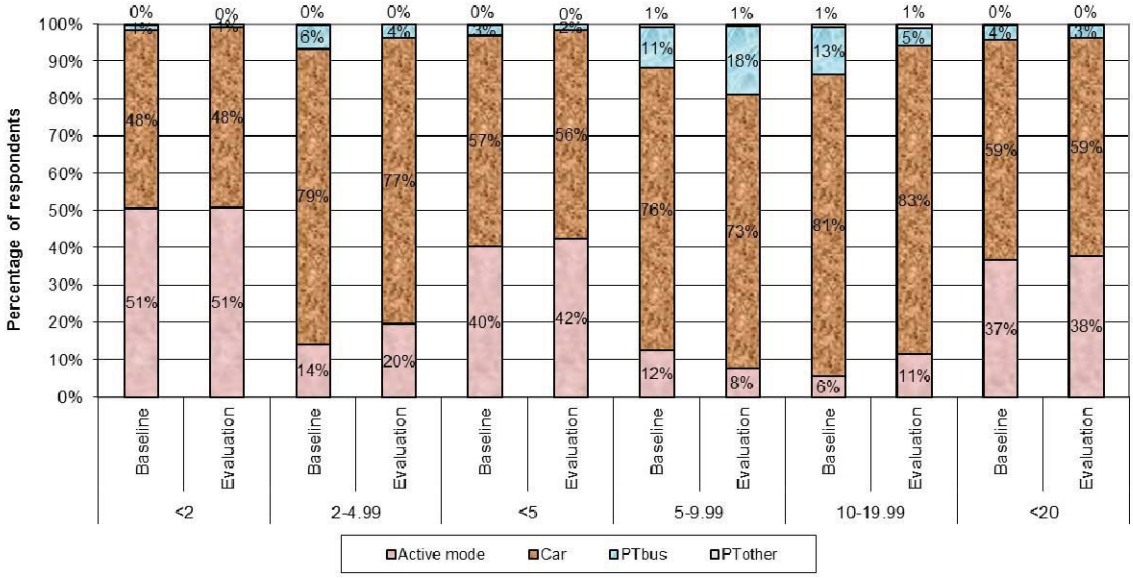
Figure 18 shows the distances children travel to their school from the baseline and evaluation surveys. In both the baseline and evaluation surveys, around 85% of students lived less than 5km of their school.

Figure 18. Change in distance travelled to school between class baseline and evaluation surveys



The change in mode of travel to school between class baseline and evaluation surveys, by distance from home to school is shown in Figure 19. For students who lived within 5km of their school there was a significant increase in the proportion using active modes to get to school (from 40% to 42%), and a decrease in car use (from 57% to 56%). The largest shift in active mode use was observed for students living within 2–4.99km of their school, with a six percentage point increase (14% to 20%) in the use of active modes and a four percentage point decrease (80% to 76%) in car use to travel to school.

Figure 19. Change in mode of travel to school between class baseline and evaluation surveys, by distance travelled to school



Due to the small number of students living more than 10km from their school, none of the observed changes are statistically significant; however, results from this commuting distance show that the number of active commuters and car commuters increased while public transport use declined.

At the 31 schools in the evaluation, there was an increase of around 300 active mode trips to these schools each day for students that lived within 5km of their school. If one assumes that these trips were made by active modes each school day for 196 days, this amounts to nearly 59,000 more active mode trips to these schools per school year.

If this level of mode shift was observed for all primary/intermediate students across the Wellington region who live within 5km of their school, based on 2013 rolls, there could be around 950 more active mode trips to school per day, and over 186,000 per school year. Changes in the number of car trips are detailed in the next section.

7.5 Trip reduction

In 2013 there were 31 schools in the Wellington region that had been involved in the STP programme long enough to have completed both baseline and evaluation surveys.

Table 5 shows the estimated reduction in car trips between baseline and evaluation surveys for the students (living within 5km of their school) at the evaluation schools and for all students across the region. It also shows the resulting reduction in vehicle kilometres travelled (VKT) and CO_2 emissions. The reduction in car trips to schools that have participated in the STP evaluation reduced VKT by 12,439km each year and reduced CO_2 emissions by 4.3 tonnes each year.

If the schools in the evaluation are assumed to be representative of the Wellington region, the STP programme could reduce the number of car trips, of primary/intermediate students who live within 5km of their school, by 1,034 car trips per day (202,000 fewer per school year).[11] This equates to 282,659 fewer VKT and a reduction in CO_2 emissions of 97.8 tonnes.

[11] This is likely to be an underestimate as there are usually fewer than two children per car.

Table 5. VKT and CO_2 reduction resulting from the STP programme, for students living within 5km of their school

	Total students	Car trips to school saved per year*	Reduction in VKT to school each year**	CO_2 reduction per year*** (tonnes)
At evaluation schools	6,804	4,458	12,439	4.3
All regional schools	66,077	101,311	282,659	97.8

*School runs for a total of 196 days per year and assuming two children travel in each car

**Assuming each trip is 2.79km in length (the 5% trimmed mean car distance travelled to school for students in the region, 2010–2013 – see Table 4. This will be an overestimate as 2.79km is for all students not just those living within 5km of their school.

***Fleet-weighted exhaust emissions factor for CO_2 = 346g/km (Ministry for the Environment, 2008)

Whilst it is encouraging to see a reduction in car trips following STP activities, it is acknowledged that reducing car trips to school may still not stop particular car trips occurring altogether as a number of parents are already driving (Durling and Winslow, 2011) when they drop their child off to school. Even if a number of car trips are still occurring, the finding that school travel planning has increased active travel to school is still important, especially in terms of the health benefits for students.

Since the introduction of the STP programme, at the schools that have participated in evaluation surveys, we estimate that at a minimum there has been an increase of around 315 active mode trips and a decrease of around 100 car trips to these schools each morning for students living within 5km of their school. If these changes were observed across the whole Wellington region there could be around 1,600 more active mode trips and at least 500 fewer car trips to primary/intermediate schools each morning.

7.6 Summary

In 2013 there were 31 primary/intermediate schools in the Wellington region that had been in the STP programme long enough to have implemented some travel plan activities and participate in an evaluation survey. The number of schools is increasing each year making further analyses possible and more reliable.

Evaluation results to date are encouraging. There has been a significant increase in travel to these schools by active modes and a significant decrease in travel by car. Although older students are more likely to travel to school by active modes, it is the younger students who have experienced the largest increases in active mode use between the baseline and evaluation measurements.

Mode of travel to school is strongly influenced by the distance a child travels, with active modes of transport not feasible for longer journeys to school. Analysis of mode of travel to school for those students that live within 5km of their school showed significant increases in the proportion of students using active modes to travel to school since the schools became involved in the STP programme. A decrease in the proportion of students travelling to school by car is also observed.

The reduction in car trips means that there will be a reduction in VKT, which brings with it an associated decrease in CO_2 emissions from car travel to school. Whilst it is encouraging to see a reduction in car trips for travel to school following the STP programme, it is acknowledged that reducing car trips to school may still not stop the car trip occurring altogether, as a number of parents are already driving when they drop

their child off to school. Even if a number of car trips are still occurring, the finding that school travel planning has increased active travel to school is still important, especially in terms of the health benefits for students, and the reduction in vehicle traffic near schools, and on routes to schools is also important for the perceived safety of the environment and the likelihood that parents will allow their children to walk or wheel to school.

Initial findings from the schools included in this evaluation are encouraging and show positive shifts towards achieving the programme's aims. Each year additional schools sign up to the STP programme, and of the schools at the evaluation stage, large increases in active mode trips and decreases in car trips have occurred. A move away from dependence on car travel suggests that parents are becoming increasingly aware of and are attracted to, other school travel options.

References

Auckland Regional Transport Authority (2008). TravelWise Programme Evaluation 2008.

Durling, N. E.; Winslow, S. (2011). School Travel Plan Programme: Regional Report 2006–2011. Greater Wellington Regional Council: New Zealand. Unpublished.

Ministry for the Environment (2008). Good Practice Guide for Assessing Discharges to Air from Land Transport. Wellington: New Zealand.

Ministry of Education (2013). http://www.educationcounts.govt.nz/statistics/schooling/july_school_roll_returns/6028

Ministry of Transport (2009). How New Zealanders Travel: Trends in New Zealand Household Travel 1989–2008.

Ministry of Transport (2010). Safer Journeys: New Zealand's Road Safety Strategy 2010–2020.

Greater Wellington Regional Council (2012). http://www.gpiwellingtonregion.govt.nz/assets/Uploads/Indicator-data-sources/Transport-Perceptions-Survey-Report2012.pdf

Ministry of Transport (2012a). Comparing Travel Modes: New Zealand Household Travel Survey 2008–2011.

Ministry of Transport (2012b). http://www.transport.govt.nz/ourwork/TMIF/Pages/TP007.aspx

Ministry of Transport (2013). http://www.transport.govt.nz/assets/Import/Documents/NZ-household-travel-survey-Comparing-travel-modes-April-2013.pdf

Appendix: Locations of school-age pedestrian and cyclist crashes

Table A1. Locations of school-age pedestrian and cyclist crashes in south Wellington City by injury severity, 2008–2013

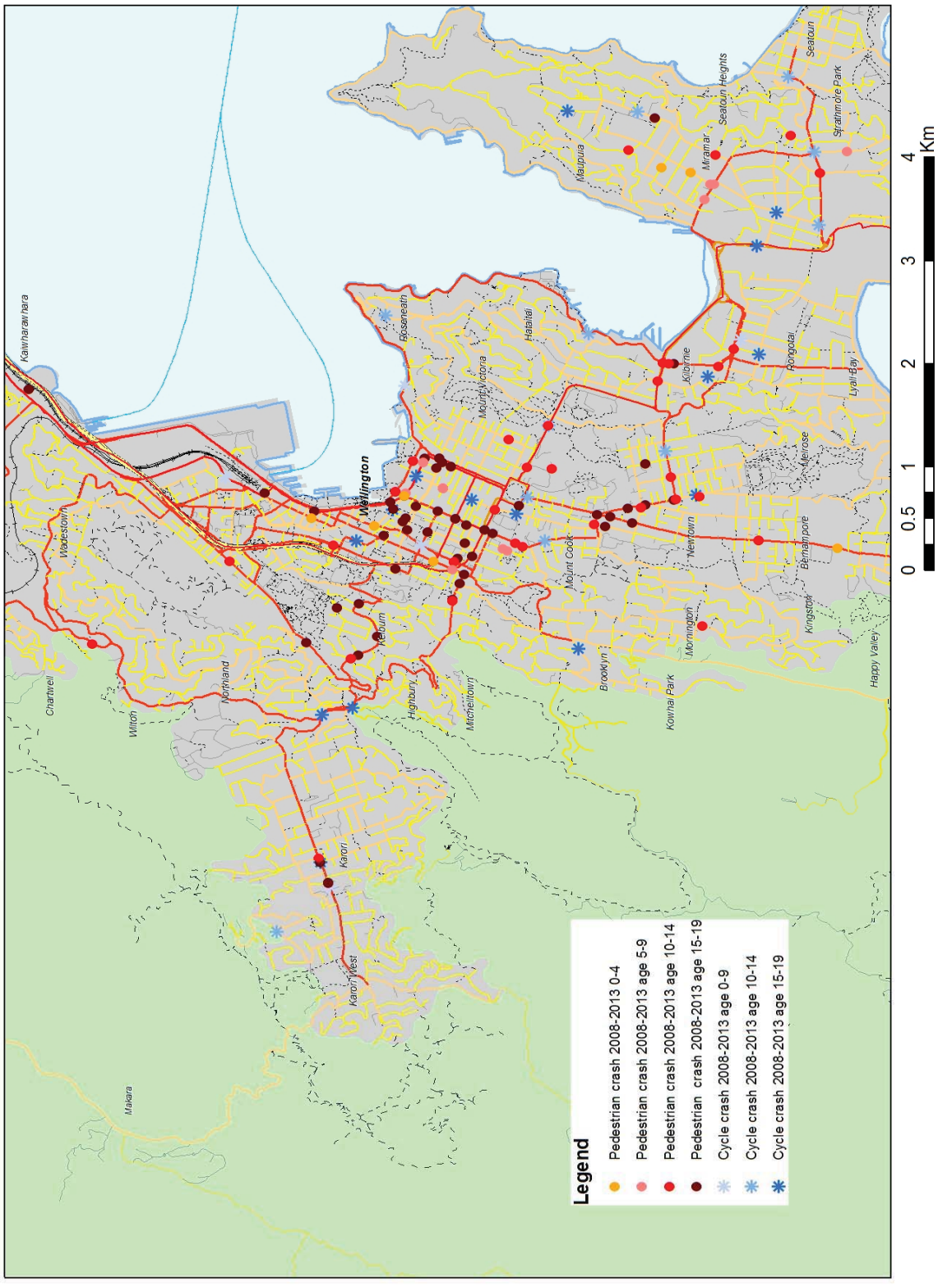


Table A2. Locations of school-age pedestrian and cyclist crashes in north Wellington City by injury severity, 2008–2013

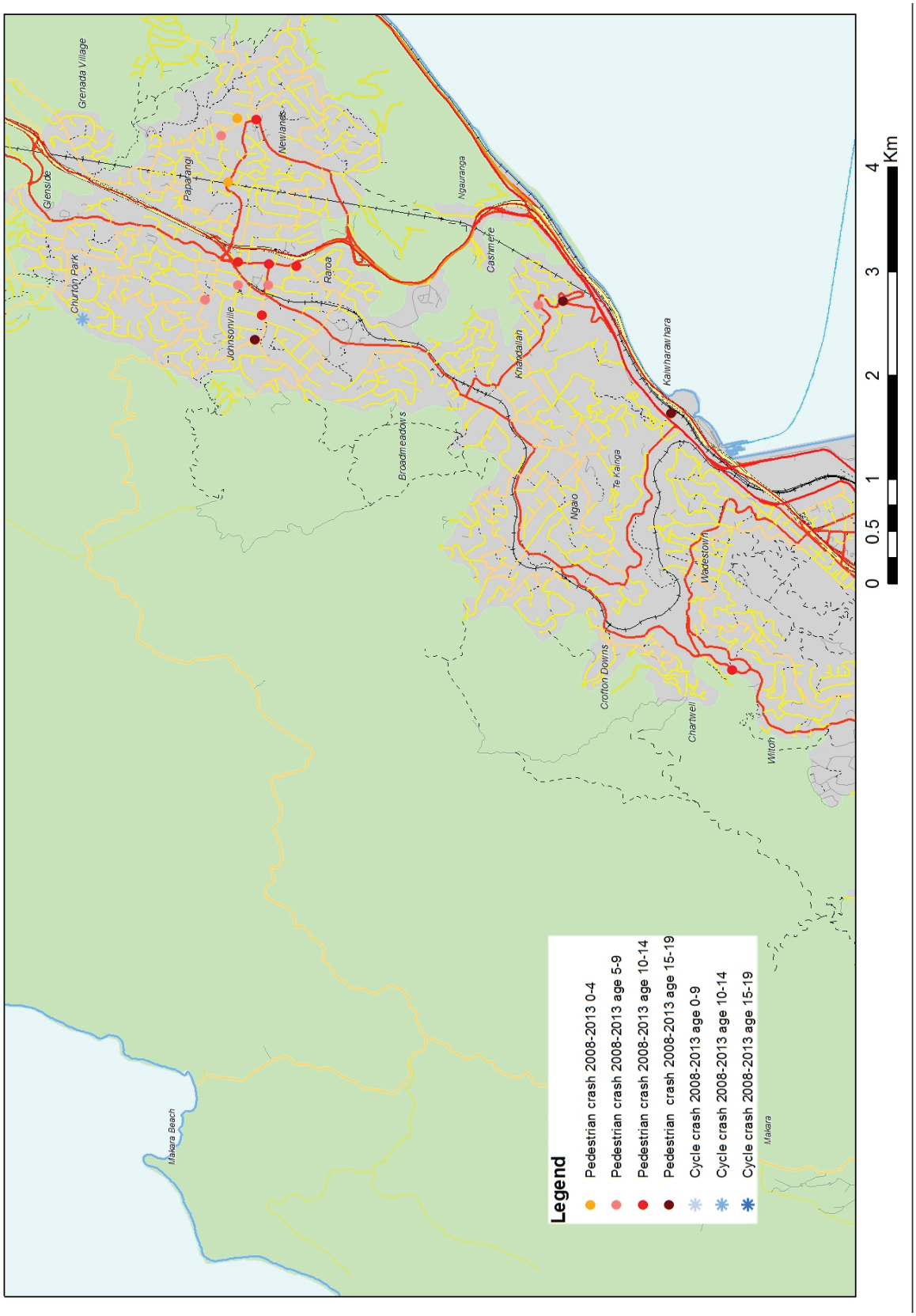


Table A3. Locations of school-age pedestrian and cyclist crashes in Hutt City by injury severity, 2008–2013

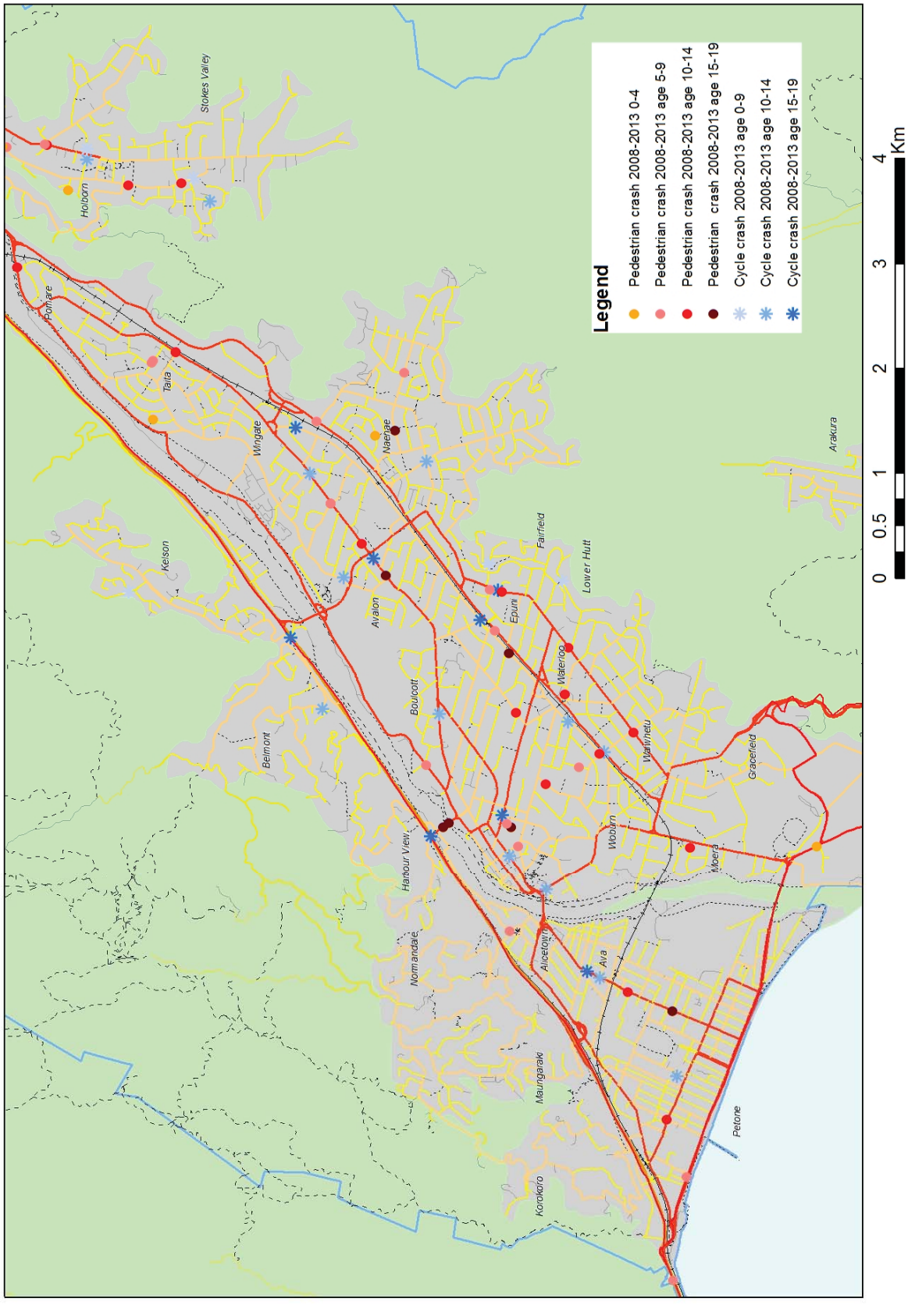


Table A4. Locations of school-age pedestrian and cyclist crashes in Upper Hutt City by injury severity, 2008–2013

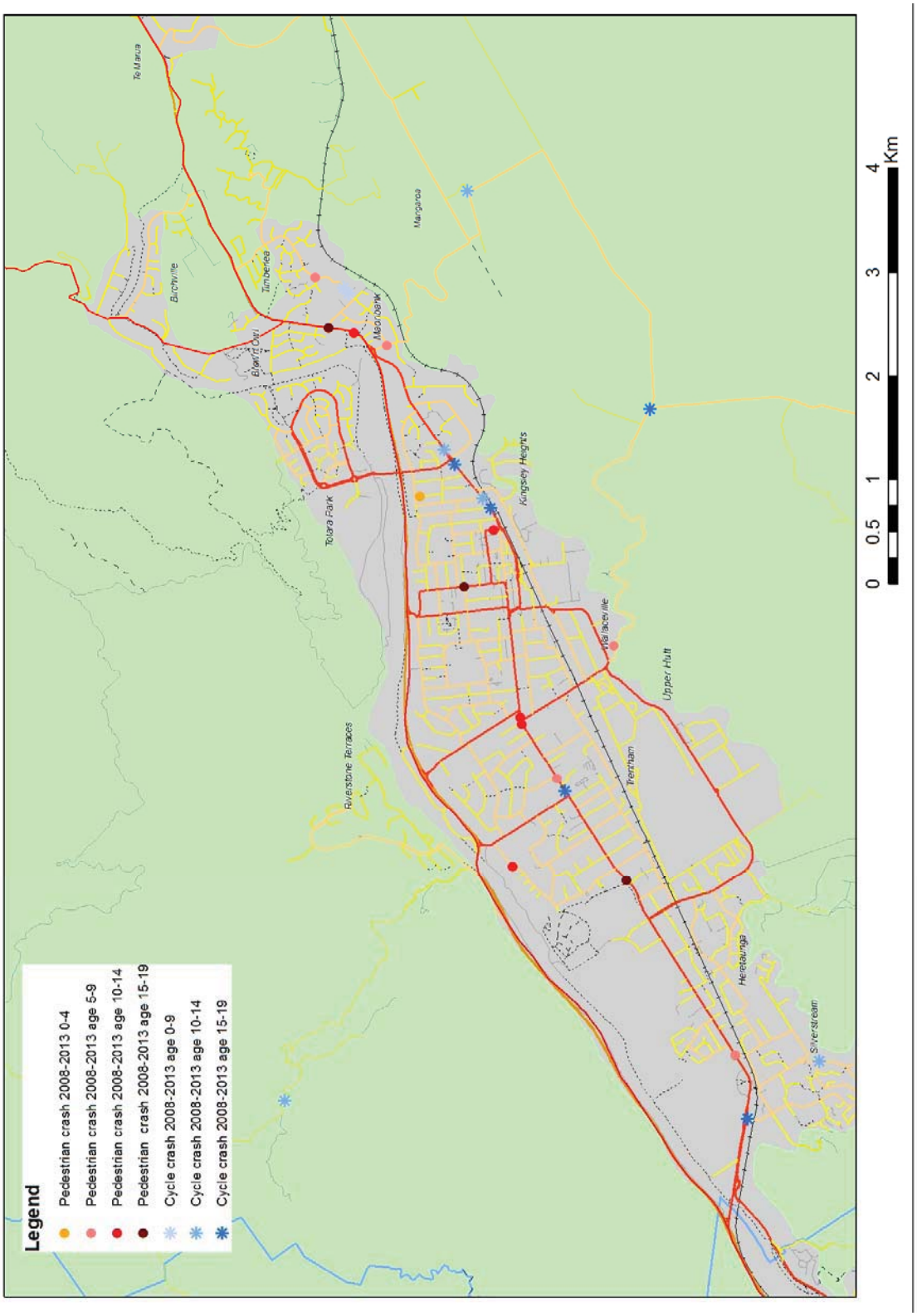


Table A5. Locations of school-age pedestrian and cyclist crashes in Masterton District by injury severity, 2008–2013

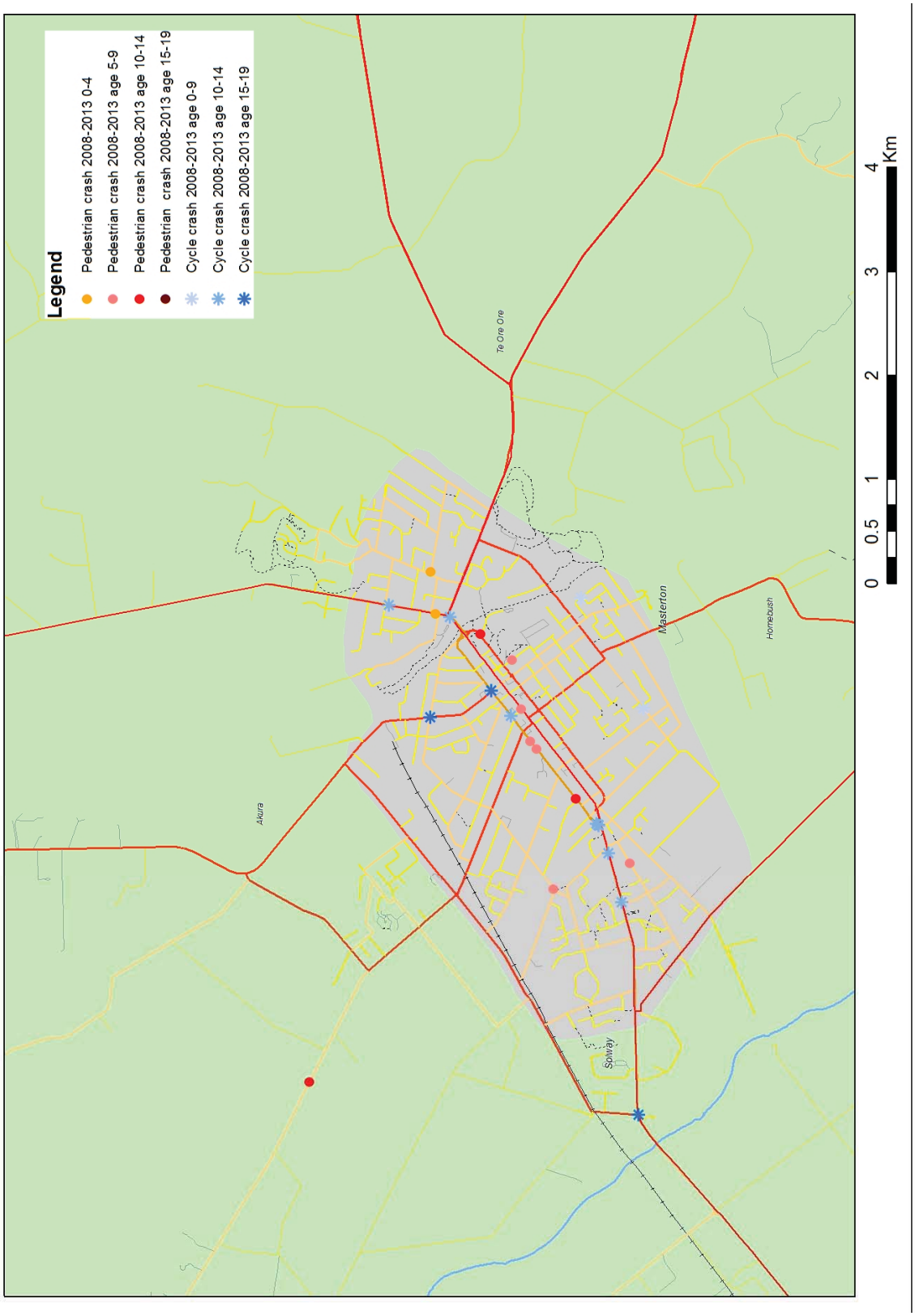


Table A6. Locations of school-age pedestrian and cyclist crashes in Porirua City by injury severity, 2008–2013

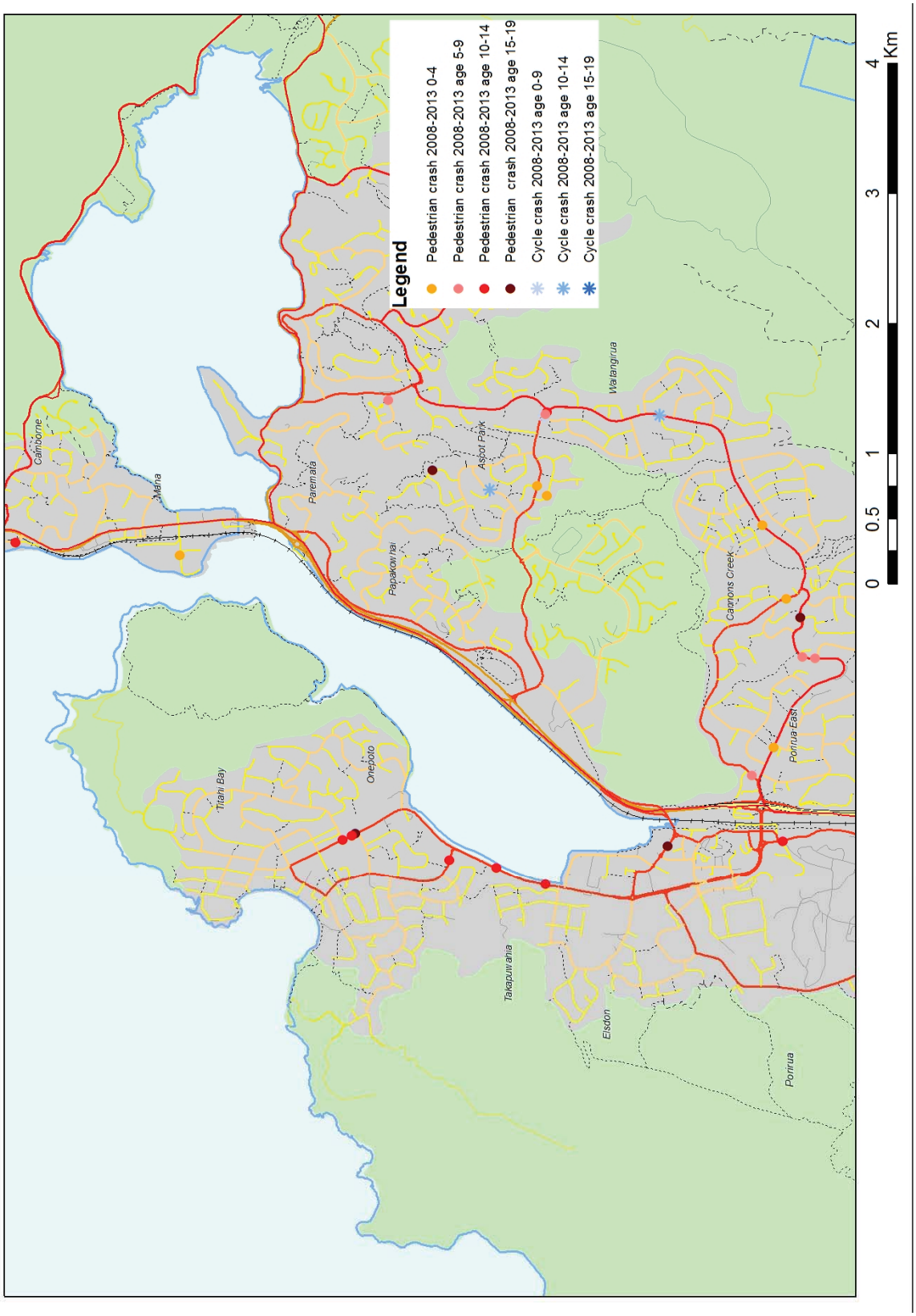


Table A7. Locations of school-age pedestrian and cyclist crashes in south Kapiti Coast District by injury severity, 2008–2013

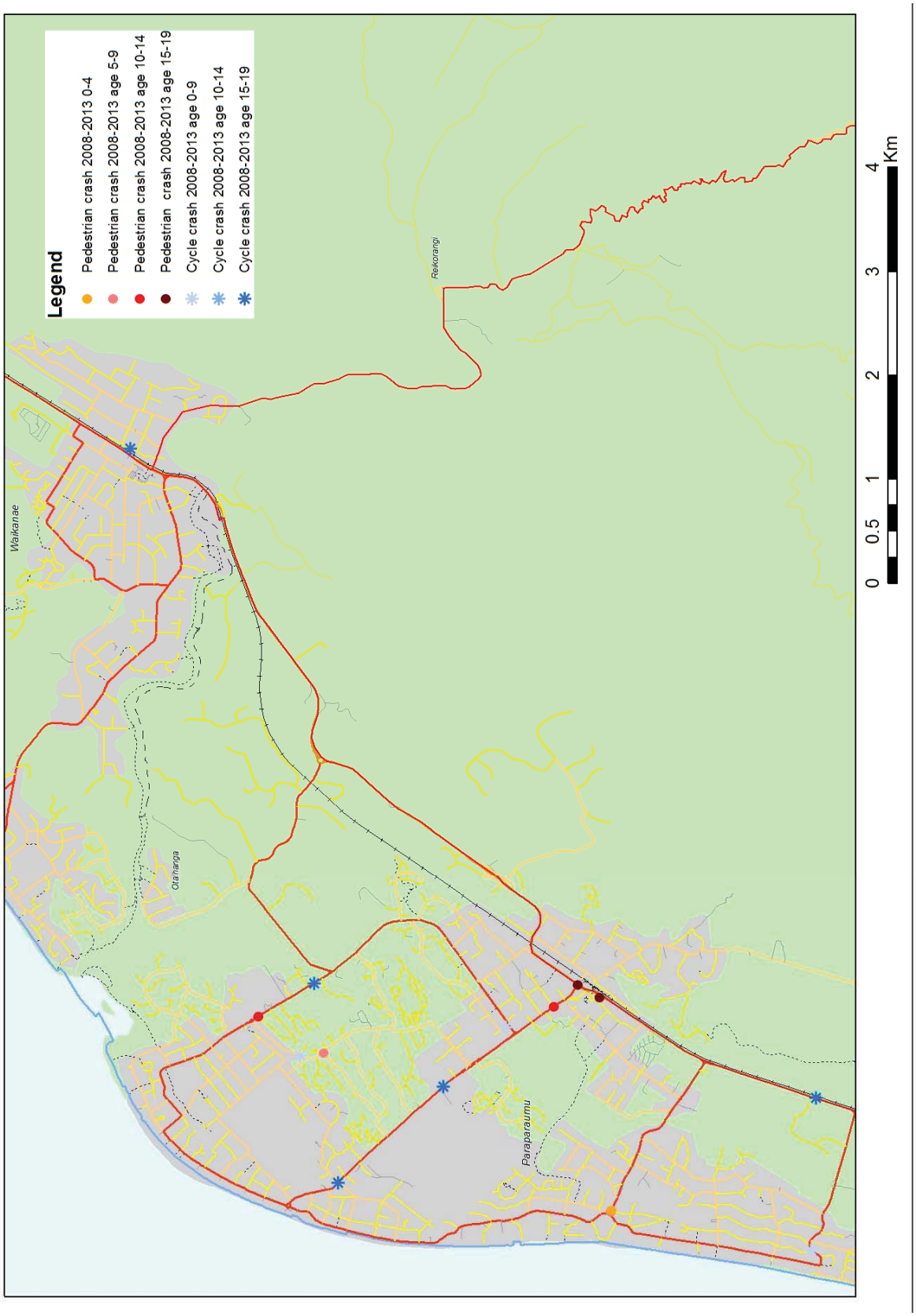


Table A8. Locations of school-age pedestrian and cyclist crashes in north Kapiti Coast District by injury severity, 2008–2013