

## Memorandum

TO	Puketāpapa Local Board Infrastructure and Heritage Cluster
FROM	Randhir Karma
DATE	13 August 2018
SUBJECT	<b>Road Safety and Speed Management in the Puketapapa Local Board Area</b>

### 1. Introduction

1. Auckland has a serious problem with people needlessly dying and being seriously injured on our roads and streets. In 2017, 64 people died on our roads and an additional 749 were seriously injured.
2. Road Safety performance in the Puketāpapa Local Board area has also worsened over the last five years due to various factors. These include economic and population growth, new demands on the unforgiving urban road network, and growth in people walking, cycling and motorcycling.
3. The Tāmaki Makaurau Road Safety Governance Group (TMRSG) has been established to provide leadership for improving safety and reducing the high number of death and serious injuries (DSi) on the Auckland road network. This group has a strong national and regional mandate to drive safety outcomes and the partners include AT, NZ Police, NZ Transport Agency (NZTA), Accident Compensation Corporation (ACC), Auckland Council (AC), Auckland Regional Public Health (ARPH) and Ministry of Transport (MoT).

As AT moves to the Vision Zero approach, it is also proposing an ambitious safety infrastructure acceleration programme estimated to reduce DSi by up to 18% over an initial three year period. It will work closely with its partners to deliver on the Vision Zero goal for Auckland.

4. This follows the New Zealand's Government's commitment to deliver a new road safety strategy as outlined in the Government Policy Statement on Land Transport.
5. There is a strong focus on safety at AT. The Board and Executive Leadership Team have recently endorsed an increased three-year investment in road safety engineering, a Speed Management Plan and behaviour change activities to reduce road trauma, including in the Puketāpapa Local Board area.
6. The Auckland Road Safety Capital Programme 2018-28 is a systemic response to improve road safety outcomes and create a more forgiving road network. Investment will be lifted by an additional \$550 million over ten years.
7. The Regional Fuel Tax will enable this investment to improve a larger number of high-risk intersections and routes through roundabouts, red-light cameras, and segregated facilities. The combined impact of these accelerated programmes is estimated to reduce DSi by 60% over ten years from the 2017 baseline, as well as contribute towards additional congestion reduction benefits and increased health and

environment benefits. Our aspiration is to move towards zero deaths or serious injuries on Auckland's roads.

8. One of the fastest and most cost effective ways to reduce road trauma is to implement speed reduction measures. AT is currently working to identify areas and roads around the Auckland region to set lower speed limits. These roads will be added to the Schedule of Speed Limits and drafted into the bylaw. The bylaw will be consulted Auckland-wide (consultation on the entire programme of works for the Auckland region at a strategic level). Post-consultation, the bylaw will need to be approved by AT's Board, after which the new lower speed limits will become legally enforceable.
9. The primary road safety focus areas in the Puketāpapa Local Board area for the next three years include safe intersections and roads, safe speeds, vulnerable road user safety (walking, cycling & motorcycling) and sober driving. These areas are will be addressed through a combined annual programme of investment in safety engineering, speed management, education and training of road users and enforcement of safe road user behaviour with NZ Police.
10. A senior AT representative will present a PowerPoint presentation at the Infrastructure and Heritage Cluster meeting.

## **2. Details**

11. Auckland's rapid growth has resulted in a number challenges including housing, transport and public health. The recent increase in road trauma is both a transport and public health issue for the region with significant economic costs. More importantly, the after-effects of road trauma on the victims' whānau, friends and community are devastating.
12. AT's long-term goal of Vision Zero is about being more people-centered and emphasises that no loss of life on our road network is acceptable. It is a proven approach from jurisdictions where road designers and operators need to take greater responsibility in creating forgiving infrastructure that prevents road trauma.
13. The Vision Zero approach also accepts that road users are people who make mistakes and therefore all parts of the transport system need to be strengthened through a safe road environment, safe speeds, safe vehicles and safe road use, so that when mistakes occur, it does not lead to people dying or being seriously injured. These are the four pillars of the Vision Zero / Safe System approach.
14. Speed management is a central part of the Vision Zero approach for reducing speeds to survivable levels for road users, particularly on unforgiving rural roads and in urban streets where there are large numbers of vulnerable road users. For individuals, the risks of a severe crash might seem small, but from a societal point of view there are substantial safety gains from reducing average speeds on streets.
15. Speed management is a low-cost area-wide treatment that will deliver substantial savings including reduced deaths and serious injuries, increased walking, cycling and public transport use, and increased public health benefits. Speed is currently responsible for 30% of all road deaths and serious injuries, and small reductions in average speeds of 1% or a few kilometres per hour can reduce the risk and severity of crashes by up to 4% (Speed and Crash Risk, International Transport Forum, 2018).
16. Speed determines both the likelihood of a crash occurring and the severity of the outcome. Regardless of what causes a crash, whether someone walks away or is carried away will depend on the speed vehicles are travelling. For example if hit by a vehicle travelling at 30km/hr, a person walking has a 90% chance of surviving when compared with only a 20% chance of surviving at 50km/hr. Speed also determines the

braking or stopping distance and the time it takes for the driver to react to take evasive measures. A small increase in travel speed corresponds to a relatively large change in stopping distance. The higher the speed the longer the braking or stopping time.

17. AT and its partners have a Road Safety Action Plan (RSAP) in place that identifies key actions from partners for addressing Road Safety Focus Areas in the Puketāpapa Local Board area (see paragraph 23), including speed management. The RSAP is developed collaboratively by AT, NZ Police, Accident Compensation Corporation and NZTA. It covers the NZ Police districts of Auckland City, Waitemata and Counties Manukau. The document is updated quarterly and a new one for the current financial year is being developed.
18. AT is investing in an ambitious road safety programme including safety engineering, speed management and behaviour change over the next ten years that will contribute towards a 60% reduction in road trauma across Auckland.

### **3. Discussion and Officers Comments**

19. Auckland's rapid growth has resulted in a number of challenges including housing, transport and public health. The recent increase in road trauma is both a transport and public health issue for the region with significant economic costs. More importantly, the after-effects of road trauma on the victims' whānau, friends and community are devastating.
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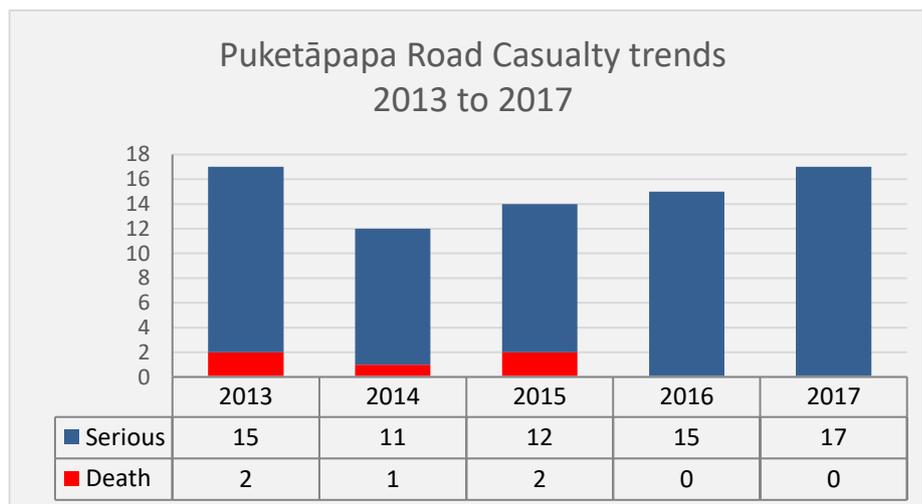
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## Tātaritanga me ngā tohutohu / Analysis and advice

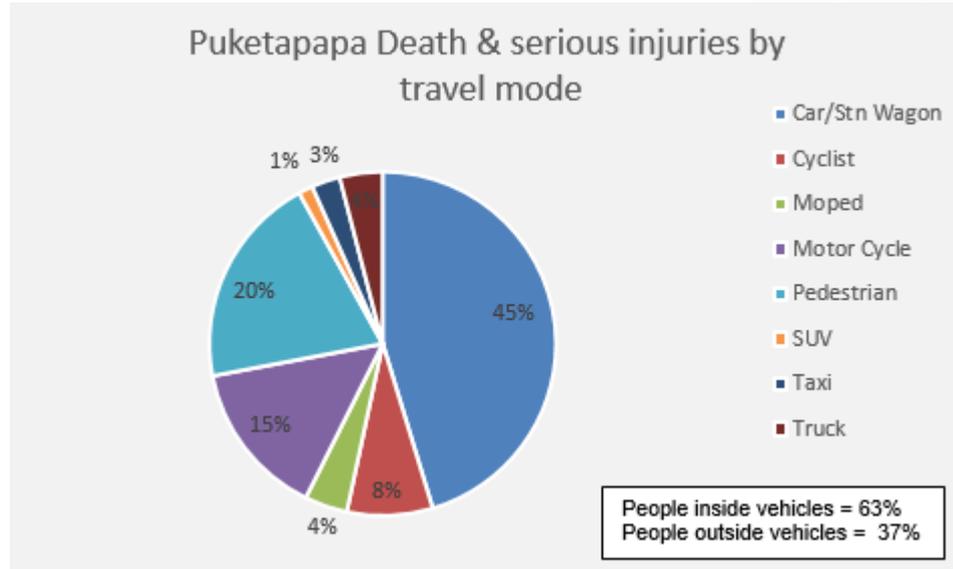
27. Auckland's DSI rates have increased by 67% from 486 in 2013 to 813 in 2017 as outlined in the table below.

Auckland Region	2013	2014	2015	2016	2017
<b>Deaths</b>	48	36	52	46	64
<b>Serious injuries</b>	438	447	568	618	749

28. Puketāpapa Local Board road deaths and serious injuries (DSi) have not changed markedly from 2013 to 2017, and Puketapapa achieved zero road deaths in 2016 and 2017. Puketāpapa Local Board DSI made up 2% of Auckland's total DSI in 2017. While Puketāpapa Local Board rated 19<sup>th</sup> when compared to DSI compared across all local boards in 2017, curiously it had the highest rate of serious road injuries per capita, out of all local boards in 2016. This suggests that while road trauma is static within the Puketepapa Local Board area, residents of Puketapapa are involved in crashes at a higher rate outside of the local board area.



29. In the Puketāpapa Local Board area 37% of all DSI involved vulnerable road users.

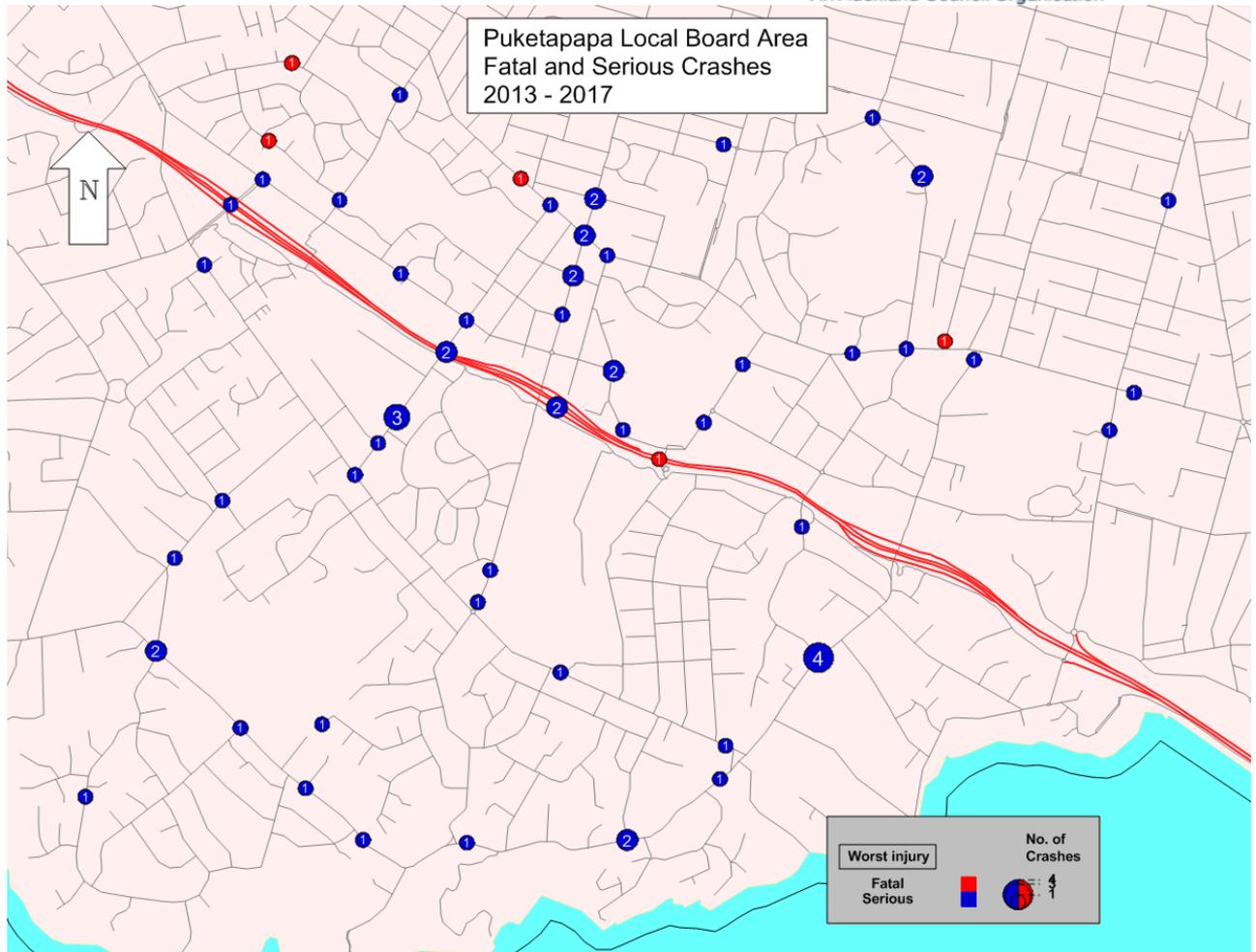


30. AT's Road Safety Action Plan for 2018-19 covers the Puketāpapa Local Board area. Below is an excerpt from the action plan showing five-year DSi trends from 2013 to 2017 for the Puketāpapa Local Board area. The primary safety intervention measures include aspects from the Safe Systems approach: improving the safety of the roads and intersections, improving safety for people walking and motorcycling, speed management and alcohol/drugged driving prevention (shaded in red in the table below). Please note that DSi Focus Areas overlap i.e. one DSi can appear in multiple focus areas.

Road Safety Focus Areas for Puketāpapa 2018/19								
Focus areas	Five year Road Death & Serious Injury (DSi) trend							Interventions
Increase Focus	Safe System Management	2013	2014	2015	2016	2017	Total	Waitemata Police Road Safety Action Plan
	Safe Intersections	8	8	7	4	8	35	Safety Engineering, Enforcement & Campaigns
	Safe Roads	14	10	14	15	17	70	Safety Engineering, Enforcement & Campaigns
	Pedestrian Safety	3	2	5	5	0	15	Travelwise Schools, Walking School Bus routes, Safe Crossings & Safer Communities
	Motorcycle Safety	5	1	2	3	3	14	Safety Engineering, Checkpoints, Enforcement & Campaigns
	Safe Speed	1	1	5	1	1	9	Speed Management Changes, Education & Enforcement Campaigns
Maintain Focus	Alcohol/Drugged Driving	7	3	3	1	6	20	Education & Enforcement Campaigns

	Young Drivers	0	2	0	2	2	6	Young Driver Training, Education and Enforcement Campaigns
	Cycle Safety	1	1	0	1	3	6	School Cycle Training
Emerging Focus	Restraints	2	2	2	0	3	9	Restraint Education & Enforcement, including Child Restraints
	Older Road Users	1	1	2	1	1	6	Development of a 2018-21 programme
	Distraction & Fatigue	1	3	2	1	1	8	Safe Travel Stop Education and Enforcement Campaigns
	Pacific	3	1	3	2	1	10	Marae-based Learner Licence workshops, Speed management Hui

31. The table also highlights how AT and its partners combine their resources and programmes to address high-risk areas and road user groups through a combination of safety engineering, speed management, education, training and enforcement activities. While a majority of these activities are planned, the action plan is revised quarterly to be more responsive to emerging trends.
32. Road crashes are investigated by NZ Police and then mapped by NZTA across the Puketāpapa Local Board. The map highlights locations of Puketāpapa fatal and serious crashes from 2013 to 2017 where a slightly higher number were midblock (not at intersections) crashes on straight roads.



33. Road death and serious injury locations are also analysed to identify high-risk intersections and routes that have a high collective crash-risk (number of DSi per km or intersection) and personal crash-risk (rate of DSi per vehicle kilometres travelled). This methodology identifies a small percentage of the network carrying a large percentage of the road trauma.
34. Within the Puketāpapa Local Board boundaries there is one high-risk intersection and four high-risk routes (based on 2012 to 2016 data). All of the high-risk routes are also high-risk for motorcycles.
35. Within the Puketāpapa Local Board boundaries there are two high-risk intersections and five high-risk routes (based on 2012 to 2016 data) of which four high-risk routes are also high-risk for motorcycles.

High risk routes in the Puketāpapa Local Board area				
Ranked in the top 100 high risk routes in the Auckland Region (2012-2016 data)				
Regional Ranking	Route Name	Collective Crash Risk	Active Road User Collective Crash Risk	Motorcycle Collective Crash Risk

2	Dominion Road*	High	High	High
50	Mt Albert Road*	Medium High	Medium High	High
72	Richardson Road	Medium High	Medium	High
73	Mt Eden Road* (Poronui St to Kingsway)	Medium High	Medium	Medium
89	Hillsborough Road	Medium High	Medium	Medium High

\*Routes are subject to current safety investigations.

High risk intersections in the Puketāpapa Local Board area				
Ranked in the top 100 high risk intersections in the Auckland Region (2012-2016 data)				
Regional Ranking	Location	<sup>1</sup> Collective Crash Risk	<sup>2</sup> Active Road User Collective Crash Risk	Motorcycle Collective Crash Risk
57	Dominion Road / Memorial Avenue*	High	Low Medium	High
97	Dominion Road / Denbigh Avenue #	Medium High	Medium	Medium High

\*Intersection was signaled in 2017/18

#Intersection is subject to current safety investigation.

36. AT has embarked on a programme to reduce the incidence of death and serious injury by 60% in a 10-year period. The initial three-year target is to reduce the incidence of death and serious injury by 20% from the 2018-19 financial year.
37. The tables below highlight some of the engineering improvements, speed management changes, and behaviour change activities that will be delivered in the Puketāpapa Local Board area in 2018/19 as part of the 2018-21 AT programme.

## Safety engineering improvement projects 2018-19

Motorcycle safety corridor study on Dominion Road

<sup>1</sup> Collective Crash Risk = total number of fatal and serious crashes or estimated deaths and serious injuries within 50metres of an intersection or within 1kilometre of a corridor in a 5-year crash period

<sup>2</sup> Active Road Users (ARU) = Pedestrians and Cyclists

Route safety study on Mount Albert Road

Mount Roskill Safer Community programme delivery in 2019-20

### Other safety improvement projects 2018-19

Queenstown Road signalised crossing	Remove refuge island and install mid-block traffic signals
Hayr Road Roundabout	Pedestrian safety Pram crossings and island cut-through on the southern leg of the roundabout
Kingsway Road	Kerb Build Outs to provide crossing sight distance for improved safety

### Pedestrian safety and shared path network expansion 2018-19

Hillsborough Road cycle lanes	Widened cycle lanes and new shared path crossing at intersection of Hillsborough Rd and SH20 motorway ramps
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### Speed management investigations 2018-19

Investigation into safe and appropriate speeds on local roads

### Road safety and school travel behaviour activities 2018-19

15 active Travelwise School Programmes and 13 active walking school buses, along with re-engaging inactive Travelwise schools and walking school buses.

Driver Distraction Campaign and Checkpoints with NZ Police

Motorcycle and Scooter Safety Workshops

Safe speed awareness campaign

Red light running campaign and Educational events with NZ Police

Deliver compulsory breath testing operations with NZ Police

Deliver Drive Drink Free promotion in partnership with sports team and NZ Police

Cycle Training and Bikes in Schools

38. Speed has an impact on both the likelihood of a crash occurring and the severity of injury, should a crash occur.
39. Therefore, one of the fastest and most cost effective ways to reduce road trauma is to implement speed reduction measures. Research shows that there is a very strong relationship between speed and road safety. It is difficult to think of any other risk factor that has a more powerful impact on crashes or injuries than speed.
40. A Vision Zero or Safe System speed is defined as the maximum survivable speed upon impact where the chance of death is less than 10%.
41. Speeds of 30 km/h are the maximum any vulnerable or unprotected road user (pedestrians and people on bikes) can withstand without sustaining death or serious injuries. Although this speed is common on local roads in Europe, it is uncommon in New Zealand.
42. Speeds over 50km/h dramatically increases the chances of death and serious injury in the event of a crash between two vehicles at an intersection.
43. Contrary to popular belief, the majority of Auckland road deaths and serious injuries occur on 50km/h urban roads, involving vulnerable road users.
44. While a smaller percentage of speed related crashes occur on rural roads, the ones that do happen are more likely to result in death.
45. Many people fear that reducing the speed limit in urban areas will dramatically increase journey times. However, research shows that lower speed limits only marginally increased journey times. An NZTA study tracked travel times along six different routes in New Zealand. It found that when driving at the maximum posted speed limit wherever possible, drivers arrived at their destination as little as 1.08 minutes faster than when they drove 10km/h slower.

## **5. Next Steps**

46. AT welcomes input from the Puketāpapa Local Board to help address the road safety challenge that is generating such a significant burden on road users and their families.
47. Getting aligned with our partners and stakeholders (Local Boards, Councillors, Ministers, MoT, NZ Transport Agency, NZ Police, AA, Walk Auckland, Bike Auckland, Road Freight Association to name a few) is imperative for the success of the AT road safety and speed management programme in the Puketāpapa Local Board area.
48. Aucklanders and local boards have indicated their support for an increased road safety and speed management programme in the recent Regional Land Transport Programme (RLTP) consultation, to help address Auckland's concerning increase in road trauma.
49. The RLTP has committed to investing in an accelerated speed management programme, of which the first year will include treatment on 800km of the network. This will require expedient delivery by AT and a more efficient process for changing speed limits.
50. Reducing speed limits is a sensitive topic, with expectations from some stakeholders that AT should deliver rapid changes to speed limits across Auckland, while others in the community may not like the speed limit reductions and speed calming measures. For individuals, the risks of a severe crash might seem small, but from a societal point of view there are substantial safety gains from reducing average speeds on streets.

51. AT will do this by talking about the unacceptable loss of human life and focus on road safety with our communities, stakeholders and the media. This will be led by Communications and Road Safety senior management at a regional level in the later months of 2018.
52. This will include running a publicity awareness campaign followed by a consultation process on the Speed Limit Bylaw. The campaign will aim to change the road safety conversation by educating Aucklanders that lower speeds provide survivable crash outcomes as well as enabling our kids to walk and cycle to school, a more liveable street environment, and many health and environmental benefits.
53. Before and during the awareness campaign, AT will engage with our key stakeholders (NZTA, NZ Police, AA) to identify roads that will be affected by the speed limit changes.
54. The bylaw will be consulted on Auckland-wide (consultation on the entire programme of works for the Auckland region at a strategic level). Due to the urgent imperative to reduce the number of deaths and serious injuries AT will in many cases not consult on each individual element of the safety improvement plan.
55. Once the bylaw has been approved by AT's Board, then the speed limits become legally enforceable. AT will continue to discuss in partnership with local boards on all safety and speed limit changes in their areas.

## **Risks**

56. Risks include reputation and continuing road trauma in the Puketepapa Local Board area. If the accelerated road safety programme and speed management programme are not championed or supported by the Puketepapa Local Board it may be challenging to implement unpopular safety and speed management projects that could reduce community road trauma.