



Eastern Bay of Plenty

Road Safety Strategy 2015-18

TABLE OF CONTENTS

| | | |
|-----------|---|-----------|
| 1 | BACKGROUND | 4 |
| 2 | VISION | 5 |
| 3 | THE EASTERN BAY OF PLENTY CLUSTER | 5 |
| 3.1 | Key characteristics | 6 |
| 3.2 | Roading network and registered vehicles | 8 |
| 4 | ROAD SAFETY POLICY FRAMEWORK | 10 |
| 4.1 | National framework | 10 |
| 4.2 | Regional framework | 12 |
| 4.3 | Delivery model for the Eastern Bay cluster | 12 |
| 4.4 | Implementing the delivery model | 13 |
| 5 | ROAD SAFETY ISSUES IN THE EASTERN BAY CLUSTER | 15 |
| 5.1 | Crash numbers and casualties | 15 |
| 5.2 | High social costs in the Eastern Bay | 16 |
| 5.3 | Communities at risk | 16 |
| 5.4 | A snapshot of age, gender and ethnicity of drivers at fault | 17 |
| 5.5 | Crash factors | 19 |
| 6 | EASTERN BAY ROAD SAFETY RISK AREAS | 20 |
| 6.1 | Speed | 20 |
| 6.2 | Rural roads | 20 |
| 6.3 | Alcohol and drug impairment | 21 |
| 6.4 | Distraction | 22 |
| 6.5 | Young drivers | 22 |
| 6.6 | Restraints | 23 |
| 6.7 | Older road users | 23 |
| 6.8 | Other contributing factors | 24 |
| 7 | IMPLEMENTATION OVERVIEW | 25 |
| 7.1 | Eastern Bay of Plenty Signature project | 26 |
| 8 | FUNDING SOURCES | 27 |
| 8.1 | New Zealand Transport Agency | 27 |
| 8.2 | Police activities | 27 |
| 8.3 | ACC | 27 |
| 9 | LINKING WITH OTHERS | 28 |
| 10 | MONITORING | 28 |
| | Appendix 1: Summary statistics for crashes within identified priority risk areas between 2009-13 | 29 |
| | Appendix 2: Priority areas in the Eastern Bay | 31 |
| | References | 33 |

1 BACKGROUND

Road safety is a complex issue. Statistics illustrate that the Eastern Bay of Plenty is a vulnerable area in terms of road safety, with high social costs across the sub-region amounting to over \$419 million over the last five years (2009-13). A multifaceted approach to road safety is needed in the Eastern Bay along with clear operational policy, the development of community responsibility and integrated stakeholder involvement.

This strategy provides a framework for road safety. It essentially sets the direction and actions for the Eastern Bay cluster over the next three years.

The purpose of this document is to ensure that the road safety programme is strategically led and encourages communities to take greater responsibility for the driving behaviours of citizens. In particular, it aims to:

1. Provide high level strategic direction for road safety education in the Eastern Bay of Plenty
2. Address local road safety needs by targeting risk areas and populations 'at risk'
3. Link with other areas across Councils' activities to identify opportunities for integrating road safety education and risk management initiatives
4. Outline a set of realistic actions that support the Eastern Bay of Plenty road safety vision
5. Support other agencies working in road safety education at all levels, including aligning with the New Zealand Police education calendar

Road safety is an issue that involves a wide range of factors, including the engineering of roads and roadsides, quality of vehicle fleets, and changing driving behaviours through education and promotion. It is acknowledged that all these factors are important for improving road safety. This strategy's focus, however, is on changing driver behaviours through education and promotion in the Eastern Bay.

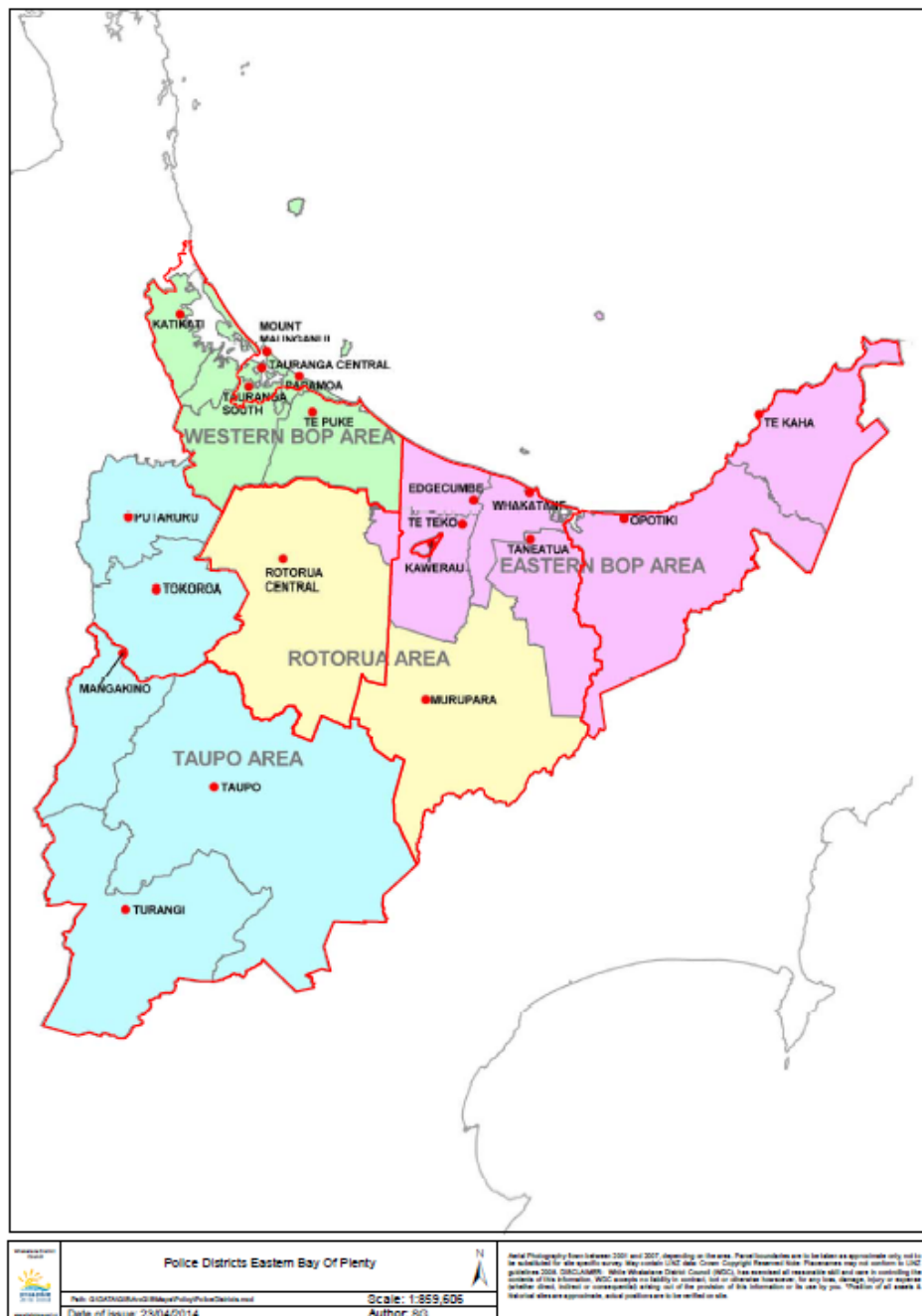
2 VISION

Working together to ensure a safe Eastern Bay of Plenty road system that is increasingly free of death and serious injury.

3 THE EASTERN BAY OF PLENTY CLUSTER

Eastern Bay communities are over represented in terms of road safety risk. The Eastern Bay of Plenty cluster refers to the Kawerau, Ōpōtiki and Whakatāne Districts. A map showing the cluster area and the related Police boundaries is shown in Figure 1.

Figure 1: Map of the Eastern Bay area showing district council and policing boundaries



3.1 Key characteristics

The Eastern Bay cluster has three main urban centres (Whakatāne, Ōpōtiki and Kawerau) and many small, rural, isolated communities scattered throughout, particularly along the coast. Key demographic factors characterising the Eastern Bay cluster, based on the 2013 Census, include (refer to Table 1 for more detail):

- Low population numbers
- Declining or static populations
- High levels of deprivation
- Low employment levels
- High proportions of low income earners
- High proportions of Māori and European ethnicities
- Low proportions of the population in the 20-30 year age group
- High proportions of the population in the under 15 year and over 65 year age groups.

Table 1: Demographic factors for Kawerau, Ōpōtiki and Whakatāne for 2013

| District | Summary of demographic factors |
|----------------|--|
| Kawerau | <ul style="list-style-type: none"> • 6,363 people usually live in Kawerau District • Total population has decreased by 558 people since 2006 Census • Females make up 51.1 percent of the total population • 582 people (12.3%) of the labour force are unemployed • 2,742 people (58.1%) of the labour force have an income of \$30,000 or less • 3,477 Māori usually live in Kawerau District (50.5 percent of the total population)¹ • 17.6 percent are aged 65 years and over • 25.8 percent are aged under 15 years • 61.1 percent of people over 15 years have a formal qualification and 6.1 percent hold a bachelor's degree or higher as their highest qualification • 62 percent of households in occupied private dwellings owned the dwelling or held it in family trust • Median weekly rent paid was \$180 |
| Ōpōtiki | <ul style="list-style-type: none"> • 8,433 people usually live in Ōpōtiki District • Total population has decreased by 543 people since 2006 Census • Females make up 50.5 percent of the total population • 393 people (6.0%) of the labour force are unemployed • 3,501 people (53.8%) of the labour force have an income of \$30,000 or less • 4,518 Māori usually live in Ōpōtiki (53.6 percent of the total population) • 17.2 percent of people are aged 65 years and over • 22.8 percent of people are aged under 15 years • 65.6 percent of people over 15 years have a formal qualification and 8.7 percent hold a bachelor's degree or higher as their highest qualification • 59.3 percent of households in occupied private dwellings owned the dwelling or held it in family trust • Median weekly rent paid was \$170 |

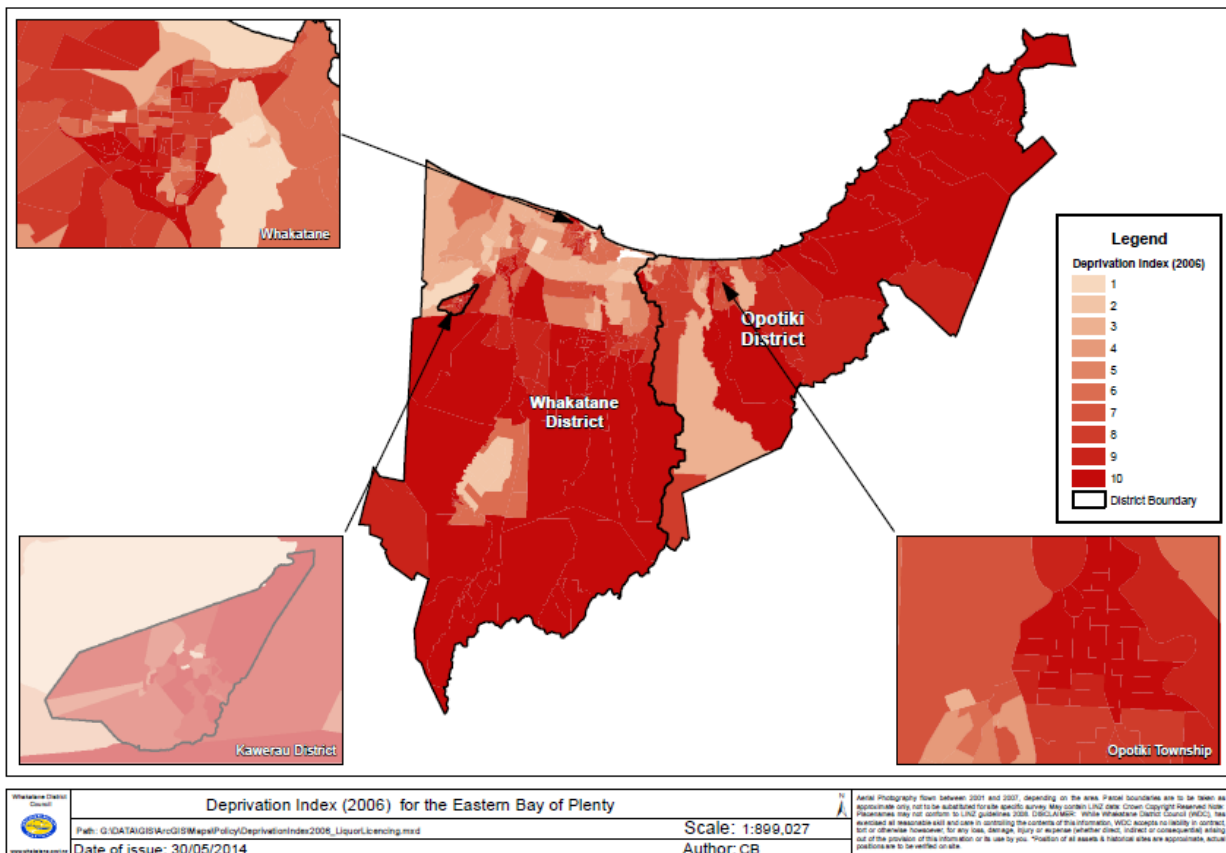
¹ The Māori ethnic population is the count for people of the Maori ethnic group. It includes those people who stated Māori as being either their sole ethnic group or one of several ethnic groups.

| | |
|-------------------------|---|
| <p>Whakatāne</p> | <ul style="list-style-type: none"> • 32,688 people usually live in Whakatāne District • Total population has increased by 609 people since the 2006 Census • Females make up 51.7 percent of the total population • 1,689 people (6.7%) of the labour force are unemployed • 12,180 people (48.5%) of the labour force have an income of \$30,000 or less • 13,032 Māori usually live in Whakatāne District (39.9 percent of the total population) • 15.3 percent of people in Whakatāne District are aged 65 years and over • 23.2 percent of people are aged under 15 years • 72.6 percent of people over 15 years have a formal qualification and 13 percent hold a bachelor’s degree or higher as their highest qualification • 63.1 percent of households in occupied private dwellings owned the dwelling or held it in family trust • Median weekly rent paid was \$220 |
|-------------------------|---|

Source: Statistics New Zealand. Census data, 2013.

The deprivation index is an index of socioeconomic deprivation based on the 2006 census mesh-blocks from Statistics NZ. It combines nine variables from the 2006² census into a deprivation score for each mesh-block, reflecting the level of deprivation. The map (Figure 2) shows deprivation levels for all of the Eastern Bay of Plenty showing the high levels (10 is highest level of deprivation) throughout most of the three districts which puts the cluster amongst some of the most deprived communities in New Zealand.

Figure 2: Map of the Eastern Bay area showing deprivation levels



² This information is not yet available for the 2013 Census data.

3.2 Roading network and registered vehicles

The three districts are served primarily by the State Highway (SH) network (refer Figure 3), which includes:

- SH2 running from Tauranga to Gisborne via Whakatāne and Ōpōtiki districts
- SH30 between Rotorua and Whakatāne
- SH34 linking Kawerau with SH2 at Awaiti, west of Edgecumbe, and SH30 near the Rotomā hills
- SH35 which follows the coastal route around the East Coast between Ōpōtiki and Gisborne

Other key local roads within the region include:

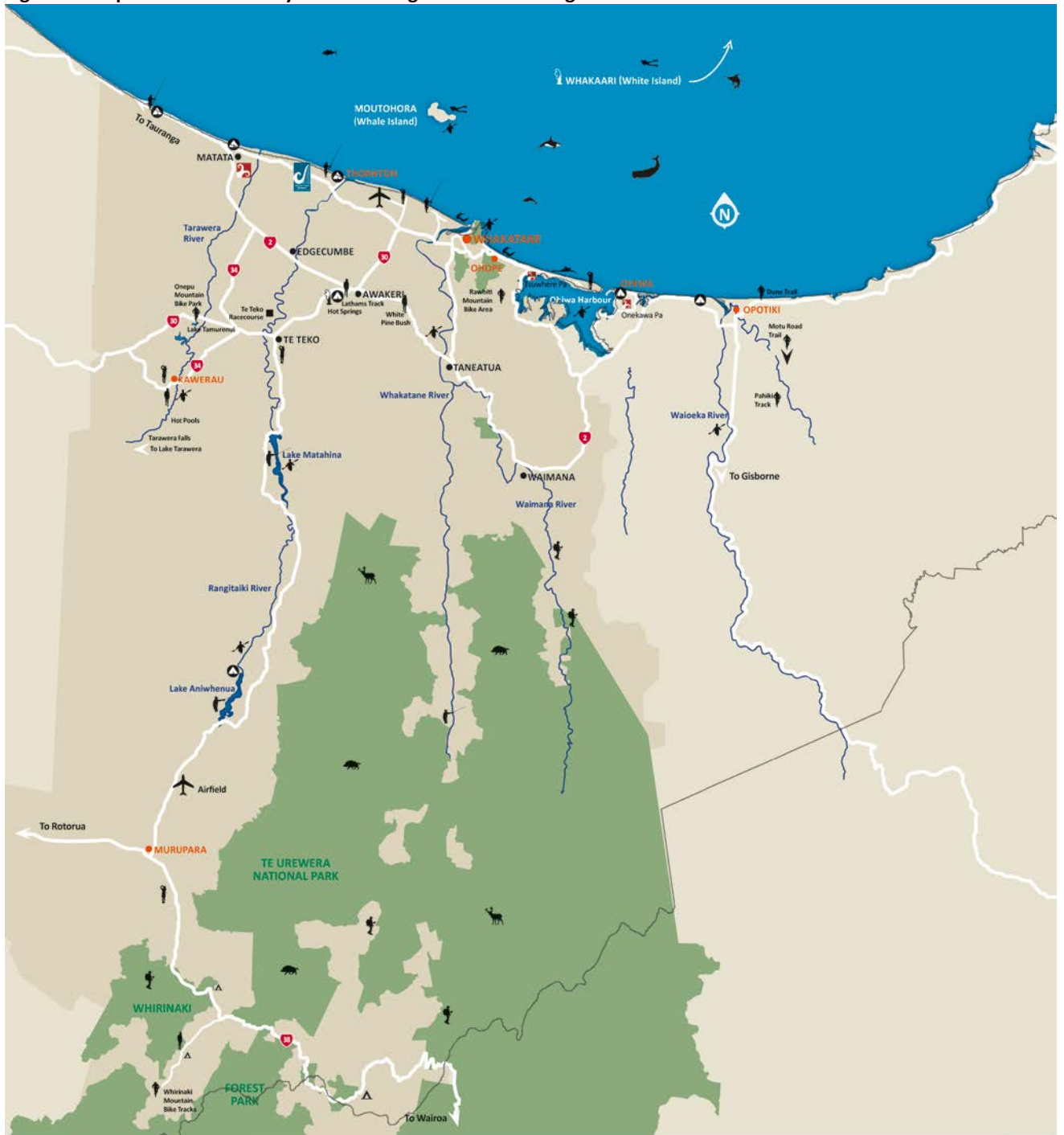
- Thornton Road / Wainui Road, which together form the Coastal Arterial Route through Whakatāne and Ōhope, along the coast from Matatā in the west and around the inner margins of the Ōhiwa Harbour to Matakerepu in the east
- Galatea Road, running from SH2 between Te Teko and Awakeri, south into the Kāingaroa hinterland, towards Murupara
- Pokairoa Road / Ngamotu Road, running from Galatea Road, just south of the Matahina Dam, southwest to the boundary with the Rotorua District at Rerewhakaaitu (an increasingly popular alternative route south)
- Ruatāhuna Road – Waikaremoana Road, the old SH38 which links the Bay of Plenty with Wairoa District via Ruatāhuna, Waikaremoana and the Te Urewera National Park.

The cluster had 38,931 registered vehicles in 2012, 360 km of state highways and 412 km of local roads (refer Table 2). Centre for Road Safety Intelligence (2013) reported that the cluster fleet is older on average than the rest of the country and less likely to have a current Warrant of Fitness (WoF).

Table 2: Registered vehicles and roading network for the districts in the Eastern Bay cluster

| | No. registered vehicles | Length of SHs (kms) | Length of local roads (kms) |
|------------------|-------------------------|---------------------|-----------------------------|
| Whakatāne | 27,163 | 153 | 998 |
| Ōpōtiki | 7,130 | 201 | 370 |
| Kawerau | 4,638 | 6 | 44 |
| TOTAL | 38,931 | 360 | 412 |

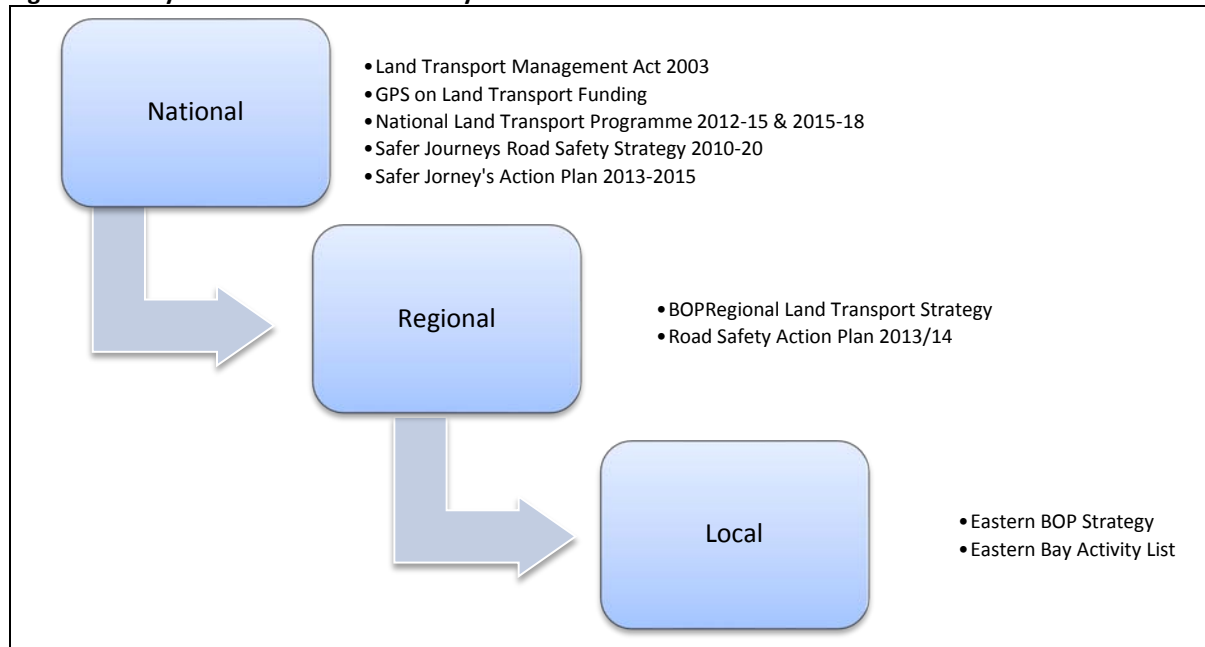
Figure 3: Map of the Eastern Bay area showing the main roading network



4 ROAD SAFETY POLICY FRAMEWORK

There are three tiers to the policy framework for road safety – national, regional and sub-regional (local). A number of relevant documents at each tier influence this road safety strategy. Figure 4 illustrates the policy framework and the relevant documents at each tier.

Figure 4: Policy framework for road safety



4.1 National framework

Nationally, road safety is guided through the following key documents.

Land Transport Management Act 2003 (LTMA) is the legal framework for the development and management of the land transport system. Safety is one of the key purposes of the LTMA.

Government Policy Statement on Land Transport Funding (GPS) sets out the desired outcomes and priorities for the land transport sector. Road Safety is one of three priority areas for the GPS, along with economic growth and productivity, and ensuring value for money.

National Land Transport Programme (NLTLP) 2012-15 gives effect to the GPS with a \$12.28 billion investment over the three year period.

Safer Journeys Road Safety Strategy 2010-2020 (Safer Journeys) is the Government's strategy to guide improvements in road safety over the period 2010–2020. The strategy envisions a safe road system increasingly free of death and serious injury and introduces the Safe System approach to New Zealand.

Safer Journeys highlights the need for a multifaceted approach to achieve the vision of a safe road system increasingly free of death and serious injury. There is a need to work across all elements of the Safe System (roads, speeds, vehicles and road use) and advocate that everyone has a responsibility for road safety.

The current **Safe System** approach represents a fundamental shift in the way we think about road safety in New Zealand and acknowledges that even responsible people make mistakes. The objectives of the Safe System are to:

- Make the road transport system more accommodating of human error
- Manage the forces that injure people in a crash to the level the human body can tolerate without serious injury
- Minimise the level of unsafe road user behaviour

The Safe System approach delivered through *Safer Journeys* is illustrated in Figure 5. Four main cornerstones used in *The Safe System* are safe roads and roadsides, safe speeds, safe road use, and safe vehicles:

Safe roads and roadsides – The goal is to improve the safety of roads and roadsides to significantly reduce the likelihood of crashes occurring and to minimise the consequences of crashes when they do occur.

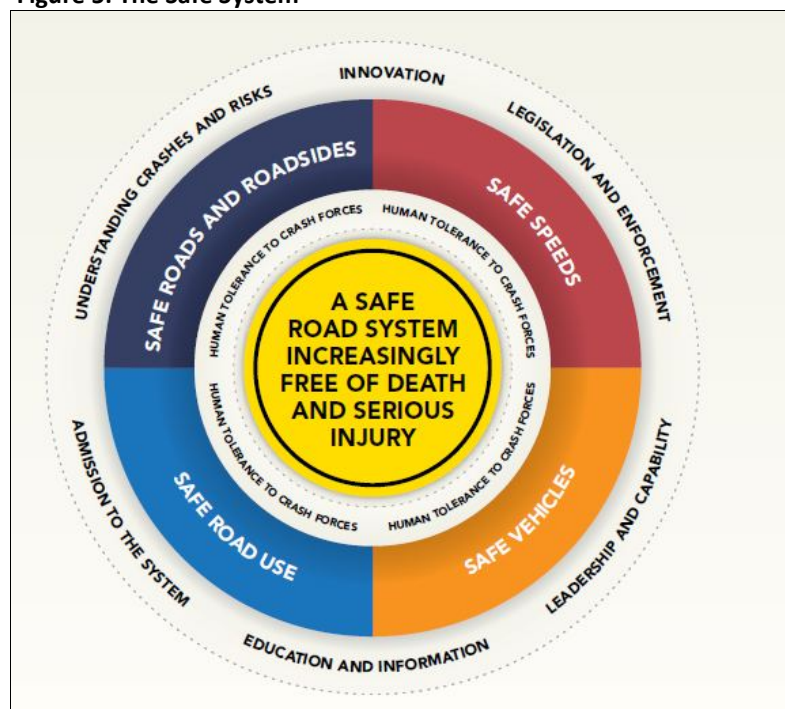
Safe speeds – Managing speed on the road network is crucial to reducing deaths and serious injuries, because the consequences of all crashes are strongly influenced by impact speed.

Safe road use – The goal is road users who are skilled, competent, alert and unimpaired; they comply with road rules, take steps to improve road safety and expect safety improvement.

Safe vehicles – The goal is to have a forgiving vehicle fleet that helps to reduce or avoid error, recover from error, and absorb crash forces. This means we'll have more vehicles in the fleet that help prevent crashes from occurring and which better protect drivers, riders, passengers and other road users in the event of a crash.

Safer Journeys Action Plan 2013-2015 is the second action plan building on Safer Journeys.

Figure 5: The Safe System



Source: *Safer Journeys: New Zealand's Road Safety Strategy 2010-2020*

4.2 Regional framework

Regional authorities must include road safety in regional land transport strategies and plans and programmes. The **Bay of Plenty Regional Land Transport Strategy 2011-2014** (Regional Strategy) sets the direction for the region's land transport system for the next 30 years. The region's vision for transport is the *best transport systems for a growing economy and a safe and vibrant Bay lifestyle*. The safe system approach in Safer Journeys provides the direction for road safety in the Bay of Plenty via the Regional Strategy. The Strategy sets out that the following 'fatal five' contributing factors to fatal and serious crashes will be targeted: speed, drink and drug driving, not wearing a restraint, dangerous and careless driving, and high-risk drivers.

Safety and personal security outcomes sought through the strategy are that deaths and serious injuries on the region's roads are reduced, people understand and contribute to a safety culture that is supported by a safe system approach to road safety, and transport corridors and public spaces are safe and secure environments to use and people feel safe using them.

Bay of Plenty Regional Council's **Road Safety Action Plan 2013/14** contributes to the Safer Journey initiatives and road safety outcomes in the Regional Strategy by aiming to seek to fully understand crash risks in the region, identify regional road safety priority areas, and collaboratively develop and deliver a regional road safety campaign.

4.3 Delivery model for the Eastern Bay cluster

Road safety is a shared responsibility across the Eastern Bay. The Eastern Bay cluster is made up of the Kawerau, Ōpōtiki and Whakatāne District Councils as well as Bay of Plenty Regional Council. The Road Safety activity delivers a number of programmes to help promote the safety of the community on our roads. The existing model allows stakeholders to come together at all levels of planning and operations. For this structure to be successful, it needs to have strong governance, shared responsibility and ongoing buy-in from all parties. Road safety also needs to be strategically led, integrated and coordinated to be effective. The model for delivery is described below and in Figure 6.

Eastern Bay Road Safety Committee and its members are accountable for the outcomes of the Eastern Bay Road Safety activity. They provide the governance, strategic direction, oversight and leadership to ensure Eastern Bay roads are increasingly free of death and serious injury. The committee is made up from representatives from the following organisations:

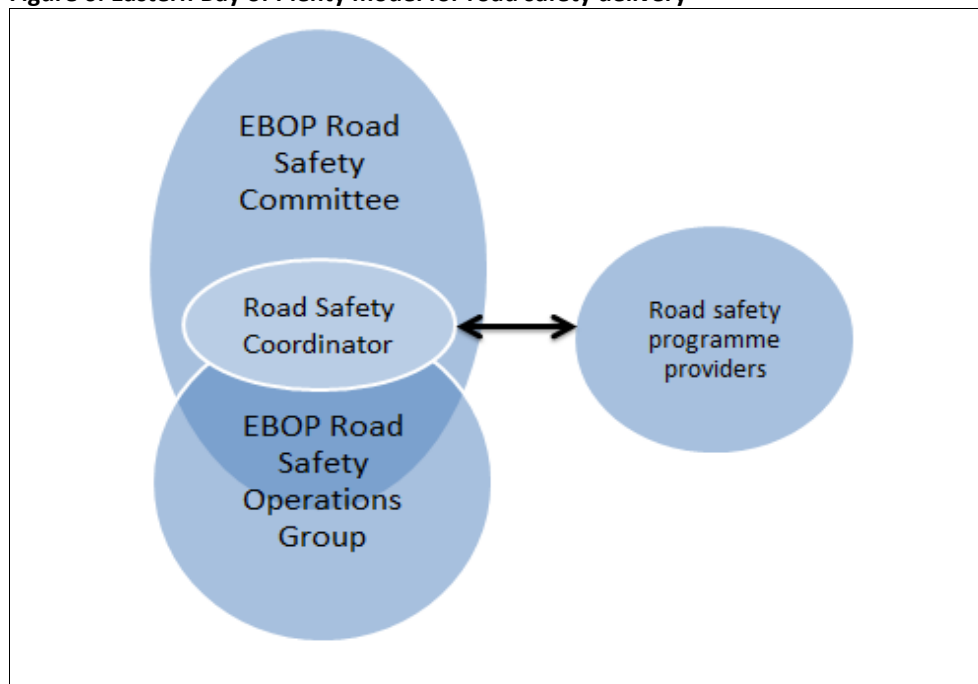
- Whakatāne District Council
- Kawerau District Council
- Ōpōtiki District Council
- Bay of Plenty Regional Council
- New Zealand Transport Agency (NZTA)
- Road Transport Association New Zealand (RTANZ)
- Police
- Accident Compensation Corporation (ACC)

Road Safety Coordinator reports to the Committee directly and also liaises with the Operations Group and programme providers. This role is pivotal in coordinating all road safety activities for the Eastern Bay cluster and includes the development of the road safety activity list. It does this through the development and delivery of education and promotion initiatives for road safety on behalf of the three represented authorities in the cluster (Kawerau, Ōpōtiki, Whakatāne District Councils). The Bay of Plenty Regional Council also has a Road Safety Coordinator and has an overview of the whole Bay of Plenty region. Coordination of external programme providers is also part of this role through the provision of funding support and monitoring of delivery outcomes.

Eastern Bay of Plenty Road Safety Operations Group's purpose is to provide a forum to contribute and plan the coordinated delivery of road safety actions in the Eastern Bay cluster. This group is made up of transport managers from each district, the road safety coordinator, NZTA and Police and focuses on pragmatic solutions for improving safer roads and roadsides. The members of this group are also represented on the Eastern Bay Road Safety Committee.

Road safety programme providers are those external stakeholders that deliver programmes related to road safety that can be funded through the Eastern Bay road safety activity, for example, Ministry of Justice, schools, iwi organisations, community education officers and Police. These are typically independent programmes developed and implemented by external stakeholders.

Figure 6: Eastern Bay of Plenty model for road safety delivery



4.4 Implementing the delivery model

Eastern Bay Road Safety objectives aim to deliver a collaborative and integrated road safety activity. It does this through three key strands of work:

1. Promotion and education programmes developed and implemented by the Road Safety Coordinator for the Eastern Bay cluster
2. Road safety programmes developed and implemented through external providers with funding support from the Eastern Bay cluster

3. Road safety work in the engineering area that focuses on road improvements to help reduce the crash risk

First, to achieve Safer Journeys objectives, there is an ongoing need to provide road safety education at the local level for people of all ages. Road user educational campaigns and programmes are a core component of the approach to road safety. Education and promotional programmes aim to support NZTA and Police national campaigns as well as targeting specific local issues. Road safety campaigns developed and implemented through the Road Safety Coordinator for the cluster will inform road users about priority local issues and encourage people to become 'safe road users' – a key component of a safe system.

Second, building knowledge, capacity and ownership across the Eastern Bay in road safety is an important focus. This second strand of work acknowledges that a lot of positive road safety initiatives occur outside of the cluster councils. Funding support and coordination of these activities allows for a wider and more effective road safety programme. In addition, often those 'at risk' groups for road safety are often 'at risk' in terms of other social issues, such as alcohol and drug use and crime. It is therefore important to make linkages with other Councils' work programmes and across partner agencies to enable the delivery of integrated road safety messages to target communities regarding road safety along with other 'at risk' behaviours.

Third, improving the safety of Eastern Bay of Plenty roads and roadsides to reduce the likelihood of crashes occurring and to minimise the consequences of those crashes that do occur is paramount. The Eastern Bay has a small population base with challenging geography. Both these factors, along with the high costs associated with road engineering, contribute to the difficulty of investing in safe roads. A key challenge is finding ways to cost-effectively improve roads with high crash rates.

The three strands of work will be complementary, and opportunities to partner wider stakeholder groups will be harnessed. The effectiveness of this structure may need to be reviewed before the three year strategy is reviewed.

5 ROAD SAFETY ISSUES IN THE EASTERN BAY CLUSTER

The Eastern Bay is a high risk area for road crashes. This section summarises the extent of the road safety issue.

5.1 Crash numbers and casualties

During the five year period 2009-13, there were 1520 crashes with 43 deaths, 146 serious injuries, 404 minor injuries and 927 non-injuries in the Eastern Bay of Plenty (refer Table 3).

Table 3: Crash list fatal and serious crashes 2009-2013: Eastern Bay of Plenty

| Overall injury statistics | | | | Overall casualty statistics | | |
|---------------------------|-------------|------------|-------------------|-----------------------------|------------|------------------|
| Crash severity | Number | % | Social cost (\$m) | Injury severity | Number | % all casualties |
| Fatal | 43 | 3 | 193.64 | Death | 48 | 5 |
| Serious | 146 | 10 | 165.21 | Serious | 201 | 23 |
| Minor | 404 | 27 | 34.83 | Minor | 634 | 72 |
| Non-injury | 927 | 61 | 25.79 | | | |
| | 1520 | 100 | 419.47 | | 883 | 100 |

Source: NZTA Crash Analysis Data (CAS) 2009-13

The number of crashes and the numbers of resulting casualties for each of the five years are illustrated in Figures 7 and 8. Encouragingly, these figures show that the numbers of fatal, serious and minor crashes have declined slightly and the numbers of non-injury crashes have declined steadily over the last five years. This is consistent with the trend nationally.

Figure 7: Crash severity numbers from 2009-13 in the Eastern Bay

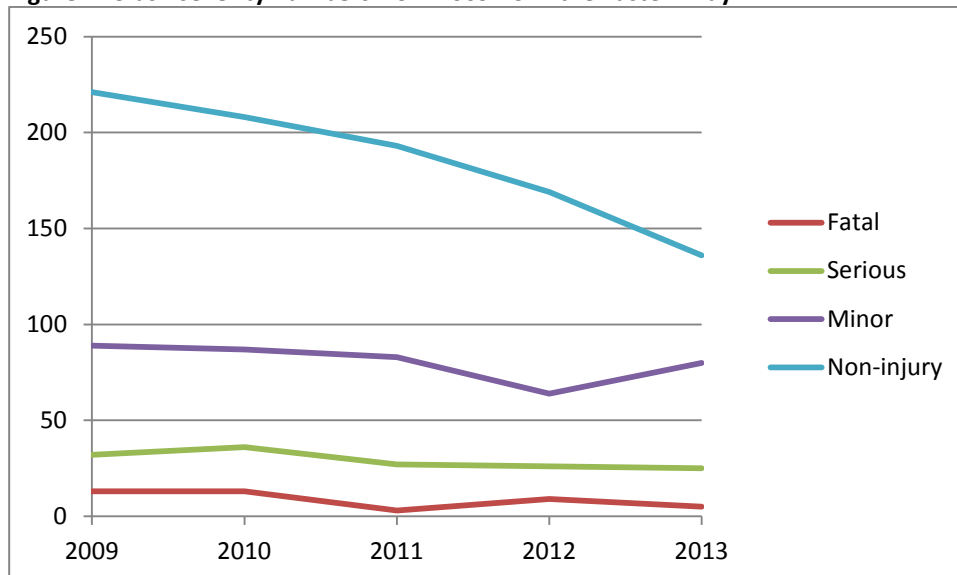
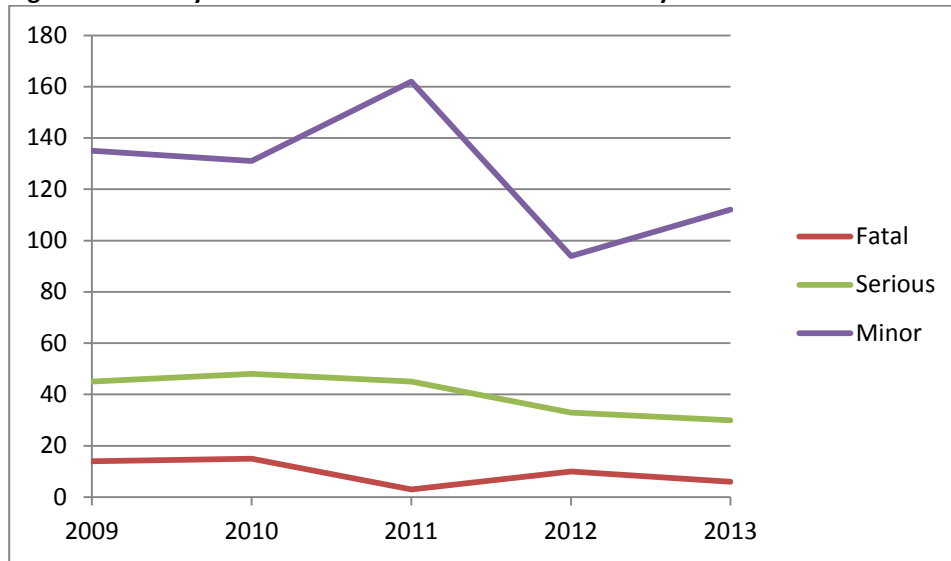


Figure 8: Casualty numbers from 2009-13 in the Eastern Bay

5.2 High social costs in the Eastern Bay

The estimated social cost of all crashes during 2009-13 was \$419.47 million for the Eastern Bay (refer Table 3). This is an estimated social cost of loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage. Highest social costs were attributed to rural roads (\$304 million), alcohol and drug impairment (\$152 million) and young drivers (\$151 million). For more detail, refer to the table in Appendix I.

5.3 Communities at risk

The Communities at Risk Register is produced annually and has been developed by NZTA to identify communities that are over-represented in terms of road safety risk. The Register ranks communities by local authority area based on the Safer Journeys areas of concern and is based on fatal and serious injury crash data from the crash analysis system database over a rolling five year period.

The degree of risk of a fatal or serious injury for individual road users, for each area of concern outlined in Safer Journeys, has been assessed by NZTA both locally and regionally. The statistics illustrate that the three Eastern Bay districts have a similar high risk profile. Young drivers, alcohol and drugs, rural roads, distractions and restraints are areas of concern where at least two of the three districts score in the high individual risk category (refer to Tables 1 and 2 in Appendix 2).

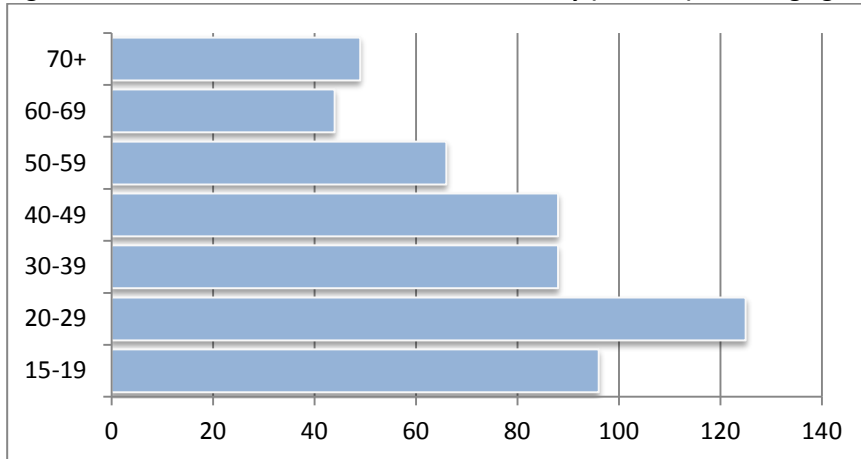
A summary of the factors where one or more of Kawerau, Ōpōtiki or Whakatāne districts are represented in either the high or medium risk categories is also provided in Appendix 2 (Tables 1 and 2). For the period 2008-12, Ōpōtiki District ranked as the community with the second highest risk factor for all crashes compared with all 72 territorial authority districts. Kawerau District ranked fourth and Whakatāne District was ranked 21.

5.4 A snapshot of age, gender and ethnicity of drivers at fault

Age groups

Figure 9 depicts the number of crashes in the Eastern Bay by age group. As is shown in the graph, the younger generation is over-represented with 96 crashes recorded for drivers at fault between the ages of 15-19 years³ and 125 crashes for drivers within the 20-29 year category.

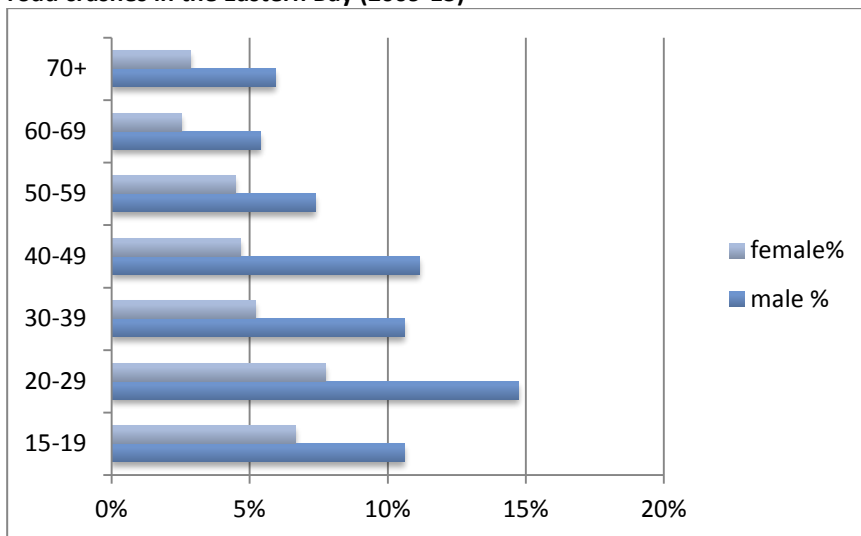
Figure 9: Total number of crashes in the Eastern Bay (2009-13) across age groups



Gender

Overall, males were at fault in more road crashes in the Eastern Bay compared with females over this five year period (2009-13), with 66 percent of all drivers at fault being male. As shown in Figure 10, male drivers were over-represented in all age groups. This is particularly concerning in the 15-19 and 20-29 age groups with higher numbers of crashes. In addition, males were well over-represented in crashes involving alcohol and drug impairment (80 percent were male) and speed related crashes (70 percent were male). Refer to Appendix I.

Figure 10: Proportion of male and female drivers at fault across age groups for all fatal, serious and minor injury road crashes in the Eastern Bay (2009-13)



³ Note this is the only age group with a five year instead of ten year age bracket

Ethnicity

Drivers at fault generally reflected the ethnic composition of the districts, with a relatively even split between Māori and European.

5.5 Crash factors

Table 4 shows crash factors for all crashes in the cluster for the 2009-13 period. Poor handling and observation are the two highest crash factors. While poor observation and poor handling feature as high crash factors, it is likely they cover a wide range of driver errors. It is possible they are recorded in combination with alcohol and speed crash factors that also feature near the top of the list and were the most predominant factors when investigating the 2008-2012 period for fatal and serious crashes (Centre for Road Safety Intelligence, 2013). Road factors also feature as a high crash factor. Further investigation into these crashes will show if there are road improvements that could be made to help reduce the crash rate.

Table 4: Crash factors in the cluster 2009-2013

| Crash factors | Number | % |
|-------------------------|--------|----|
| Poor handling | 547 | 36 |
| Poor observation | 492 | 32 |
| Too fast | 299 | 20 |
| Road factors | 297 | 20 |
| Alcohol | 253 | 17 |
| Poor judgement | 217 | 14 |
| Failed Give way/Stop | 220 | 14 |
| Incorrect lane/position | 182 | 12 |
| Other | 185 | 12 |
| Fatigue | 129 | 8 |
| Weather | 115 | 8 |
| Vehicle factors | 82 | 5 |
| Failed Keep Left | 41 | 3 |
| Overtaking | 43 | 3 |
| Disabled/old/ill | 51 | 3 |
| Pedestrian factors | 26 | 2 |

Source: CAS Data 2009-13

In addition, Lost control / Head on (combined straight road and on bend crashes) is the most common crash type and represents 54 percent of all cluster crashes. Crashes on the open road make up 57 percent of all crashes across the Eastern Bay (CAS Data, 2009-13).

6 EASTERN BAY ROAD SAFETY RISK AREAS

Analysis of crash information has identified seven risk areas for the Eastern Bay cluster. These are a mixture of high risk behaviours and high risk groups. They are:

1. Speed
2. Rural roads
3. Alcohol and drug Impairment
4. Young drivers
5. Restraints
6. Older road users
7. Distraction

6.1 Speed

Speed affects the likelihood and impact of all crashes. Small reductions in impact speeds greatly increase the chances of surviving a crash. The Safe System goal is to reduce the number of speed-related crashes and the severity of all crashes if they do occur, with three long term objectives:

- People will increasingly understand what travelling at safer speeds means
- Speed limits will better reflect the use, function and safety of the network
- Travel speeds will support both safety and economic productivity

As reported by the Centre for Road Safety Intelligence (2013), along with alcohol, speed is the one of the most common single crash factors in fatal and serious injury crashes in the cluster, and these two factors are leading to a loss of control causing crashes. Loss of control is a factor in more than 60 percent of all fatal and serious injury crashes (2008-12) and 54 percent of all crashes in the cluster (2009-13).

These findings align with Table 4, listing speed (too fast) as the third most common factor for all crashes in the cluster. Over the 2009-2013 period, speed was the primary factor in 299 crashes, including 13 fatal and 40 serious road crashes. Of these, the majority of crashes (82 percent) were single party crashes, and 80 percent occurred on a bend with poor handling (78 percent), alcohol (39 percent) and road factors (33 percent) being identified as attributing factors. 70 percent of speed related crashes had male 'at fault' drivers, and a further 54 percent were in the 15-24 year age group.

The high proportion of speed-related crashes illustrates the importance of drivers needing speed management guidance on how to drive to the conditions on open roads.

6.2 Rural Roads

A rural road is defined by NZTA as a motorway, state highway, expressway, local road or private road with a speed limit of 80km/h or more. As the cluster is predominately rural, this accounts for much of the roading network in the Eastern Bay.

This is reflected in the statistics, with the total number of crashes from 2009-13 on rural roads in the cluster totalling 862, including 33 fatal and 96 serious, with a social cost estimated at \$304 million. Of these, 51 percent were on bends, 68 percent had male drivers at fault and most were spread reasonably evenly over driver age groups. Poor handling was the common crash factor in 44 percent of crashes.

6.3 Alcohol and drug impairment

The effect of alcohol on driving has been comprehensively researched, and there is extensive evidence to show that driving starts to be impaired with very low alcohol levels.

While the number of alcohol/drug-related fatal and serious injury crashes, especially for youth, has declined nationally, the problem remains a significant one. Any level of alcohol increases driving errors and affects alertness, skill, and judgements. Alcohol use also correlates with failure to wear restraints, which remains a relatively common factor in fatal crashes, particularly in the Eastern Bay.

Although alcohol availability is not proportionally high compared with the rest of the nation, the adverse impacts of drinking behavior and/or culture in the cluster are significant. These are also not evenly distributed throughout the population. The *Local Alcohol Policy Research Report (2013)* provides insight into the drinking behaviours in the Eastern Bay. Findings from this report included that:

- Research has shown that people living in areas of high socio-economic deprivation, Māori and Pasifika peoples are disproportionately affected by alcohol-related harm. A 2012 Eastern BOP Primary Health Alliance (2012) report highlighted that although Māori adults were found to be less likely than non-Māori adults to have consumed alcohol on a daily basis, those who did drink were more than twice as likely to have consumed large amounts. This pattern of consumption, known as 'binge drinking' has been found to be particularly harmful, with road traffic accidents.
- The health impacts of alcohol use in the Eastern Bay are high. The rates for alcohol-related deaths and hospital discharges nearly all exceed national figures, as does the number of alcohol-related injury hospital discharges for each of the three districts.
- Alcohol contributes significantly to a wide range of traffic and crime offences in the Eastern Bay of Plenty. The rate of offences for dwelling assaults, public place assaults, alcohol offences by licensed premises and drunks taken to detox across all three councils occur at a higher rate than national figures. In addition, the percentage of arrests where the level of intoxication was moderate or extreme was higher than the national average in Whakatāne and Ōpōtiki. Whakatāne District has over twice as many drunks taken to detox per 10,000 people compared with neighbouring Ōpōtiki and Kawerau districts and compared with national figures.
- In all three districts, 50 percent or more of those arrested where alcohol was consumed prior had their last drink at a private residence, compared to 45 percent nationally.

As reported by the Centre for Road Safety Intelligence (2013), alcohol along with speed is the most common single crash factor in fatal and serious injury crashes in the cluster (2008-2012), and these two factors are leading to a loss of control, causing crashes. Loss of control was a factor in more than 60 percent of all fatal and serious injury crashes.

Over the 2009-2013 period, alcohol was the primary crash factor in 249 crashes, including 21 fatal and 42 serious road crashes. The majority of crashes (73 percent) were single party crashes, and 51 percent occurred on a bend. Eighty percent of alcohol/drug related crashes had male drivers at fault. In addition, younger drivers were also over-represented, with 44 percent in the 15-24 year age group. The age group with the second highest proportion (24 percent) of alcohol related crashes were those aged between 30-39 years (refer Appendix I).

The Centre for Road Safety Intelligence (2013) reported that 74 percent of all cluster fatal and serious injury crashes involved residents of the clusters, and that these crashes occurred closer to their home area than

outside of their home area. The report identifies the possibility that drivers are becoming intoxicated at their own homes or the homes of friends, then driving afterwards. Some crash reports have stated that prior to a crash drivers were drinking with friends, and in one case that some had been drinking for a considerable amount of time, then drove to get more alcohol. This supports the finding from the LAP report discussed above, with high proportions of alcohol offenders having their last drink at a private residence.

The cluster has considerable on-going issues with drink drivers reoffending, with a steady rate of around 27 percent over the last few years. Recidivist drink drivers are associated with significant and avoidable health costs.

Impairment related to drug use (legal and illegal) when driving is not as closely monitored or enforced compared with alcohol use. Improving information around driving and drug impairment and a move towards an approach to random roadside drug screening and testing would be useful.

6.4 Distraction

Driving safely means giving driving your full attention. Driver distraction is a serious road safety issue and includes a range of activities where the driver's attention is directed away from the primary task of driving towards events, objects or people, inside or outside of the vehicle. Distraction includes a range of activities where drivers' attention is directed away from safe driving, such as talking with passengers, using cell phones, eating and drinking, reaching or searching for objects in the vehicle, adjusting vehicle controls, adjusting the radio/in-vehicle entertainment system and changing CDs/cassettes, being emotionally upset/angry, smoking, and looking at other activity/events outside of the vehicle.

For this cluster, a total of 159 crashes were attributed to distracted drivers in the 2009-2013 period, including 8 fatal and 15 serious crashes. Of these, 31 percent occurred on a bend, 26 percent on a straight road and 23 percent involved the car rear-ending another or hitting an obstacle. 73 percent occurred in daylight hours, 55 percent involved a single party, and most were spread reasonably evenly over the age groups (refer Appendix I).

6.5 Young drivers

Increasing the safety of young drivers aged 15-24 years is a high strategic priority identified in Safer Journeys. At a national level, the First Actions have improved the safety of young drivers, and the licensing changes mean that young drivers enter the system slightly older and with higher skill levels when they start driving on a restricted licence. Other actions already taken to address alcohol-impaired driving include lowering the blood alcohol concentration (BAC) limits to zero for drivers under the age of 20 years.

Given these changes, young drivers are still significantly over-represented in fatal and serious injury crashes where the driver was at part or prime fault. Young drivers have a lower level of road safety due to factors such as age, maturity and inexperience. Working with community leaders to engage with young drivers and facilitating education and training is likely to reduce their involvement in fatal and serious injury crashes (Centre for Road Safety Intelligence, 2013).

During the five year period 2009-13, 213 crashes were attributed to young drivers, including 16 fatal and 59 serious crashes (35 percent of the total number of crashes). Of these, nearly half (49 percent) of young drivers held either a learner or restricted licence, and a further 17 percent had never held a licence. Poor handling (46 percent), too fast (35 percent) and alcohol (29 percent) were the three most common crash factors.

The Centre for Road Safety Intelligence (2013) identified alcohol as being particularly evident in crashes involving young drivers in the cluster. While they stated that fatal and serious injury crashes linked to alcohol were dropping, the young drivers were frequently very intoxicated with very high blood-alcohol results.

In addition, the Centre for Road Safety Intelligence (2013) reported that nearly 50 percent of the drivers of motorcycles at fault in fatal and serious crashes were aged 15-24, and only one motorcycle had a current Warrant of Fitness. The report suggests that it is possible that the physical condition of unwarranted motorcycles is contributing to their involvement in at-fault fatal and serious injury crashes in the cluster. This may also reflect the high proportion of motorcycles used for farming purposes by young people in the cluster.

6.6 Restraints

In the Eastern Bay, for the 48 fatal crashes in the last five years (2009-13), 43.8 percent involved crashes where restraints were not being worn (refer to Appendix I). As discussed above, this is often linked to alcohol impairment.

As reported by the Centre for Road Safety Intelligence (2013), for the fatal and serious crashes where restraint data was available, restraints were not used in 28 percent of crashes. Restraint use for rear seat occupants is considerably lower in the cluster (78 percent) than nationally (90 percent), whereas front seat use is similar to the national rate (around 90 percent).

Every child under seven years of age must be properly restrained by an approved child restraint when travelling in cars, vans and trucks. Children aged seven years must use an appropriate child restraint if one is available, or else use an adult safety belt. Older children (aged eight and over) must use a safety belt if available, and if no restraint is available they must travel in the rear seat. It is the driver's responsibility to make sure all child passengers are correctly restrained (Ministry of Transport).

In February 2014, child restraint checkpoints were carried out in Ōpōtiki and Kawerau Districts⁴. In Kawerau, 62 checks were made, with 79 percent of those being incorrectly restrained, including five children with no restraints. Similarly, 43 checks were made in Ōpōtiki District, with 63 percent incorrectly restrained, including one child with no restraint.

CAS data shows that the Eastern Bay of Plenty has double the national rate for fatal and serious injuries in crashes where a restraint was not worn.

Research into the reasons why and development of programmes to encourage appropriate restraint use is needed to reduce fatal and serious injury crashes involving no restraint use or the inappropriate use of restraints.

6.7 Older road users

Older drivers (70+ years) are the fastest-growing segment of the New Zealand population, and this trend is also reflected in the Eastern Bay cluster. Not only will there be more drivers, but these drivers will also drive more kilometres per year than previous generations and will drive at older ages. A number of factors make older drivers more vulnerable. Factors include:

⁴ Data supplied by Eastern Bay Plunket.

- People tend to get physically frailer with age, meaning older drivers are more likely to be injured or die following a crash than younger people
- Health problems including diminishing vision, physical and/or cognitive abilities can make driving more difficult and risky
- Older drivers are unlikely to have had any driver education for many years, meaning there may be gaps in general knowledge about the road code and new road rules

From 2009-13, a total of 55 road crashes were attributed to older road users, including three fatal and nine serious road crashes. Poor observation (55 percent) and failed to give way or stop (38 percent) were the most common crash factors. Many (85 percent) of these crashes occurred in the day, involved multiple parties (60 percent) and happened mid-week (75 percent).

6.8 Other contributing factors

Offending

Centre For Road Safety Intelligence (2013) identified previous traffic offenders as an 'at risk' group. They reported that there were 169 drivers at fault in a fatal or serious injury crash with a driver's licence recorded. Of these drivers, approximately 39 percent were detected committing at least one traffic offence in the 18 months preceding the sample crash period. This compares to approximately 21 percent of the current national licensed population committing at least one traffic offence in the last 18 months.

Aged vehicle fleet

Centre for Road Safety Intelligence (2013) reported that the cluster fleet is older on average than the rest of the country and less likely to have a current WoF. Older and unwarranted cars were over-represented in fatal and serious injury crashes. The report suggests that a community project to assist with maintenance and Warrant of Fitness compliance would likely reduce the occurrence and/or severity of crashes.

ACC data

A number of crashes are not recorded in CAS. This is evident based on the higher number of ACC claims in this cluster than are matched with CAS records. It is likely investigation into non-CAS matched ACC claims would provide further information to support existing road safety initiatives and/or identify new opportunities (Centre for Road Safety Intelligence, 2013).

Local issues

Local issues that are community specific also influence road safety in the Eastern Bay. Stock on roads is an example of this.

7 IMPLEMENTATION OVERVIEW

Actions to address the seven key priority areas are summarised in Table 5 below. As shown in the table, many of the actions are applicable across all seven key priority areas. The information in this report will help to inform the development of the Activity List for Road Safety promotion through NZTA funding based on the actions summarised in Table 5.

Table 5: Summary of Road Safety Actions for the Eastern Bay cluster

| | speed | rural roads | alcohol & drug impairment | young drivers | restraints | older drivers | distraction | other |
|--|-------|-------------|---------------------------|---------------|------------|---------------|-------------|-------|
| Design and deliver sub-regional road safety messages through mixed media that build on and are timed with key national, regional and local safety awareness and enforcement campaigns. | √ | √ | √ | √ | √ | √ | √ | |
| Build public understanding so that people will increasingly understand what travelling safely means. | √ | √ | √ | √ | √ | √ | √ | |
| Increase public awareness of the consequences of 'at risk' driving behaviours through educational and promotional campaigns. | √ | √ | √ | √ | √ | √ | √ | |
| Support the delivery of programmes throughout the Eastern Bay targeting 'at risk' groups with road safety messages. | √ | √ | √ | √ | √ | √ | √ | |
| Link with other Councils' projects and programmes that promote key road safety messages. | √ | | √ | √ | | √ | | |
| Work together with other agencies to develop approaches to improve road safety. | √ | | √ | √ | √ | √ | √ | |
| Advocate for national policies and programmes aimed at increasing road safety. | √ | √ | √ | √ | √ | | √ | |
| Encourage licensed premises to promote road safety messages and include mechanisms to address road safety within host responsibility policies. | | | √ | | | | | |
| Keep Police informed of councils' policies and any special events that may have implications for enforcing drink and drug driving. | | | √ | | | | | |
| Investigate the lack of appropriate restraints in the Eastern Bay of Plenty and develop an appropriate response. | | | | | √ | | | |
| Promote and support opportunities to work closely with local iwi to promote road safety. | √ | √ | √ | √ | √ | √ | √ | √ |
| Support community projects that assist with maintenance and WoF compliance to improve the quality of the vehicle fleet. | | | | | | | | √ |
| Enforce compliance. | √ | | √ | √ | √ | | √ | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Link with the Road Safety Operations Group to develop safe roads and roadsides. | √ | √ | √ | √ | √ | √ | √ | √ |
|---|---|---|---|---|---|---|---|---|

In addition, if funding is available, specific programmes and projects may be developed to address specific ‘at risk’ groups or behaviours. For example:

- Young drivers are a group that would benefit greatly from an integrated road safety programme that focuses on speed, alcohol/drug impairment, distraction and restraint use.
- Re-offending drivers, particular recidivist drivers, are another group that could be targeted for a specific project aiming to change driving behaviours.
- Investigate, development and implement or support appropriate projects for encouraging restraint use in the Eastern Bay.
- Uncontrolled stock on roads in rural areas.

Often those ‘at risk’ groups for road safety are often ‘at risk’ in terms of other social issues, such as alcohol and drug use, crime, and unpreparedness to contribute to society productively. It is therefore important to make linkages with other Councils’ work programmes, particularly in community development, and across partner agencies to enable the delivery of integrated road safety messages to target communities regarding road safety along with other ‘at risk’ behaviours. Work programmes relating to alcohol licensing and stock on roads are areas where an educational road safety component could easily be incorporated.

7.1 Eastern Bay of Plenty Signature project

Signature projects have been introduced by NZTA to make demonstrable advances in reducing road trauma for all road users by implementing the Safe System approach within regions and communities. NZTA plans for signature projects to be well-resourced initiatives that demonstrate innovation and give effect to Safe System principles. The purpose is “to showcase best or emerging practice, develop understanding and demand for improved road safety from a wider audience, and reduce road trauma, project design will include evaluation and communication work streams”.

The rural road safety signature project currently based in Eastern Bay of Plenty is now in investigation and design phase. The working group agreed that the focus for this project will be on the following themes: disengagement from the system (licensure, compliance etc.), restraints, impairment, speed, and road and roadsides. The working group has formed different work streams to focus on the issues. A business case will be developed for the 2014/15 financial year.

8 FUNDING SOURCES

Funding may be sourced through a number of different channels. These are summarised below.

8.1 New Zealand Transport Agency

Transportation Programme

New Zealand Transport Agency co-invests in council's transportation programme for a three year period. Development of programmes is guided by the GPS, and safety is one of the key purposes of the LTMA. The transportation programme includes the maintenance, operation and renewal of the network. Improvements to the network are also part of the programme. Transport planning activities and road safety promotion are funded from separate activity classes within a transportation programme.

The road safety promotion programme, which forms part of council's overall transportation activity, is a co-investment between the local authorities and New Zealand Transport Agency. Funding is provided from the National Land Transport Fund.

Road Safety Promotion

Territorial authorities are required to make road safety funding applications to the NZTA and are responsible for prioritising road safety activities and developing a road safety promotion activity list. Currently, NZTA funding is allocated based on identified priority areas at the time of application (this does not include new and emerging issues). In the Eastern Bay this happens at a sub-regional level, with collaboration between Ōpōtiki, Kawerau and Whakatāne District Councils.

A completed road safety promotion activity list is submitted to the NZTA for funding for Eastern Bay activities over a three year period. This includes the two key streams of work – education/promotional activities coordinated through the Road Safety Coordinator, and funding support to external programme providers. The current funding programme covers 2012-15, and the Eastern Bay has been funded 64 percent of a \$404,500 programme over three years.

8.2 Police activities

National road policing activity is directed by the Road Policing Strategy and delivered through the National Road Policing Programme. Funding is negotiated nationally with the NZTA and allocated through the NLTF in accordance with the Road Policing Performance Agreement. Regional funding is allocated to deliver programmes in line with strategies set down in the National Road Policing programme and regional and district level directives.

8.3 ACC

ACC has a new process for working with injury prevention efforts. ACC is currently reviewing its road safety strategies, which will then have streams of work running from them.

9 LINKING WITH OTHERS

As discussed earlier, many positive road safety initiatives occur outside of the cluster councils. Funding support and coordination of these activities allows for a wider and more effective road safety programme. For example, strong links need to be made and maintained with schools, Plunket and iwi organisations.

Stronger links with stakeholders who are able to distribute road safety messages, such as licensed premises, would also be beneficial. Making these links will help to build knowledge, capacity and ownership of road safety in the Eastern Bay.

10 MONITORING

Monitoring will be used to measure the progress of this strategy and actions to consider emerging issues and to assist in the development of further actions. Consideration will be also given to how we can supplement the crash data used for analysis.

In addition to monitoring the results, the sector's ability to deliver the strategy needs to be monitored.

A review of the Eastern Bay of Plenty Road Safety Strategy will be conducted in three years to take into account NZTA funding rounds and any changes in national, regional and/or sub-regional priorities.

APPENDIX 1: SUMMARY STATISTICS FOR CRASHES WITHIN IDENTIFIED PRIORITY RISK AREAS BETWEEN 2009-13

| Priority area | Number | Social cost (\$millions) | Type | Gender of driver at fault | Age group / license type of driver at fault | Common crash factors | Number of parties | Locations & conditions | Timing |
|------------------------------------|--|--------------------------|---|---------------------------|---|---|-------------------|--|--|
| Speed | 299 Total 13 fatal 40 serious 87 minor 159 non-injury | \$116 | 80% on bend | 70% male | 52% 15-24 yrs. | Poor handling (78%), alcohol (39%), road factors (33%) and poor judgement (21%). | 82% single party | 67% open road, 57% daylight and 58% dry conditions. | 63% during week and highest numbers on Thursdays and Saturdays. |
| Rural roads | 862 Total 33 fatal 96 serious 256 minor 477 non-injury | \$304 | 51% on bend 18% straight 16% rear end / obstruction | 68% male | Crashes were spread relatively evenly across age groups | Poor handling (44%), road factors (26%), too fast (23%) and poor observation (22%). | 73% single party | 100% open road, 60% daylight and 65% in dry conditions | 65% during week and highest Numbers on Fridays and Saturdays. |
| Alcohol and drug impairment | 249 Total 21 fatal 42 serious 72 minor injury 114 non-injury | \$152 | 60% on bend | 80% male | 44% 15-24 yrs. 24% 30-39 yrs. | Poor handling (59%) and too fast (47%). | 80% single party | 58% open road, 69% dark and 75% dry conditions. | 55% during week and highest numbers on Fridays, Saturdays and Sundays. |

| Priority area | Number | Social cost (\$millions) | Type | Gender of driver at fault | Age group / license type of driver at fault | Common crash factors | Number of parties | Locations & conditions | Timing |
|-------------------------------------|---|--------------------------|---|---------------------------|--|---|--------------------|---|--|
| Young drivers (15-24 years) | 213 Total 16 fatal 59 serious 138 minor | \$151 | 46% on bend 17% straight 15% crossing / turning 13% rear end / obstruction | 64% male | 100% 15-24 yrs. 49% learner or restricted, 24% full licence and 17% never licensed. | Poor handling (46%), too fast (35%), alcohol (29%), poor observ. (24%), poor judgement (23%) and road factors (20%). | 61% single party | 62% open road, 60% daylight and 72% dry conditions. | 63% during week and highest numbers on Saturdays. |
| Older Road Users (70+ years) | 55 Total 3 fatal 9 serious 43 minor 0 non-injury | \$27 | 36% crossing / turning 24% on bend 24% rear end / obstruction | 65% male | 100% 70+ yrs. | Poor observ. (55%), failed to give-way or stop (38%), poor handling (16%) and disabled/old or ill (16%) | 60% multiple party | 53% urban and 84% in dry conditions. | 85% occurred in the day time, 75% mid-week |
| Distracted Driver | 159 Total 8 fatal 15 serious 52 minor 84 non-injury | \$60.1 | 31% on bend 26% straight 23% rear end / obstruction | 62% male | 18% 30-39 yrs. 16% 15-19 yrs. 16% 50-59 yrs. 13% 70+ yrs. | Poor handling (36%) | 55% single party | 56% open road 82% in dry conditions. | 73% occurred in the day time, 67% mid-week and highest numbers on Saturdays. |

Source: CAS (NZTA crash database)

APPENDIX 2: PRIORITY AREAS IN THE EASTERN BAY

Table 1: Eastern Bay of Plenty Road Safety Priorities 2013/14

| Community at Risk Register Strategic Priorities and Safer Journeys areas of concern | Safer Journeys national high concern | Safer Journeys national medium concern | Safer Journeys national continued and emerging focus | Eastern Bay risk based on NZTA/CAS Communities at Risk Register | Eastern Bay – NZTA funding as per activity list | Eastern Bay Focus Areas |
|--|--------------------------------------|--|--|---|---|-------------------------|
| Young (of light vehicles aged 15-24 yrs.) | X | | | H1 | X | EB |
| Alcohol/drugs | X | | | H1 | X | EB |
| Speed (too fast for conditions) | X | | | H2 | X | EB |
| Intersection – urban (subset of roads and roadsides) | X | | | | | |
| Intersection – rural (subset of roads and roadsides) | | | | H2 | | EB |
| Intersections (all – roads – subset of roadsides) | | | | | | |
| Roads and roadsides | X | | | | | |
| Roads (rural) | X | | | H1 | | EB |
| Motorcyclists (crashes involving motorcycles and Mopeds) | X | | | | | |
| Cycling | | X | | | | |
| Pedestrian/walking | | X | | | | |
| Distraction (attention diverted) | | X | | M1 | | EB |
| Fatigue | | X | | | | |
| Older road users (aged 75 yrs. and over) | | | X | E2 | | EB |
| Restraints (seatbelt not worn) | | | X | E1 | X | EB |
| Heavy vehicles | | X | | | | |
| Light vehicles | | X | | | | |
| High Risk Drivers (dangerous and careless driving – disqualified, unlicensed, repeat DIC etc.) | | X | | | | |

| | | |
|------------|---------------------------------------|-----------------------------|
| KEY | Identified Eastern Bay Priority Areas | 2013/14 NZTA agreed funding |
|------------|---------------------------------------|-----------------------------|

Table 2: Summary table of NZTA Communities at Risk Register 2008-2012 (Based on CAS data)

| NZTA / Safer Journeys areas of concern | High strategic priority | | | | | | | | Medium strategic priority | | | | Emerging strategic priority | | All fatal & serious crashes ranked at local body level |
|--|-------------------------|---------|--------|------------|------------|---------------|-------------|------------|---------------------------|-------------|--------------|---------|-----------------------------|------------|--|
| | Young | Alcohol | Speed | Urban int. | Rural int. | Intersections | Rural roads | Motorbikes | Cyclists | Pedestrians | Distractions | Fatigue | Older | Restraints | |
| Kawerau | High | High | Medium | Medium | High | Medium | High | Medium | Medium | Medium | High | Medium | High | High | High |
| Ōpōtiki | High | High | High | Medium | Medium | Medium | High | Medium | Medium | Medium | High | Medium | Medium | High | High |
| Whakatāne | Medium | Medium | Medium | Medium | Medium | Medium | Medium | Medium | Medium | Medium | Medium | Medium | Medium | Medium | Medium |
| Eastern Bay of Plenty issue area | H1 | H1 | H2 | Medium | H2 | Medium | H1 | Medium | Medium | Medium | M1 | M2 | E2 | E1 | A1 |

| | | | |
|-----|------|--------|------------|
| Key | High | Medium | Above mean |
|-----|------|--------|------------|

High, medium and above mean risk are shown in each strategic priority area, and a ranking has been allocated as below. For the purposes of this exercise, one high and/or a combination of medium/above mean risk will be considered an Eastern Bay issue.

High concern is assigned to communities with personal risk profiles one standard deviation from the mean and above.

Medium concern is assigned to communities with personal risk profiles between a half a standard deviation from the mean and below one standard deviation.

Above mean is assigned to communities with personal risk profiles between the mean and half a standard deviation.

| High strategic priority | Medium strategic priority | Emerging strategic priority |
|-------------------------|---------------------------|-----------------------------|
| 2 High = H1 | 2 High = M1 | 2 High = E1 |
| 1 High = H2 | 1 High = M2 | 1 High = E2 |

REFERENCES

- Bay of Plenty Regional Council (2013). *Road Safety Action Plan 2013/14*. Bay of Plenty Regional Council, Tauranga.
- Bay of Plenty Regional Transport Committee (2011). *Land Transport Strategy 2011-41*. Bay of Plenty Regional Council, Tauranga.
- Centre for Road Safety Intelligence (2013). *Kawerau, Ōpōtiki, and Whakatāne Road Safety Risk*. Centre for Road Safety Intelligence.
- Centre for Road Safety Intelligence (2013). *Kawerau, Ōpōtiki, and Whakatāne: Opportunities for Targeted Road Safety Interventions*. Centre for Road Safety Intelligence.
- Department of Statistics. *Census Data 2006 and 2013*.
- Land Transport Management Act, 2003*.
- Ministry of Transport (2011). *Government Policy Statement on Land Transport Funding 2012/13-2021/22*. Ministry of Transport, Wellington.
- Ministry of Transport (2010). *Safer Journeys Road Safety Strategy 2010-2020*. Ministry of Transport, Wellington.
- National Road Safety Committee (2013). *Safer Journeys Action Plan 2013-15*. National Road Safety Committee, Wellington.
- New Zealand Transport Agency (2013). *Crash Data Analysis (CAS) 2009-13*.
- New Zealand Transport Agency (2012). *Communities at Risk Register 2012-15*. NZTA, Wellington.
- New Zealand Transport Agency (2012). *National Land Transport Programme 2012- 15 At a Glance*. New Zealand Transport Agency, Wellington.
- Whakatāne District Council, Ōpōtiki District Council and Kawerau District Council (2013). *Local Alcohol Policy Research Report*.