



MANNINGHAM ROAD SAFETY STRATEGY 2010 and Action Plan for 2011 & 2012



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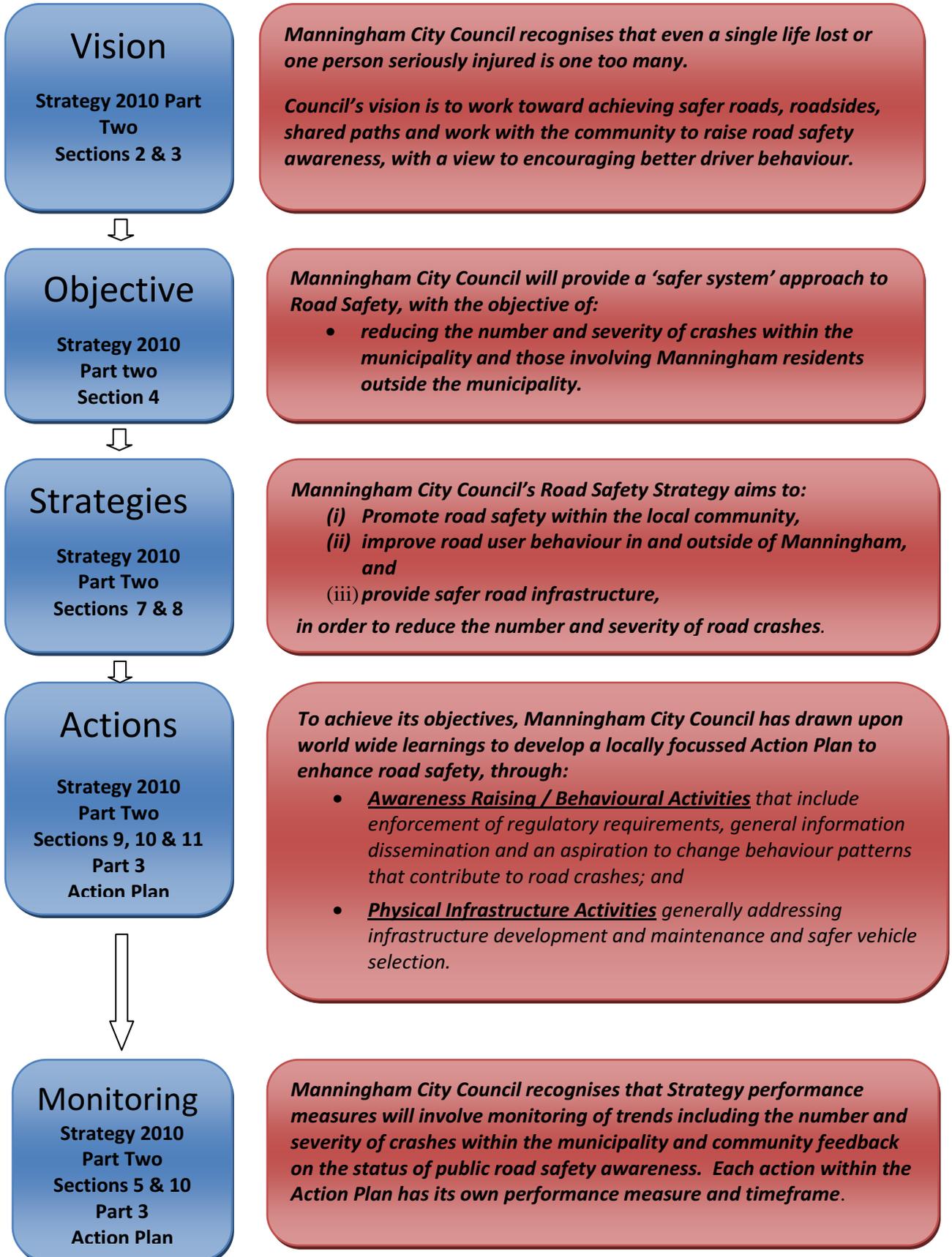
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Manningham's Stance on Road Safety



Contents



1

PART ONE – OVERVIEW.....	1
1. EXECUTIVE SUMMARY	1
1.1. Introduction	1
1.2. ‘Vision Zero’ and the Safe System Principles.....	1
1.3. Review of 2005 Strategy Three Year Action Plan	2
1.4. Recent Developments Impacting Road Safety Issues.....	3
1.5. Manningham Crash Profile.....	4
1.6. Where To From Here – Two Year Action Plan.....	4
1.7. Funding Sources	5
1.8. Implementation and Monitoring.....	6
PART TWO – 2010 STRATEGY	7
2. INTRODUCTION	7
3. BACKGROUND	8
3.1. ‘Vision Zero’ and the Safe System Principles.....	8
3.2. State & National Government adoption of Safe System Principles.....	8
3.3. Manningham’s Vision Zero.....	9
4. CONTEXT	10
4.1. Integrated Approach.....	10
4.2. Co-ordination and Leadership.....	10
4.3. Road Transport Network - Roles and Responsibilities.....	10
4.4. Public Transport - Buses.....	11
4.5. Documents Reviewed	11

5.	REVIEW OF 2005 STRATEGY THREE YEAR ACTION PLAN	12
5.1.	Performance and Effectiveness	12
5.2.	Improvement Opportunities.....	13
5.3.	Establishing a CrashStats Base to Monitor Next Two Year Actions.....	13
6.	MANNINGHAM CRASH PROFILE	14
6.1.	Three Year Period – 2005 to 2007.....	14
6.2.	Five Year Trends – Period 2003-2007	14
6.3.	Three Year Trend Post 2005 Strategy – Period 2005-2007.....	15
7.	WHERE TO FROM HERE	16
8.	RECENT DEVELOPMENTS IMPACTING ROAD SAFETY ISSUES	17
8.1.	Crash Perspectives - Communication.....	17
8.2.	Road Safety and Wider Social & Environmental Objectives.....	17
8.3.	Road Trauma is a Public Health Issue	18
8.4.	Transport Choice is a Personal Health Decision	18
8.5.	Reducing Traffic Volumes Reduces Trauma.....	19
8.6.	Higher Fuel Prices Provide Economic & Environmental Benefits	19
8.7.	Green House Gas Emission Savings	20
8.8.	Driving Distraction Increasing.....	20
8.9.	Speed – High Trauma Contributor.....	21
8.10.	Generation Y - Young People.....	23
8.11.	Pedestrian/Cyclist Path Safety	23
8.12.	Crash Rates Involving Older People.....	24
9.	ACTION PLAN 2011 AND 2012.....	25
9.1.	Safe System	25
9.2.	Awareness Raising / Behavioural Actions - Safer Road User Behaviour.....	25
9.2.1.	Link to Local Community / Community Groups.....	26
9.2.2.	Link to Lifestyle - Environmental Sustainability & Economics.....	26
9.2.3.	Link to Young at Risk.....	27
9.2.4.	Link to Older Persons at Risk	28
9.2.5.	Link to Alternative Transport	28
9.2.6.	Link to All Road Users	29
9.3.	Functional Actions – Safer Infrastructure	29

9.3.1.	Safer Roads, Roadsides and Vehicles.....	29
9.3.2.	Safer Cyclist and Pedestrian	30
9.3.3.	Traffic Speed Controls.....	30
9.3.4.	Public Transport Infrastructure.....	31
9.4.	Correlation between Actions and Target Groups	31
10.	IMPLEMENTATION PLAN.....	32
10.1.	Monitoring and Review.....	32
10.1.1.	Annual Review of Action Plans & Performance Measures.....	32
10.1.2.	Strategy Review.....	32
11.	FUNDING SOURCES.....	33
11.1.	Physical Infrastructure Actions – Vic Roads Funds	33
11.2.	Physical infrastructure Actions – Manningham Capital Works Budget	33
11.3.	Awareness Raising / Behavioural Actions – Manningham Recurrent Budget ...	33
12.	REFERENCES.....	35
	PART THREE – DETAILED ACTION PLANS 2011 & 2012.....	1



PART ONE - OVERVIEW

This Manningham Road Safety Strategy 2010 supports the aim and objectives of the 2005 Strategy which remain relevant, and are consistent with the current road safety approaches of all levels of government.

The 2010 Strategy and new final two-year Action Plan are to be read in conjunction with the Manningham Road Safety Strategy 2005.

1. EXECUTIVE SUMMARY

1.1. Introduction

Manningham City Council recognises that even a single life lost or one person seriously injured is one too many.

The Manningham Road Safety Strategy 2005 was established with a long term objective of 'zero' road deaths and injuries and aimed to achieve in the short term over a five year period to 2010, a 20% reduction in casualty crashes contributing to death or serious injury.

This 2010 Strategy identifies changes to the context of Road Safety over the past three years and with this understanding along with the 2005 Strategy's achievements to date, builds on the strong foundation put in place by the 2005 Strategy's three year Action Plan, and sets out priority actions for the final two years in a new two year Action Plan for 2011 and 2012.

1.2. 'Vision Zero' and the Safe System Principles

The unpredictable nature of human behaviour in the complex traffic environment means it is unrealistic to expect that all crashes can be prevented.

'Vision Zero' policy is that "serious injury and deaths on the road should not be tolerated". It acknowledges that crashes will happen, and the best course of action is to try to minimise the effect, decreasing the number of fatalities and serious injuries to zero.

Flowing from 'Vision Zero', the Safe System approach, adopted by the Federal and State governments, recognises that even with the best preventative programs in place, road crashes will still occur – and aims to build a road system that offers maximum protection for all users by providing safer road infrastructure, increasing the proportion of safe vehicles on

our roads, and improving the safe behaviour of road users by targeting areas such as speeding, drink and drug driving, fatigued driving and driver distraction.

The Safe System approach already adopted by Manningham encourages a better understanding of the interaction between the key elements of the road system: roads and roadsides; road users and their behaviour; and vehicles.

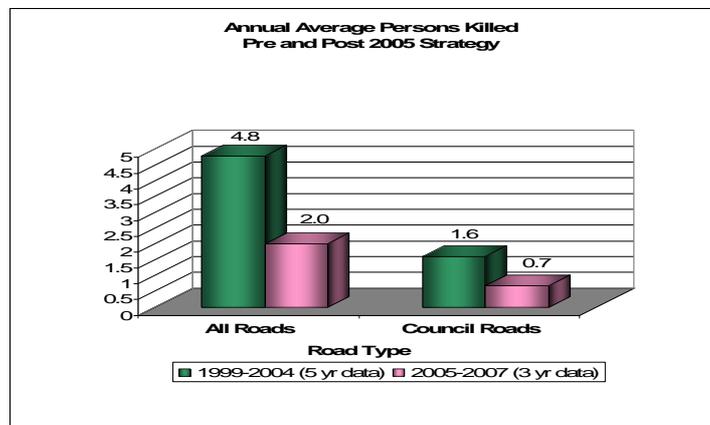
This Strategy also recognises that road safety is an individual responsibility that must be accepted by the community, as well as a Government responsibility. There is a need for physical infrastructure improvements to make roads and vehicles safer and behaviour change programs to raise community awareness.

1.3. Review of 2005 Strategy Three Year Action Plan

Manningham has seen lower fatalities and a reduction in serious injury crashes over the first three year implementation period.

Performance can be measured by completion of the actions, effectiveness in terms of changes in CrashStats data and through measures to assess changes in community attitudes and awareness of road safety.

During the first three year implementation period of the 2005 Strategy, fatalities decreased from an average of 4.8 persons killed per year Pre Strategy (five years from 1999 to 2004) to an average of 2.0 persons killed per year Post Strategy (three years 2005 – 2007) for ALL roads, and from an average of 1.6 to 0.7 persons killed per year on Council roads over the same period.



Unfortunately a new CrashStats data collection process and system was introduced by the Police from December 2005 causing a discontinuity in the data series. Therefore the non-fatal data (serious and other injury) from 2006 onwards cannot be compared to previous years' data.

Based on the raw CrashStats data VicRoads annually ranks each of the 79 Victorian Council's on Fatalities and Serious Injuries (taken to hospital); with Ranking 1 having the highest statistics and therefore the worst case crash history.

Over the five year period 2003 - 2007 Manningham's ranking for fatalities has fluctuated from its worst at 13th in 2004 to a better performance at 61st in 2005, and for serious injuries

Manningham has been consistent, but rated in the worst 50% of municipalities with the trend line generally achieving a lower ranking over the five year period.

Due to the discontinuity of the Crashstat data from Dec 2005 a new a base for monitoring trend changes in serious and other injury from 2006 and 2007 data has been established for monitoring the implementation of the next Two Year Action Plan. Fatality data is continuous allowing on-going trends to be monitored.

1.4. Recent Developments Impacting Road Safety Issues

Heightened behavioural change perspectives and methods of delivery of the Road Safety messages have emerged over the last three years.

Since the commencement of the 2005 Road Safety Strategy the interest of governments and other organisations has heightened bringing forward new perspectives and developments impacting on the delivery of road safety initiatives. Eleven of these are discussed, all which influenced the setting of the next two year Action Plan.

Individual road users tend to under-estimate or ignore many of the risks.

For road safety professionals, communicating an understanding of this issue to road users presents a major challenge.

Integrating road safety with environmental and health concerns should be at the forefront of modern transport policies

Road safety initiatives are generally valued solely on the basis of the level of trauma reduced. However, it is important to improve our understanding of the effects of safety policies and assess their wider social and environmental benefits.

Road trauma is a major contributor to diminished public health.

Substantial proportions of the economic cost of a road crash death of \$1.9 million and serious injury of \$407,000 are sustained by the health system. Allocating these resources to road crash casualties means that correspondingly fewer resources are available to address other public health priorities.

Heart disease kills almost 30 women each day and is responsible for 17% of all deaths in Australian women

Women (and men) can reduce their risk of heart disease, amongst other factors, by being active every day. The benefits of walking or cycling, rather than driving for short trips, such as taking students to school or visiting a friend, should be promoted.

Reducing traffic volumes reduces road trauma.

Reducing the number of vehicles on the roads reduces the potential for a crash involving another vehicle. It is safer for other road users such as pedestrians, cyclists and motorcyclists as there is less congestion and travel time reducing frustration and decreasing likelihood of a crash. Use of alternative forms of transport should be promoted, particularly for short trips.

Economic (higher fuel prices) and environmental concerns are changing driver attitudes

A Recent survey found that 62% of Melbourne drivers stated they drive less due to the higher fuel prices. A growing awareness of dwindling natural resources and other environmental issues are also affecting drivers' attitudes with about 2 in 5 Australian drivers saying they only drive when necessary, choosing to walk or cycle wherever possible instead.

People who shift from cars to public transport can make significant savings in their greenhouse gas emissions.

A recent survey revealed that Melburnians are more likely than people in other cities to think about different public transport options and the environment before getting into the car.

Sources of driver distraction, both within the vehicle and in the general road environment, have increased substantially in recent years.

People need to pay more attention to what they are doing. Individuals need to have a situational awareness to see the effect they have on everybody else who's on the road.

Severity of trauma from a crash is directly related to speed

Speeding and inappropriate travel speeds directly contributed to at least 30% of deaths on Victorian roads each year. Irrespective of their personal views on restricted speed zones, drivers are ultimately responsible for the speed at which they travel.

AAMI research shows that they're Generation Y and don't like waiting – whether its for coffee, a promotion or a traffic light.

Gen Y's impatience extends to their behaviour on the road, with more than one third (35%) of young drivers describing themselves as quite impatient behind the wheel – almost double that of drivers aged over 25.

Conflict and personal injury between cyclists and pedestrians on shared paths, and Cyclist Rage are emerging trends.

A protocol for Users of pedestrian/cyclist paths is required to reduce conflict.

1.5. Manningham Crash Profile

Road Users most at risk in Manningham during the three year period from 2005 to 2007 are vehicle drivers and their passengers, making up 81% of all fatalities and serious injuries in Manningham over the period.

Drivers most at risk (and their passengers) are the young aged from 17 to 25, while older pedestrians over 60 (39%), cyclists in the 30- 49 age groups (45%) and mid-aged motorcyclists from 30-59 (59%) are identified as being most at risk.

1.6. Where To From Here - Two Year Action Plan

The Chairman of the RACV wrote in the Royal Auto April 2009: "We also urge all drivers to act responsibly and safely on our roads by obeying speed limits, watching out for other road users, especially cyclists and pedestrians, and by setting the right example for our youngest, most vulnerable drivers"¹²

Experience shows that past programs form the backbone of road safety but are not sufficient to make a significant shift in our crash statistics unless we are willing to make a paradigm shift in focus on behavioural as well as physical programs.

The 2011 and 2012 Action Plan accepts the challenge to make a paradigm shift and seeks to achieve this through Awareness Raising / Behavioural Activities that aspire to improve knowledge and change the way users think about road safety, with the intent to change

behaviour patterns that contribute to road crashes and acknowledges that there are Physical Infrastructure Activities generally addressing infrastructure development and maintenance, and general information dissemination.

Awareness Raising / Behavioural Actions

Behavioural Actions within Manningham's next two year Action Plan provide a combination of new innovative and proven programs which reflect the recent developments impacting road safety issues identified in this strategy by linking the actions to five main themes:

- Link to Local Community Groups;
- Link to Lifestyle;
- Link to Young at Risk;
- Link to Older Persons at Risk;
- Link to Alternative Transport; and
- Link to All Road Users.

Physical Infrastructure Actions

Manningham is already locked into infrastructure programs targeted at making the Council road network safer including ongoing maintenance, capital improvements, traffic control devices and local area traffic calming. The actions are grouped under three main headings:

- Safer Roads, Roadsides & Vehicles
- Safer Cyclists and Pedestrians
- Traffic Speed Controls

Safer Vehicles

Higher vehicle safety standards and advances in technology will continue to improve overall safety of vehicles and reduce vehicle occupant fatalities and serious injury rates.

Although it is the role of car manufacturers along with the State and Federal governments to pursue vehicle design changes, Councils at the local level can initiate programs to assist the community to understand which cars, new and old, are the safest.

1.7. Funding Sources

Awareness Raising / Behavioural Actions addressing safer road user behaviour and safer vehicles are funded from Council's recurrent budgets and external grants if available.

Physical Infrastructure Actions including road infrastructure improvements and maintenance, traffic and speed control works and information dissemination may be funded from various VicRoads road safety improvement programs, Federal Assistance Grants and Council's Capital Works Budget.

1.8. Implementation and Monitoring

The State Government has the prime responsibility for road safety in Victoria, and Council has delegated responsibility to provide a safe and functional Council Arterial and Local Road network and assist behavioural changes at the local level.

It is essential that the Strategy Action Plan be reviewed annually and that the Strategy's performance in meeting the objectives is measured. Performance can be measured against the expected outcomes from each Action, community feedback, the overall changes in Crashstats in Manningham after each year of implementation.



PART TWO - 2010 STRATEGY

2. INTRODUCTION

The Manningham Road Safety Strategy 2005 was established with the aim of dramatically reducing death and serious injury rates for both users of Manningham's roads and residents using roads outside of the municipality.

The Strategy was supported by an integrated three (3) year Action Plan grouped into the categories of Safer Road Environment, Safer Road Users and Safer Vehicles.

The three-year Action Plan is now completed and this review updates the 2005 Strategy and develops the final two-year Action Plan under the Manningham Road Safety Strategy 2010.

This review identifies changes to the context of Road Safety, particularly at the State and Federal levels, considers the impact of external influencers such as fuel prices, green house gas emissions and increased use of alternative transport modes, such as bus, cycling and walking. Within this understanding and set within the context of the 2005 Strategy and achievements to date, this 2010 Strategy builds on the strong foundation put in place by the 2005 Strategy and three year Action Plan, and sets out new priority actions for the final two years 2010/11 and 2011/12, all of which are relevant, achievable and measurable.

At the completion of the final two year Action Plan a new Strategy should be developed to reflect any further changes to the context of Road Safety and industry developments.

The 2010 Road Safety Strategy and the final two-year Action Plan are to be read in conjunction with the Manningham Road Safety Strategy 2005.

3. BACKGROUND

3.1. 'Vision Zero' and the Safe System Principles

The unpredictable nature of human behaviour in the complex traffic environment means it is unrealistic to expect that all crashes can be prevented.

Sweden, hailed as a leader in its revolutionary way of thinking about traffic safety, instigated the 'Vision Zero' policy. The basic idea behind the 'Vision Zero' policy is that "serious injury and deaths on the road should not be tolerated". In the past crashes and deaths on the roads were seen as a necessary evil to be accepted in the interests of personal mobility³. "Vision Zero" acknowledges that crashes will happen, and the best course of action is to try to minimise the effect, decreasing the number of fatalities and serious injuries to zero. This is accepted as a long term goal.

Flowing from 'Vision Zero', the Safe System approach recognises that even with the best preventative programs in place road crashes will still occur – and aims to build a road system that offers maximum protection to all users by providing safer road infrastructure, increasing the proportion of safe vehicles on our roads and improving the safe behaviour of road users by targeting areas such as speeding, drink and drug driving, fatigued driving and driver distraction.⁴

3.2. State & National Government adoption of Safe System Principles

The Safe System has been adopted by the Federal and State Governments, to reduce the number of crashes and severity of the injuries if one occurs.

The National Government through the National Road Safety Strategy 2001-2010 incorporated the Safe System approach and the State Government through it's 'arrive alive' Road Safety Strategy 2008-2017 also formally incorporates the Safe System approach to road safety.

These Strategies put in place measures with potential to significantly reduce road trauma and lay the foundations for longer term gains in four broad areas:

- Safer Speeds
- Safer Roads and Roadsides
- Safer Vehicles
- Safer Road Users and Safer Behaviours.

As individual goals, the State Government's recently updated 'arrive alive' Road Safety Strategy for 2008-2017 set a target of 30% reduction in deaths and serious injury rates by 2017 (formerly 20% reduction in the 2002-2007 Strategy), and the Federal Government's National Road Safety Strategy 2001 to 2010 set out to achieve a 40% reduction in the number of fatalities per 100,000 population by 2010.

Manningham's 2005 Road Safety Strategy short term target of reducing fatal and severe injuries by 20% by 2010 aligns with the State and National Strategies.

3.3. Manningham's Vision Zero

Manningham City Council recognises that even a single life lost or one person seriously injured is one too many, and strives through its corporate objectives to provide a safe environment for residents and visitors and to ensure that Manningham's transport system of roads, streets and pathways allow safe, reliable and efficient travel by all users.

Manningham's Road Safety Strategy 2005 was consistent with the Vision Zero and Safe System Principles and aimed at achieving a reduction in the number of crashes causing death or serious injury by 20% over the five year period from 2005 to 2010 as a staged approach to a longer term goal of 'zero' road deaths and serious injuries.

This Strategy also recognises that road safety is an individual responsibility that must be accepted by the community, as well as a Government responsibility. There is a need for physical infrastructure improvements to make roads and vehicles safer and behaviour change programs to raise community awareness.

The Safe System approach adopted by Manningham for both the 2005 and 2010 Strategies encourages a better understanding of the interaction between the key elements of the road system: roads, roadsides and vehicles; road users and their behaviour.

The 2005 three-year Action Plan reflected these safe system values which have also been incorporated into the new 2010 Strategy's final two-year Action Plan.

4. CONTEXT

4.1. Integrated Approach

This Strategy adopts a holistic approach to road safety and recognises that it is a shared responsibility for achieving the overall goal of the Strategy.

Although prime responsibility for implementing the actions of the Strategy rests with the Manningham City Council, achieving the targets set for this strategy will require the involvement and support of a number of internal and external organizations and agencies including:

- Relevant Council Service Units;
- The whole Manningham community;
- Specific groups, organizations and associations representing the community;
- VicRoads, Department of Transport and relevant Government departments;
- RACV;
- TAC;
- Local Police;
- Transport user groups;
- Schools;
- Business's and users of Activity Centres;
- Media outlets;
- Roadsafe; and
- State and Federal governments through the allocation of funding for road safety initiatives.

4.2. Co-ordination and Leadership

The State Government has prime responsibility for road safety in Victoria, and Council has delegated responsibility to provide a safe and functional Council Arterial and Local Road network and to encourage behavioural changes at the local level.

The key to successful development and implementation of a Road Safety Strategy is the development of a strong alliance and partnering relationship with the community and State Agencies such as the Victorian Police, VicRoads, Department of Transport etc. The ability to coordinate all these players in a collective multi-disciplinary approach is essential and Council is appropriately placed to ensure that there is a shared commitment to achieve effective results.

4.3. Road Transport Network - Roles and Responsibilities

The Strategy recognises the division of roles and responsibilities between VicRoads and Council for Declared Arterial Roads (Arterial Roads) and Council Arterial and Local Roads (Council Roads) defined under the Road Management Act 2004 and the implementation of road infrastructure works within Manningham.

A comprehensive and integrated road transport network of over 40 kilometres of off-road bicycle trails and 675 kilometres of roads service Manningham.

4.4. Public Transport - Buses

Manningham is in a unique position of being the only metropolitan council without any rail based public transport and is primarily serviced by a network of buses. Council has been advocating for sometime now the need to have a public transport system that offers transport choice and options for the Manningham community.

Council has focused its efforts and will continue to advocate in the short to medium term on improving the bus services within the municipality. To a large extent Council's advocacy activities have been extremely successful in achieving its aims. Substantial bus service improvements have been achieved and implementation will be completed in ensuing months. The improvements include the implementation of the Red, Green and Yellow Orbital routes, the review of local bus services, introduction of the Doncaster Smartbus Upgrade, the local Manningham bus loop service, the Nightrider service and the introduction of bus priority measures along main arterial roads. These bus travel improvements provide greater opportunity for destination bus travel and will assist towards community acceptance of bus travel as a viable alternative to car travel.

4.5. Documents Reviewed

The following documents were reviewed to provide a strategic and technical context to the plan.

- Manningham Council Plan 2006-2010
- National Road Safety Strategy 2001 –2010
- National Road Safety Action Plan 2009 and 2010
- Arrive alive 2008-2017: Victoria's Road Safety Strategy
- Saferoads Guidelines to assist Local Government in re-developing *Saferoads* Municipal Road Safety Strategies
- Manningham Community Safety Plan
- Manningham Bicycle Strategy 2009
- Doncaster Hill Pedestrian and Cycling Plan
- Manningham Arterial Road Improvement Strategy 2008
- Manningham Integrated Transport Plan 2009

5. REVIEW OF 2005 STRATEGY THREE YEAR ACTION PLAN

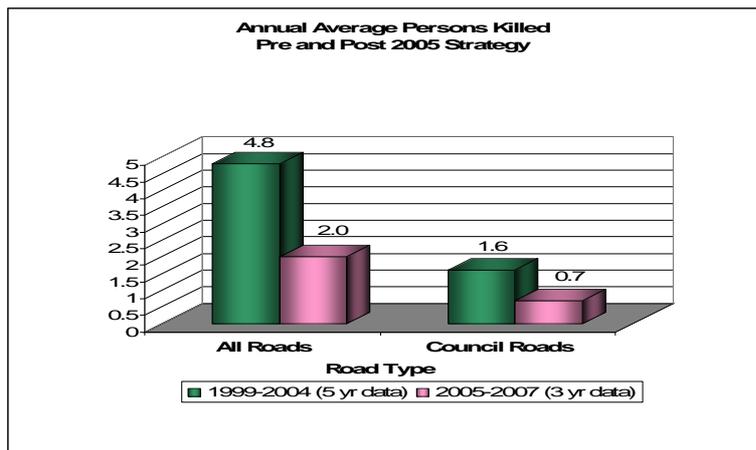
Manningham has seen lower fatalities and a reduction in serious injury crashes over the first three year implementation period.

A review of the effectiveness of the first three-year Action Plan of the 2005 Road Safety Strategy provides a guide for the development of the 2010 Strategy two-year Action Plan in the knowledge of which programs worked, identified gaps and where appropriate, inclusion of some of the successful programs into the new two year Action Plan.

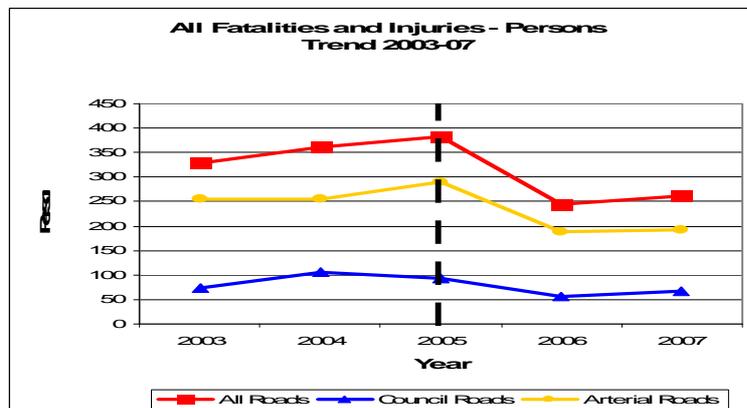
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Performance can be measured by completion of the actions, community feedback and effectiveness by changes in CrashStats data.

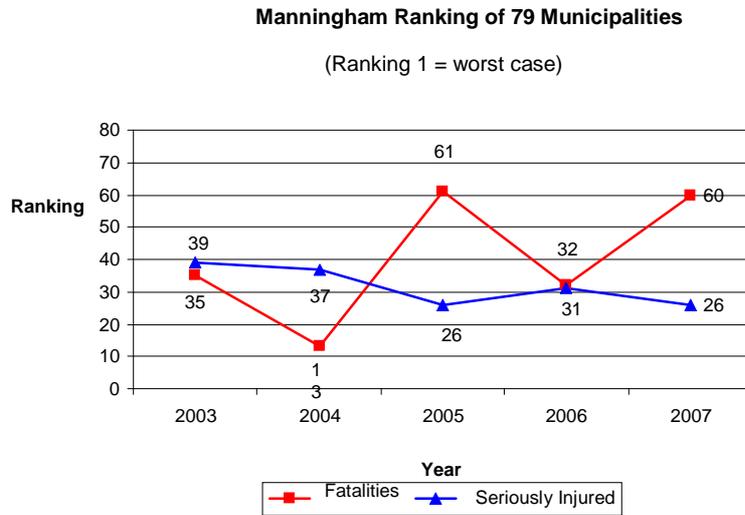
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Unfortunately a new CrashStats data collection process and system was introduced by the Police from December 2005 causing a discontinuity in the data series. Therefore the non-fatal data (serious and other injury) from 2006 onwards cannot be compared to previous years' data.



Based on the raw CrashStats data VicRoads annually ranks each of the 79 Council's on Fatalities and Serious Injuries (taken to hospital), with Ranking 1 having the highest statistics and therefore the worst case crash history.



Over the five year period 2003 - 2007 Manningham's ranking for fatalities has fluctuated from its worst at 13th in 2004 to a better performance at 61st in 2005, and for serious injuries Manningham has been consistent, but rated in the worst 50% of municipalities with the trend line generally achieving a lower ranking over the five year period.

5.2. Improvement Opportunities

The review of the three year Action Plan outcomes combined with new international and national trends in the delivery of the road safety message identified the need to strengthen actions that would initiate user behavioural change. The new Action Plan addresses this opportunity.

5.3. Establishing a CrashStats Base to Monitor Next Two Year Actions

Discontinuity of the Crashstat data from Dec 2005 requires us to use 2006 and 2007 data to establish a base for monitoring trend changes in serious and other injury during the period of implementation of the next final two-year Action Plan. Fatality data is continuous allowing on-going trends to be monitored.

CrashStats data for 2006 and 2007 provide the following base line annual averages:

- Serious Injury: 101.5 persons per annum (All Roads) and 27.5 p.p.a. (Local Roads)
- Other Injury: 148.5 persons per annum (All Roads) and 33.5 p.p.a. (Local Roads)

6. MANNINGHAM CRASH PROFILE

6.1. Three Year Period - 2005 to 2007

In the three year period from 2005 to 2007 crashes in Manningham resulted in 6 Fatalities, 298 Serious Injuries and 583 Other Injuries on Manningham Council and Vic Roads Arterial Roads.

Of the six deaths all were males and comprised 1 pedestrian (40-49 y.o.), 4 Drivers 3x (18-29 y.o.) & 1x 75+y.o. and 1 Passenger (age unknown).

The following Table 6.1 clearly demonstrates that the percentage of fatalities and injuries is much lower on Council Roads than on VicRoads Arterial Roads even though Council Roads constitute 87% of all the roads in Manningham. The disproportionate ratio is due in part to the VicRoads Arterials carrying heavier traffic volumes with higher posted speed limits.

Table 6.1 Distribution of All Crash Casualties – Council and VicRoads

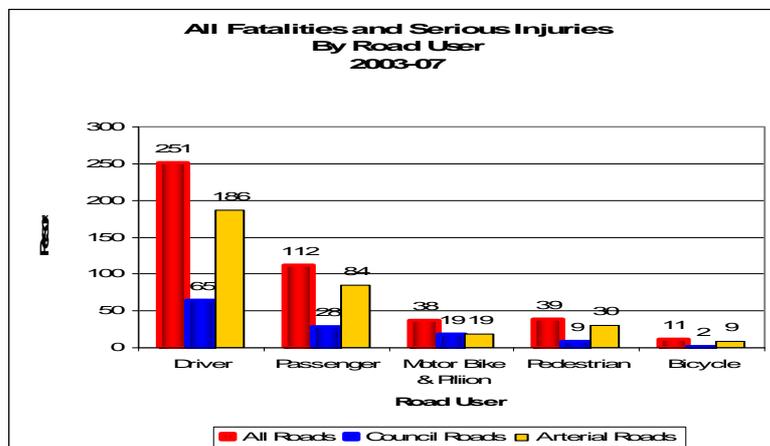
Type	No.	Council Roads	VicRoads Arterial Roads
Fatalities	6	33%	67%
Serious Injury	298	26%	74%
Fatalities + Serious Injuries	304	24%	76%
Length of Roads	675 km	87%	13%

6.2. Five Year Trends - Period 2003-2007

Analysis of CrashStat data from 2003 to 2007 revealed the following trends over the five year period:

There were 16 Fatalities of which:

- 9 were drivers, 4 passengers and 3 pedestrians. No motorcyclists, pillion passengers or bicyclists were killed.
- 81 % of persons killed were male.
- Of the Drivers killed 89% were male of which 63% were under the age of 25

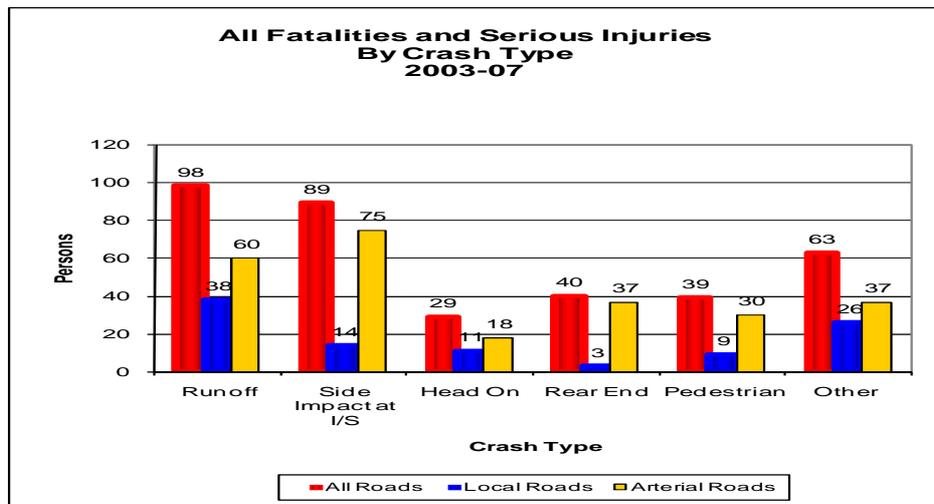


Of 451 Seriously Injured and Fatalities:

- 39 Pedestrians of which 59% were male and 39% over 60 yo, and 17 % less than 12yo
- 251 Drivers of which 55% were male and 29% under 25, with 41% under 29. 19% were older than 60
- 38 Motorcyclists (& Pillion) of which 100% were male and 59% were aged 30-59
- 11 Bicyclists of which 64% were male and 27% aged 30-39 with 36% aged 40-59.
- 112 Car Passengers of which 39% were male and 48% aged less than 21 (This is the only category where females were over represented).

Types of Crashes

The most common types of crashes are runoff the road and side impacts (intersection collisions).



6.3. Three Year Trend Post 2005 Strategy - Period 2005-2007

Road Users most at risk in Manningham during the three year period from 2005 to 2007 remain vehicle drivers and their passengers, making up 81% of all road related fatalities and serious injuries in Manningham over the period.

Drivers most at risk (and their passengers) are the young aged from 17 to 25, while older pedestrians over 60 (39%), cyclists in the 30- 49 age groups (45%) and mid-aged motorcyclists from 30-59 (59%) are identified as being most at risk.

For nearly 100% of the crashes leading to these fatalities and serious injuries, user behavioural error, be it from speeding, distraction, inexperience, under the influence of alcohol, carelessness or disobedience of road rules was a contributing factor.

Runoff road and side impacts at intersections remain the most common type of crash.

It is interesting to note that the 2006 National road toll statistics reveal that 26% of vehicle occupants killed were not wearing a seat belt and 29% of drivers recorded a blood alcohol reading over 0.05.

7. WHERE TO FROM HERE

The Chairman of the RACV wrote in the Royal Auto April 2009 : “We also urge all drivers to act responsibly and safely on our roads by obeying speed limits, watching out for other road users, especially cyclists and pedestrians, and by setting the right example for our youngest, most vulnerable drivers”¹²

In essence the RACV statement is targeted at road user behaviour. We can improve road and roadside infrastructure, provide safer vehicles and place appropriate speed limits on roads, but these alone will not take us beyond where we are now or achieve the long term goal of ‘zero’ road deaths and fatalities. We must also massage the behaviour of all road users if we are to make a shift in our Crashstat statistics.

Manningham is already locked into infrastructure programs targeted at making the Council Road network safer including ongoing maintenance, capital improvements, traffic control devices and local area traffic calming. Experience shows these programs form the backbone of road safety but are not sufficient to make a significant shift in our crash statistics unless we are willing to make a paradigm shift in focus on behavioural as well as physical programs.

The two-year Action Plan for 2011 and 2012 makes this shift and sets out actions which are:

Awareness Raising / Behavioural - aimed particularly at changing behaviour and are a little different to the actions developed for the first three year Action Plan; and those that target

Physical Infrastructure Actions- programs that are essential and improve the safety of roads, roadsides, vehicles, pedestrians and cyclists through infrastructure improvements.

8. RECENT DEVELOPMENTS IMPACTING ROAD SAFETY ISSUES

Since the commencement of the 2005 Road Safety Strategy the interest of governments and other organisations has heightened, bringing forward new perspectives and developments impacting on the delivery of road safety initiatives. Eleven of these are discussed, all of which influenced the setting of the next two year Action Plan in the 2010 Strategy.

8.1. Crash Perspectives - Communication

There is a fundamental difference in perspective between the 'top down' view of road safety professionals, and the 'bottom up' view of individual road users.²

Crash data, analysis and research clearly identify road crashes as a significant public health risk and allow road safety professionals to identify measures that could reduce the aggregate risk.

Individual road users tend to under-estimate or ignore many of the risks. Although serious crashes happen every day on our roads, they are rare in the experience of individual road users. Based on personal experience, most road users conclude that whatever they have been doing is 'safe', and that their own risk is negligible when they use the road.¹

For road safety professionals, communicating an understanding of this issue to road users presents a major challenge.

Consideration should be given to potential opportunities to gain community input regarding road safety messaging. Opportunities for community members to reach their peers with road safety messages should be explored.

8.2. Road Safety and Wider Social & Environmental Objectives

Approaches to improving road safety should not exist in isolation. It is important to consider the potential for achieving wider community objectives such as those associated with transport efficiency and sustainability.

Road safety initiatives are generally valued solely on the basis of the level of trauma reduced. However, it is important to improve our understanding of the effects of safety policies and assess their wider social and environmental benefits.

For example, speed reduction can result in reduced fuel consumption, emissions and noise. Low-speed shared road environments are conducive to walking and cycling – improving community cohesion, supporting community health objectives and reducing trauma, particularly for pedestrians. In this context a recent European Transport Safety Council report, "Managing speed: Towards safe and sustainable road transport", notes that *'integrating road safety to environmental and health concerns should be at the forefront of modern transport policies.'*¹

The Strategy Action Plan identifies several actions to encourage the utilisation of sustainable transport modes, to realise health, environmental and safety benefits. Road safety is improved through the reduction in numbers of vehicle trips which are replaced with trips by other modes.

8.3. Road Trauma is a Public Health Issue

Building partnerships with health professionals is a means of achieving linkages across professional disciplines and facilitating effective collaboration.

Road trauma is a major contributor to diminished public health. It is the leading cause of death among young Australians and needs to be addressed with similar priorities and approaches as major diseases such as heart disease, cerebrovascular disease, major depression, HIV/AIDS and cancer. *In this context, road safety needs to be identified as a national priority for health and medical research funding.*¹

Reductions in road trauma have immediate and significant benefits in public health with lower numbers of people requiring treatment and rehabilitation which is often of a long-term nature. The medical, rehabilitation, ambulance and long-term care costs comprise about 28 per cent of the human costs and 16 per cent of the total costs of road crashes in Australia. On average, the economic cost of a road crash death is \$1.9 million, a serious injury, \$407,000 and a minor injury, \$15,000 (2005 dollar values). Substantial proportions of these costs are sustained by the health system. Allocating these resources to road crash casualties mean that correspondingly fewer resources are available to address other public health priorities.

Improving road safety would release hospital bed-days and medical resources for treating other patients. Additional benefits to the health sector could accrue by way of a lower incidence of lifestyle-related diseases due to safer cycling and pedestrian activity.

Council's Road to Community Safety Expo provides an opportunity for the community to enhance their awareness of relevant agencies including Council and their roles and access information and ideas regarding means to improve their personal safety on the road and beyond. The Expo aims to reduce accident statistics and the associated burden on the public health system.

8.4. Transport Choice is a Personal Health Decision

"Australian women are four times more likely to die of heart disease than breast cancer. Heart disease kills almost 30 women each day and is responsible for 17% of all deaths in Australian women¹³. Yet a survey of 1000 men and women conducted for the heart foundation found that only 3% of Australians were aware that heart disease is the leading cause of death in women and only 25% women had spoken to their doctors about the disease.

Women (and men) can reduce their risk of heart disease, amongst other factors, by being active every day. Regular, moderate physical activity is good for the heart.

The benefits of walking or cycling, rather than driving for short trips, such as taking students to school, visiting a friend, should be promoted through this strategy and medical staff.

At a broader level, activities which improve road safety as well as potentially providing community health benefits are a key feature of the final two-year Action Plan. The Action Plan includes the production and distribution of Travelsmart maps, to highlight sustainable transport routes and cross connections, with the aim of encouraging greater community uptake of sustainable transport options.

8.5. Reducing Traffic Volumes Reduces Trauma

One only has to observe the decrease in traffic volumes on Melbourne roads during school holidays and even on the 'Building Trades monthly Monday Rostered Day off' to appreciate that by reducing the number of vehicles on the roads, the potential for a crash involving another vehicle is reduced. It is safer for other road users such as pedestrians, cyclists and motorcyclists and there is less congestion and travel time, reducing frustration and decreasing likelihood of a crash.

Use of alternative forms of transport should be promoted, particularly for short trips through the Strategy Action Plan.

In addition, Council officers are in the process of working with VicRoads to identify Bicycle Priority Routes (BPR) as part of the Principal Bicycle Network. The BPR network is being developed to give priority to routes which will be most effective in encouraging the use of sustainable transport modes to access Activity Centres for all cyclist skill levels, thereby reducing the number of vehicle trips.

Council officers are also developing a Walking Strategy, to encourage greater uptake of walking by the community. A review of Council's Special Rates and Charges Policy as it relates to footpath construction is also well progressed. This review is being undertaken to encourage the development of footpaths in higher pedestrian traffic areas, to facilitate associated health, environmental and road safety benefits.

8.6. Higher Fuel Prices Provide Economic & Environmental Benefits

The same impact has been observed from higher fuel prices, forcing drivers to reduce their car use. '62% of Melbourne drivers stated they drive less due to higher fuel prices'⁵

Interestingly in the same survey the respondents stated that 'a higher cost of living and growing awareness of dwindling natural resources and other environmental issues are also affecting drivers' attitudes about whether an alternative mode of transportation can be used. 2 in 5 Australian drivers saying they only drive when necessary, choosing to walk or cycle wherever possible instead. Nearly one third of all motorists are willing to carpool when presented with an opportunity.'⁵

Economic and environmental concerns are changing driver attitudes. But is this transforming into action on the road? Although the car is still the preferred mode of transport to work and school (60%), four percent fewer capital city dwellers used their car to travel to work and school in 2008 compared with 2007, and three percent more used public transport in the same period. In Melbourne over 2007 and 2008, total metropolitan public transport utilisation has grown by approximately 15 per cent.⁶ Unfortunately, even though patronage of public transport has increased, many motorists perceive it to have limited reliability, availability and lengthy travel times - all factors in some commuter's reluctance to use it.⁵

Of particular importance, petrol prices and the environment are becoming key considerations when people choose how to travel.

- Petrol prices – 44 per cent of people cite petrol price increases as their main reason for driving their car less (Metlink, September 2008). The impact of petrol costs varies in the outer areas of Melbourne – inner 10 km from the CBD 31 per cent, 11 – 20 km

53 per cent and 20 km more than 50 per cent of people cite petrol costs as the main reason for reducing car use.

- Environmental benefits – Nineteen per cent of people in the inner 10 km radius of the CBD cite the environment as their main reason for driving less. This falls to five per cent in the areas more than 20 km from the CBD (Metlink, September 2008) which is consistent with those residents in the outer suburbs often not having suitable and effective public transport options.

Council's Road Safety Strategy actions need to reinforce these trends through advocacy to improve public transport service frequency and coverage within the City, to encourage greater utilisation of public transport, thereby realising road safety and environmental benefits and other initiatives. Providing the community better local trip choice information will also assist in achieving transport modal shift within the community.

8.7. Green House Gas Emission Savings

People who shift from cars to public transport can make significant savings in their greenhouse gas emissions. Victorian Government research shows that the following savings can be made:

- For peak travellers – 65 per cent less greenhouse gas emissions are emitted when switching from the car to public transport.
- For off-peak travellers – a massive 95 per cent less greenhouse gas emissions are emitted by switching from the car to public transport.

Compared to the rest of Australia, Melburnians hold stronger opinions about the role of public transport in improving their city's sustainability. They also expect the government to be doing more to ensure their city's sustainability.

Melburnians are also more likely than people in other cities to think about different public transport options and the environment before getting into the car.⁶

An opportunity exists to develop a user friendly guide to calculating carbon and financial savings resulting from transport choices, to assist this mode choice decision process.

8.8. Driving Distraction Increasing

Sources of driver distraction, both within the vehicle and in the general road environment have increased substantially in recent years. Mobile phone usage is a well established risk factor, however, there are growing concerns about the array of modern in-vehicle systems that can compete for driver attention.

Modern vehicles can include on-board TV, satellite navigation, complex sound systems, climate controls, and audible and visual signals for an array of vehicle operations which compete for driver attention. Surveys show that many drivers still use hand-held mobile phones while driving despite it being illegal in all Australian jurisdictions.

Drivers operate in a complex road environment with advertising billboards; public and promotional lighting; and advisory, regulatory and directional signage. The combined and

interactive effects of the stimuli both inside and outside the vehicle generate much potential for distraction.¹

The road safety risk associated with driver distraction can be targeted through community messaging and by supporting Victoria Police campaigns.

8.9. Speed - High Trauma Contributor

Severity of trauma from a crash is directly related to speed. Speed reduction has a dual impact on road trauma because travel speeds influence the number of crashes that occur as well as the severity of crashes. At lower speeds road users have more time for decision making and reactions, are less likely to lose control, are more able to take evasive action, and can stop in a shorter distance. Additionally, lower speeds result in reduced injury severity in crashes which do occur because of the lower levels of crash impact energy involved.¹

To maximise adoption of appropriate travel speeds and minimise crashes occurring and reducing the severity of those crashes that do occur, speed management relies on an appropriate mix of:

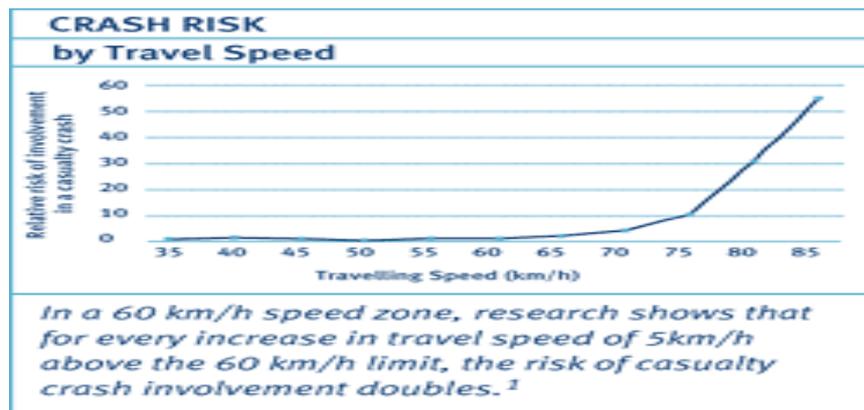
- Infrastructure;
- Behaviour (education); and
- Enforcement.

Improvements in speed management have generally been incremental since 2000, but large-scale initiatives have been linked to dramatic reductions in road deaths in Victoria and NSW.

From early 2002, Victoria implemented a raft of tightened speed compliance measures – including expanded use of mobile covert speed cameras, lowered enforcement thresholds and an integrated publicity campaign that saw measured travel speeds decline on many parts of the road network. These changes were followed by a large and sustained reduction in road deaths, particularly among vulnerable road users and in urban areas, where the effect of travel speeds was greatest. There is evidence that improved speed management has made a major contribution to the overall improvement in road safety outcomes in Victoria.¹



National Road Safety Action Plan 2009-10



We know that:

- Speeds just 5 km/h above average in urban areas and 10 km/h above average in rural areas are sufficient to double the risk of a casualty crash.
- Small reductions in average speeds (even 1 or 2 per cent) result in substantially greater percentage reductions in deaths and injuries.⁹
- The chances of surviving a crash decrease rapidly above certain impact speeds, depending on the nature of the collision¹⁰:
 - car/pedestrian: 20-30 km/h
 - car/motorcyclist 20-30 km/h
 - car/tree or pole: 30-40 km/h
 - car/car (side-impact): 50 km/h
 - car/car (head-on): 70 km/h.
- Past improvements to speed enforcement have resulted in substantial reductions in deaths and injuries.
- Reducing speed limits can reduce deaths and injuries and reduce the severity of injuries.

Speeding and inappropriate travel speeds directly contributed to at least 30% of deaths on Victorian roads each year.

Varying speed limits along a stretch of road or inappropriate setting of speed limits can cause driver frustration. Speed limits must be appropriate to the road condition, users etc. Drivers are increasingly confused about how fast they can travel on our roads with new AAMI research⁵ showing more than three-quarters of motorists are unsure of the speed limit because the zones vary so much.

- 77 per cent of drivers unsure of the speed limit due to abundance of varying zones;
- 32 per cent think there are too many restricted speed zones;
- 11 per cent ignore restricted speed zones;

- 22 per cent caught by a speed camera when they didn't believe they were speeding.

Restricted speed zones have become increasingly popular in built-up shopping strips, adjacent to schools and on suburban roads as a deterrent against drivers traveling at speeds that could kill or seriously injure cyclists and pedestrians in a collision.

However, AAMI's research suggests some drivers are becoming immune to these restrictions, with one-third of drivers nationally (32 per cent) saying there are simply too many of them. More concerning is that one in 10 drivers nationally (11 per cent) admit to ignoring restricted speed zones which completely contradicts their purpose of reducing injury and saving lives.

The uncertainty for drivers caused by all the different speed zones, combined with so many drivers of the view that there are too many of them, may be diluting the message to slow down around schools, shopping strip malls and in suburban streets.

Irrespective of their personal views on restricted speed zones, drivers are ultimately responsible for the speed at which they travel. It is up to them to always travel at safe and legal speeds. If a driver is unsure of the speed limit they should err on the side of caution and slow down.

A review of speed zones more generally across the City with a view to rationalizing zones where appropriate would simplify the driving experience for motorists and should also assist in achieving better compliance rates. Aside from actions to influence behaviour, physical works programs need to be continued to address vehicle speeds and improve safety.

8.10. Generation Y - Young People

In the five year period between 2003 and 2007, road users in the 17-25 year old age group recorded the highest proportion of deaths and serious injuries in Manningham.

In the same period 54% of all persons killed or injured on Manningham roads were Drivers and 22% passengers.

Of young drivers, AAMI research shows that they're Generation Y and don't like waiting – whether it's for coffee, a promotion or a traffic light.¹¹ Gen Y's impatience extends to their behaviour on the road, with more than one third (35%) of young drivers describing themselves as quite impatient behind the wheel – almost double that of drivers aged over 25.

Given the accident statistics and the opportunity to influence a lifetime of driving behaviour, particular emphasis needs to be given to reaching younger drivers. Existing programs targeting young people need to be continued but new initiatives are required to intensify efforts to reduce the incidence of road trauma involving young people. The development of young road safety champions who may be able to influence their peers is desirable.

8.11. Pedestrian/Cyclist Path Safety

Manningham has experienced conflict and personal injury between cyclists and pedestrians. Also Cyclist Rage between cyclists is an emerging trend with faster commuter riders sledging

and threatening slower riders, particularly on narrower cycle paths. Incidences were reported on the ABC Morning broadcast in March 2009.

There is a need for drafting a protocol for Users of pedestrian/cyclist paths including issues related to walking/riding on certain sides of tracks, highlighting appropriate speeds in some areas and re-examination of the effectiveness of mixed use cycle/pedestrian paths.

8.12. Crash Rates Involving Older People

There is an increasing trend of pedestrians and motorists over 60 years of age being represented in casualty accident statistics. The impacts of ageing on reflexes, eye sight and reaction times need to be communicated consistently to appropriate forums. Opportunities to run Wiser Driver, Keeping Older Drivers Safe and Mobile and Wiser Walker programs need to be actively pursued.

9. ACTION PLAN 2011 AND 2012

9.1. Safe System

The Safe System is achieved by implementing actions that involve:

- designing and maintaining roads and roadsides to reduce risk to as low a level as reasonably practical;
- setting speed limits according to the safety of the road and roadside;
- advising, educating and encouraging road users to comply with road rules, be unimpaired and alert, and drive according to the prevailing conditions;
- understanding reduced car travel has financial and environmental benefits and road trauma has health and social impacts.
- encouraging consumers to purchase safer vehicles with primary safety features that reduce the likelihood of a crash, such as electronic stability control, and secondary safety features that reduce injury severity in a crash, such as side curtain airbags; and
- encouraging users to utilise forms of transport other than vehicles such as walking, cycling and public transport.

The 2011 and 2012 Action Plan accepts the challenge to make a paradigm shift and achieves this through:

1. **Awareness Raising / Behavioural Activities** that aspire to change the way users think about road safety and behaviour patterns which contribute to road crashes, highlight regulatory requirements, general information dissemination and strengthening coordination between relevant agencies; and
2. delivery of new initiatives and continuing with the implementation of **Physical Infrastructure Activities**, generally addressing infrastructure development, maintenance and vehicle safety.

Part Three details the programs in the two-year Action Plan which have been developed on the principles that follow.

9.2. Awareness Raising / Behavioural Actions - Safer Road User Behaviour

Both the State and National governments have put in place actions through their respective Road Safety Strategies and introduced legislation targeting the many identified user behaviour issues with a degree of success. But until road users, particularly drivers, assume full responsibility for their actions by adopting a behavioural attitude change, there will be limitations on reaching aspirational targets of zero deaths and serious injuries from road crashes.

The Awareness Raising / Behavioural Actions are provided at the local level to begin a cultural shift in attitude and responsibility of road users. They utilise established networks and funded programs to aid delivery of the behaviour changing paradigm.

Experience has shown that a paradigm shift in culture is best achieved by targeting the young. This allows values to be adopted before being influenced by external factors such as peer groups and parent culture. Also the young take their learning home to siblings and parents and in today's world, are not abash at questioning the behaviour of older folk.

To make the next quantum leap in road safety improvements for our communities, both within and beyond the municipal boundary, is to re-engage with the behavioural leg of the safety triangle (safer Infrastructure, safer vehicle and safer user). Local Government is best placed to implement such programs through its powerful, direct connections to communities. The importance of grass roots projects is vital. Small steps can deliver grand outcomes over time.¹

Awareness Raising / Behavioural Actions within Manningham's next two year Action Plan provide a combination of new innovative and proven programs which pick up on the recent developments impacting road safety issues identified in Section 8 by linking the actions to five main themes:

- Link to Local Community Groups;
- Link to Lifestyle;
- Link to Young at Risk;
- Link to Older at Risk;
- Link to Alternative Transport; and
- Link to All Road Users.

[9.2.1. Link to Local Community / Community Groups](#)

Local government has the opportunity to tap into the local community and the network of local community groups, in the development of new methods of communicating the key messages that may assist in behavioural change of road users.

Local Community Groups may be able to assist in trialling innovative Road Safety communications.

Where feasible and appropriate, community groups could be consulted regarding road safety messaging.

Strategy Response

Opportunities are to be considered to facilitate community input into innovative road safety messaging.

[9.2.2. Link to Lifestyle - Environmental Sustainability & Economics](#)

Linking crash prevention to lifestyle changes in the areas of sustainability and broad economics has not been well publicised. Many residents are conscious of the need to reduce their carbon footprint and to save money in these tight economic times. There are a number of programs promoting the value of participating in the schemes on offer. They provide the opportunity to link savings in carbon production and savings in fuel purchases by minimising car travel trips and using other means of transport, such as public transport, which also has the benefit of reducing the risk of being involved in a crash. With fewer crashes, more funds are able to be diverted

from treating car crash victims at hospitals to the treatment of other important health issues.

Strategy Response

Manningham prepare and distribute through various means, information detailing the environmental and economic benefits of using other forms of transport...

9.2.3. Link to Young at Risk

Young people are at greater risk because they lack experience, have limited ability and judgement, underestimate risks and display deliberate risk taking behaviours such as speeding and use of alcohol and drugs.

Strategy Response

Through the introduction of new innovative initiatives and by building on current successful programs, develop champion groups of young people from pre-school to secondary colleges to promote the 'uncool to crash' message to peers, rather than be influenced by bad behaviour such as hoon driving and risk taking that lead to crashes.

New initiatives proposed for implementation include:

- *Running "Looking After Our Mates" sessions to be held at Sporting Clubs to educate younger drivers, targeting drink driving and responsible alcohol consumption;*
- *"Safety DVD" produced by teenage students for viewing by teenagers / young adults. The DVD is to be presented to local school principals for promotion, distribution and incorporation into school road safety programs;*
- *Investigation of opportunity to establish a Road Safety School in Manningham to provide road safety education to Primary School children;*
- *Establishment of a Reference Group of key stakeholders, to examine issues related to congestion around schools and develop actions; and*
- *Introduction of a new program prioritising deployment of Council's Speed Advisory Trailers to school zones.*

In addition, Council has in partnership with Victoria Police, been successful in it's TAC funding application for Victoria Police to initiate the DECLR8 program. The DECLR8 program targets the education of young drivers who commit offence. As an alternative to issuing fines, the Police officer has the option of referring the offender to attend a road safety training program. This innovative program aims to address repeat offenders not involved in hooning activity and encourage driver attitude and behaviour change, thereby improving road safety outcomes.

The Drive Alive Today Tomorrow Committee includes young community representatives from Marcellin, Whitefriars and Doncaster Secondary College amongst it's membership, to ensure that programs and initiatives developed are relevant and well targeted. External organisations also represented on the Committee include Victoria Police, the YMCA, Whitefriars College, Roadsafe and Rotary. This approach has strengthened the relationships and coordination between

these agencies with a common goal of addressing road safety targeting young people.

'Drive Alive Today Tomorrow' programs to be continued include:

- *"Walk the Torque" community event with the Rotary Club;*
- *"Bike Ed" for primary school children;*
- *"Keys Please" for Year 10 secondary school students;*
- *"Fit to Drive" for Year 11 secondary school student; and*
- *"L to P" for Year 12 secondary school students.*

9.2.4. Link to Older Persons at Risk

Older persons experience deterioration in hearing, vision, reaction times and mobility. When involved in a crash, older persons are more susceptible to serious injury than younger people mainly due to their frailty and they are less able to fully recuperate. As the number of older residents in Manningham is increasing, the need to respond will be greater in the future.

Strategy Response

Implement new initiatives to address older driver risks including:

- *"Road rules quiz for Drivers" – fun competition that teaches, promotes discussion, refreshes and updates knowledge;*

Continue to build upon and expand delivery of current successful programs which include:

- *"Keeping Safe and Mobile Older Drivers", "Wiser Walkers" and "Wiser Driver" for older road users.*

9.2.5. Link to Alternative Transport

Using alternative transport to the motor vehicle reduces the risk of being involved in a crash. Advocating for better public transport (in Manningham's case improved bus services and introduction of rail) and improved pedestrian and cycling facilities encourages and provides increased opportunity to use alternative means of transport.

Strategy Response

Advocate for improved bus services with increased frequency, improved routes and broader span of scheduled times.

Develop shared path protocols to improve safety for cyclists and pedestrians.

Develop the Manningham Walking Strategy to encourage greater participation in walking.

Develop and distribute a Travelsmart Map for Manningham showing bus routes and shared paths to increase utilization of sustainable transport modes.

9.2.6. [Link to All Road Users](#)

Implementation of new innovative actions and continuation of key existing programs, to educate and raise awareness amongst community members and broadly influence community road safety behaviour and attitudes.

Strategy Response

Prepare regular articles for inclusion in Manningham Matters and other publications on road safety, targeting high risk road user groups. Opportunities to coordinate article content with Police road safety initiatives to be considered.

Meet monthly with local Police to discuss hot spots and seek a coordinated response.

Continue to support the quarterly Road Safety Advisory Committee meetings, to facilitate a strategic organisational focus on road safety and develop recommendations to Council, on actions to improve road safety for the Manningham community

Continue to coordinate relevant agencies and arrange the Road to Community Safety Expo, to enhance community knowledge and awareness of community safety issues including road safety. Consideration to be given to incorporation of event into a larger community event, to improve accessibility to event and effectiveness.

9.3. Functional Actions - Safer Infrastructure

9.3.1. [Safer Roads, Roadsides and Vehicles](#)

Safer Roads reduce the chances of a crash, and if they do occur, they minimise the severity of the crash. Often relatively low-key improvements such as shoulder sealing, overtaking lanes, better line marking, delineation and signage and roadsides free of unprotected hazards can make a substantial contribution to a roads safety.

Higher vehicle safety standards and advances in technology will continue to improve overall safety of vehicles and reduce vehicle occupant fatalities and serious injury. However for every new car purchased with improved safety features, seven used cars are purchased.⁶ Although it is the role of car manufacturers along with the State and Federal governments to pursue vehicle design changes, Councils at the local level can initiate programs to assist the community to understand which cars, new & old, are the safest and as a large employer of people using cars within the municipality. Council has already set an example by adopting a policy of purchasing safer cars.

Important safety features in vehicles that save lives include⁶:

- Driver, passenger front air bags and side and curtain airbags;
- Antilock Braking Systems (ABS);
- Daytime Running Lights;
- Over speed warning device;
- A vehicle weight between 1300 and 1700 kgs;

- Seatbelt warning device;
- Cargo carrier (for station wagons and 4WD's);
- Rear centre lap sash seat belt;
- Traction Control; and
- Following distance alerts.

Strategy Response

Raise awareness of older car crash ratings of Manningham residents to inform decisions regarding private vehicle purchases.

Identification of high priority road infrastructure improvement works

Implement infrastructure works identified in the Arterial Roads Strategy

Apply for external funding from VicRoads, State and Federal Governments for infrastructure works.

Maintain all infrastructures in accordance with Council's Road Management Plan.

9.3.2. Safer Cyclist and Pedestrian

Encouraging users to utilise cycling and walking as alternatives to the motor vehicle requires confidence that the alternative infrastructure is appropriate, safe and convenient.

Strategy Response

Identification of high priority bicycle and pedestrian improvement works and identification of missing path links for attention, to improve access to schools and other pedestrian traffic generators.

Implement infrastructure works identified in the 2009 Bicycle Strategy.

Development of protocols and installation of suitable signage for the safe joint use of shared bicycle/pedestrian paths.

Review Council's Bicycle Strategy in 200/2011.

Conduct safety audits of shared paths and program any improvement works.

9.3.3. Traffic Speed Controls

Research indicates that speeding continues to be a major contributor to road trauma. Crash severity at time of impact increases exponentially with higher speeds¹.

Strategy Response

Review travel speeds in Activity Centres to improve safety, taking into account higher levels of pedestrian and bicycle traffic.

Educate drivers through the use of Speed Advisory Trailers and enforcement through working with the local police.

Continue installation of vehicle speed and traffic volume management measures using Local Area Traffic Management infrastructure improvement works.

Examine continuity of speed limits along individual stretches of road to ensure there are not too many speed limit changes that may confuse and aggravate road users.

9.3.4. Public Transport Infrastructure

Buses are the only form of public transport provided to Manningham residents. The road transport network supports many bus routes throughout the municipality, with new routes and services being added.

Strategy Response

Advocate for improved bus services

Provision of improved bus stop infrastructure and access to the bus stops to accommodate all users of varying mobility abilities.

Encourage use of public transport.

9.4. Correlation between Actions and Target Groups

The actions identified in the Strategy Action Plan have been developed to improve road safety across all road user groups and all age groups, with particular emphasis on groups represented most strongly in the crash statistics, as set out in section 6 of the Strategy.

Drivers most at risk (and their passengers) are the young aged from 17 to 25, while older pedestrians over 60 (39%), cyclists in the 30- 49 age groups (45%) and mid-aged motorcyclists from 30-59 (59%) are identified as being most at risk.

Page 1 of the Strategy Action Plan shows the correlation between actions identified by their reference numbers, road user groups and age groups targeted by the relevant actions. The action reference numbers shown in bold text correlate with the road user and age groups associated with higher crash rates. In addition, the actions listed under note 2 at the bottom of the table relate to all road user and age groups and apply in addition to each cell in the table

10. IMPLEMENTATION PLAN

10.1. Monitoring and Review

10.1.1. Annual Review of Action Plans & Performance Measures

It is essential that the Strategy Action Plans be reviewed annually and that the Strategy's performance in meeting the objectives is measured. The monitoring and review can be measured against the expected outcomes from each Action, community feedback and the overall Crashstats changes in Manningham after each year of implementation.

One measure of the success of the outcomes of the infrastructure improvements works and behavioural Strategy Action Plans is to monitor the change in the crash statistics before and after implementation, including:

- percentage reduction in the number of people killed or injured in road crashes in Manningham; and
- percentage reduction in the number of Manningham residents involved in crashes on the total road network, within and outside of the municipality.

Availability of some of this data is dependent upon VicRoads undertaking detailed analysis of the Crashstats data.

It is however understood that there is no direct correlation between Strategy Action Plan items and changes in crash statistics. While every effort will be made to communicate with the broader community, those most at risk are possibly the most difficult to impact with behaviour change programs. In addition, motorists from other Municipalities who may be involved in crashes will not be subject to the benefits of local behaviour change programs and as such, Crashstat trends alone are not sufficient measures of the effectiveness of Council's Strategy.

Other measures that can be used to evaluate the effectiveness of the Strategy include:

- Casualty accident rates (personal injury)/100,000 population comparison with previous five years and other Councils;
- Average speed of vehicles recorded per annum before and after action;
- % change in traffic volumes/speeds after implementation of LATM schemes;
- Feedback from community;
- Number of Safety Audits completed;
- Extent of compliance with the Action programs;
- Extent of achievement of Strategy actions; and
- Extent of public awareness of road safety (Survey of residents).

10.1.2. Strategy Review

The implementation of the Road Safety Strategy 2010 Action Plan should be reviewed annually and a full review of the Strategy after completion of the final two year Action Plan.

11. FUNDING SOURCES

Physical Infrastructure Actions including road infrastructure improvements and maintenance, traffic and speed control works and information dissemination may be funded from various VicRoads road safety improvement programs and Council's Capital Works Budget. Awareness Raising / Behavioural Actions addressing safer road user behaviour and safer vehicles may be funded from Council's recurrent budgets and external grants if available.

11.1. Physical Infrastructure Actions – Vic Roads Funds

Each year the City of Manningham makes application to VicRoads for funding under various road safety programs including Blackspot/ Blacklength, and Traffic & Transport Integration programs. Funding applications for 2008/2009 were costed at \$4.8 million and applications for ensuing years will be in the same order. However Manningham's projects must compete with others throughout Victoria on a benefit cost ratio basis. As Manningham has a relatively low state crash statistics rating compared with the whole of Victoria, projects generally struggle to attract funding.

11.2. Physical infrastructure Actions – Manningham Capital Works Budget

In line with the Council Plan, Council has a commitment to allocate funding under its Capital Works program budget of approximately \$783,000 in the current financial year for road safety infrastructure improvement works and LATM works. The Strategy requires that this funding level continue for the following two years for implementation of similar works.

The main budget groups are listed in the following table

Capital Works Activity	Budget (Years1, 2)
Road Safety – Lighting Council Roads	\$40,000
Road Safety – Local Roads	\$100,000
Road Safety – Council Link Roads	\$100,000
Bicycle Paths (Bicycle Strategy)	\$263,000
Traffic Control Devices – Council Roads	\$80,000
Traffic Management LATM Works	\$200,000
Total	\$783,000

11.3. Awareness Raising / Behavioural Actions - Manningham Recurrent Budget

Implementation of the Awareness Raising / Behavioural Actions of safer road users and safer vehicles education are generally funded from Manningham's recurrent budgets, along with external grants when available. The Strategy advocates that the current level of funding of \$37,800 per annum is maintained as a minimum amount, and external grants be sought to fully implement all programs.

The following table summarises the additional costs identified in the Action Plans. One action, the 'Speed Advisory Trailer Operating Costs' is ongoing and already absorbed into recurrent budgets.

Item No.	Action	Budget (Year One)			Budget (Year Two)		
		Council	External	TOTAL	Council	External	TOTAL
1.3	Drive Alive Today Tomorrow	\$1,000		\$1,000	\$1,000		\$1,000
1.4	Bike Ed	\$750	\$750	\$1,500	\$750	\$750	\$1,500
1.5	Road Safety DVD	\$4,000		\$4,000			
1.6	Fit to Drive		\$4,800	\$4,800		\$6,800	\$6,800
1.7	Keys Please		\$4,800	\$4,800		\$4,800	\$4,800
1.8	Look After Our Mates					\$1,200	\$1,200
1.9	L to P*	\$17,000	\$117,475	\$134,475	\$12,150	\$117,850	\$130,000
1.10	Walk the Torque	\$10,000	(\$11,500)	(\$1,500)	\$10,000	(\$15,000)	(\$5,000)
1.11A	Motorvate Courses		\$6,700	\$6,700		\$8,200	\$8,200
1.12	Wiser Walker	\$500	\$500	\$1,000	\$500	\$500	\$1,000
1.13	Keeping Safe Older Drivers	\$750	\$250	\$1,000	\$750	\$250	\$1,000
1.14	Wiser Driver	\$1,000	\$500	\$1,500	\$500	\$500	\$1,000
1.21	Road to Community Safety Expo	\$900		\$900	\$1,000		\$1,000
1.17	Shared Path Protocols				\$1,000		\$1,000
1.19	Shared Path Audits	\$1,900		\$1,900			
	Road Safety officer				\$18,029		\$18,029
1.22	Speed Advisory Trailer Operating Costs**	Funded from operational budget			Funded from operational budget		
	TOTAL	\$37,800	\$124,275	\$162,075	\$45,679	\$125,850	\$171,529

* Note – A grant from VicRoads has been obtained for Year 1.

** Note – Item 1.22 is currently funded through Engineering and Technical Services Unit.

12. REFERENCES

Note ¹	National Road Safety Action Plan 2009 and 2010
Note ²	Rumar K, Road Transport Past, Present and Future Road Safety Work in EMCT, paper prepared for the Bucharest session of the European Conference of Ministers of Transport, 2002.
Note ³	'Sweden's Road Safety Vision Catches On' - David Wiles of 'Sweden Today'
Note ⁴	'arrive alive' Roads Safety Strategy 2008-2017 – Victorian State Government
Note ⁵	Telephone and Internet survey of 2,503 Australians (nationally) by Sweeney Research for AAM1, 2008
Note ⁶	Submission to Infrastructure Australia, prepared by Metlink Victoria Pty Ltd 15 October 2008
Note ⁷	Steve Willis in The Age – as reported by Journalist Stephen Lacey
Note ⁸	Crashstats- is a road crash database developed and maintained by VicRoads, which contains all Victorian road crash statistics where at least one person was injured requiring medical treatment on site. The statistics are limited in that they do not include crashes where only property damage occurred and no one was injured.
Note ⁹	Elvik R, Christensen P and Amundsen A H, <i>Speed and road accidents: an evaluation of the Power Model</i> . Institute of Transport Economics (TOI), Oslo, 2004
Note ¹⁰	Austrroads, <i>Balance between harm reduction and mobility in setting speed limits: a feasibility study</i> . Austrroads report AP-R272/05, Sydney, 2005.
Note ¹¹	The 2008 Young Drivers Index national survey conducted by Sweeney Research for AAMI
Note ¹²	Note 12 - RACV Royal Auto - April 2009
Note ¹³	Heart Foundation Fact Sheet 'Women and Heart Disease 2008'

PART THREE - DETAILED ACTION PLANS 2011 & 2012