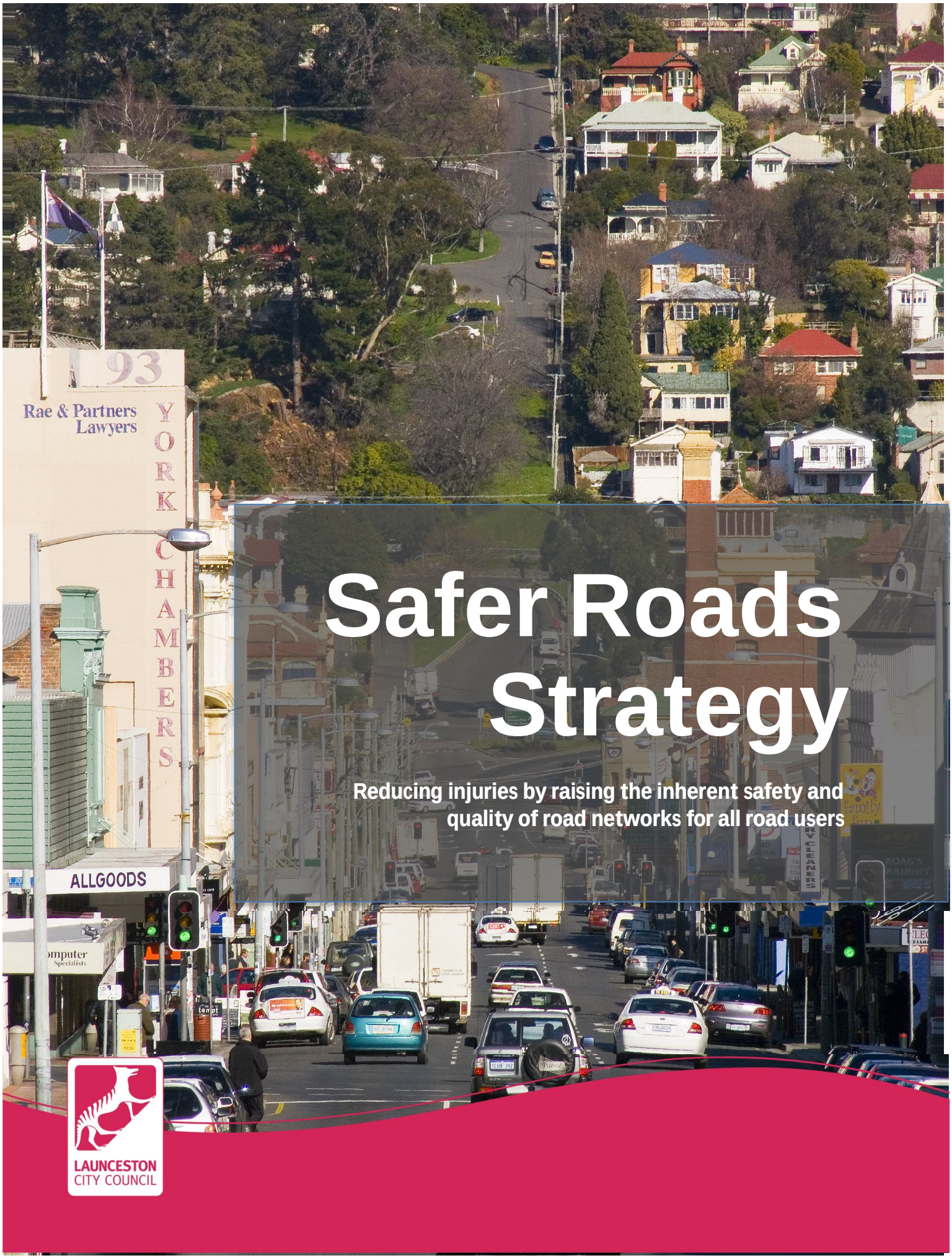

Safer Roads Strategy

Reducing injuries by raising the inherent safety and quality of road networks for all road users

LAUNCESTON CITY COUNCIL

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INTRODUCTION

everyone needs to put safety first whether they are driving, walking or riding

Safety on roads is an issue that affects everyone. Most people need to use roads to get around - to school, to work, to the shops, to the doctor, to the movies and to the parks. Most people use roads on a daily basis, as drivers, passengers, cyclists and pedestrians. It is essential therefore that, as far as possible, everyone can use the roads in safety and that everyone puts safety first whether they are driving, walking or riding.

The Launceston City Council has been involved in road safety initiatives for many years however this is the first time these efforts have been documented in a formal plan. This document is Council's inaugural Safer Roads Strategy.

The strategy is based on the Safe System Principles (a conceptual framework for road safety management) and linked to many pieces of research, strategies and policies that have been commissioned by Council in recent years including the Greater Launceston Plan, Pedestrian Strategy, Launceston 2020, Bike Strategy, Community Plan, Residential Strategy, Launceston Public Spaces and Public Life (the Gehl report) and Parking and Sustainable Transport Strategy. The strategy brings together and takes into consideration the issues relevant to safer roads identified through these key documents. It also brings together the existing information and knowledge on making Launceston's roads safer, and incorporates it into one strategic document outlining the future direction for Launceston's road network. The council has a suite of policies and documents relating to infrastructure provision, and this Strategy forms part of that overall plan (see Figure 1).

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For the Launceston City Council, safer roads means raising the inherent safety and quality of road networks for the benefit of all road users, especially the most vulnerable (pedestrians, cyclists and motorcyclists). This will be achieved through the implementation of road infrastructure assessment and improved safety-conscious planning; design; construction; and operation of roads.

This strategy will:

- Outline the road safety challenges in the council municipal area;
- Detail the process for ongoing identification of road safety projects and determining the measures to be used to address road safety issues; and
- Propose a multi year program of works either funded from Council's resources or through external finance and partnerships.

GREATER LAUNCESTON PLAN HIERARCHY

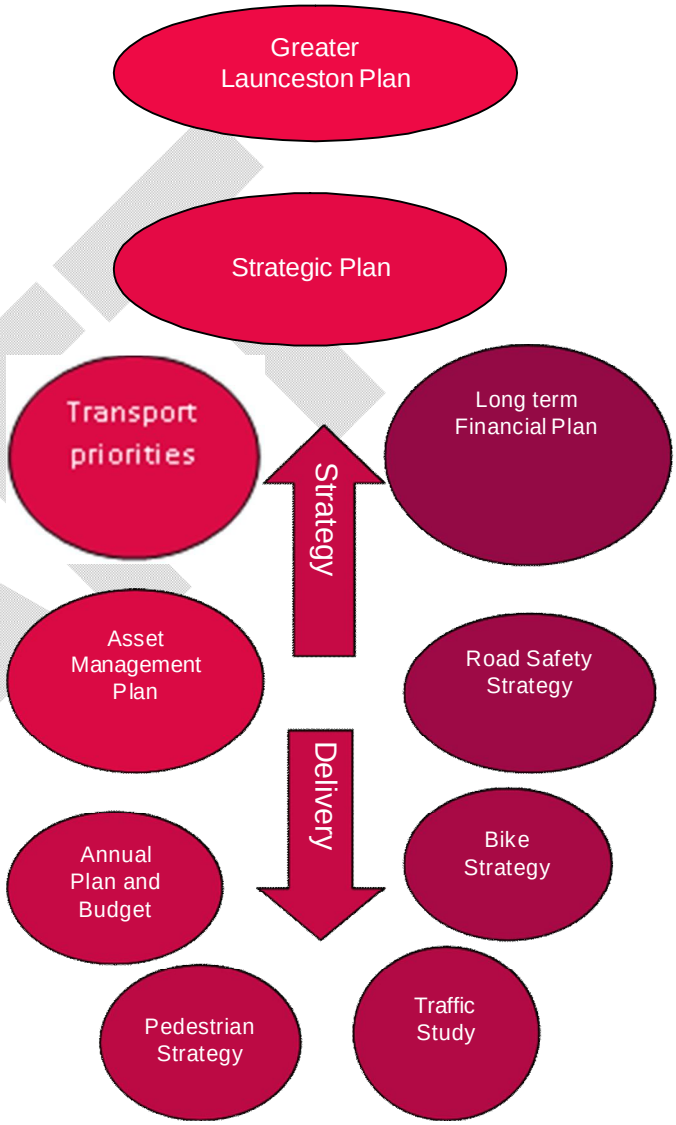

Figure 1 – Overall plan for infrastructure provision

Much of road safety activity can be considered as a means to support a more sustainable and active lifestyle; improved environmental outcomes; improved workplace safety; improved land use planning and urban amenity; and productive economic activity resulting from fewer crashes, reliable travel times and associated effects.

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The actions in this strategy give a high priority to the benefits from safer roads, safer drivers, safer cyclists and pedestrians in neighbourhoods and suburbs all across the local government area.

Safer roads are an important element in making communities safer places to live.

While the emphasis of the strategy is the "Safer Roads" theme of the Safe System Principles (see Figure 2), it also looks at 'non-engineering' plans and approaching road safety from a broader public health perspective instead of just a transport perspective. These include raising awareness about cyclists and pedestrians; alternative modes of transport; education; and land use planning that reduces the demand for travel.

The Launceston City Council, as road owner, can ensure its own road network is designed to the best possible standards and in the best possible condition. In cooperation with the Department of Infrastructure Energy and Resources (DIER), it can employ proven infrastructure initiatives in traffic management devices to ensure roads can be used more safely and more efficiently. The council can also influence safety on the state road network within the council area. The provision of safer roads is a core role of the council.

SAFER ROADS: A CORE FUNCTION OF COUNCIL

primary responsibility for a safer road network

The council is responsible for all roads within its boundaries except for state roads, private roads and forestry roads. This represents 720 kilometers or 82 % of the total road network within the Local Government Area (the DIER network is 163 kilometers). Annually, the council spends approximately $8.5 million on building and maintaining roads out of an annual operating budget of $96 million.

Council is responsible for 82% of the total road network in Launceston. This consists of:

360 kms urban roads
360 kms rural roads
68 signalised junctions
57 roundabouts
35 kms of sealed cycleways
39 kms of multi-purpose tracks in parks and reserves
500 kms of footpaths

The council has the primary responsibility for safety on these roads and is well placed to influence, negotiate and be actively involved in decisions about its road networks with different levels of government.

Specifically, the council:

- Can develop a road safety audit program for new and existing roads.
- Can develop Asset Management Plans that manage the roads and the road infrastructure so they function to the best of their capacity.
- Has access to DIER crash statistics and can develop a program of road safety engineering schemes for funding through the Federal Black Spot program and its own budgets.

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- Can develop programs to manage the roadside environment and reduce the risk from hazards (for instance, developing a tree maintenance program to ensure foliage is not obstructing signs and lights);

- Can audit signs, markers and other traffic management devices to ensure they are effective and fit for purpose;

- Is a planning authority and is responsible for much of the approval of developments on the road network. The council is well positioned to consider the road safety implications of developments and how these developments impact on all road users. The council can ensure developments do not create road safety problems through proper assessment in the planning process.

Each year, Council spends approximately $8.5 million on building and maintaining roads out of an annual operating budget of $96 million.

Has an important role to play in lobbying higher levels of government for funding, infrastructure changes and the introduction of legislation to improve road safety at the community level.

Has a role to play in identifying road safety issues, engaging the community to address road safety issues, encouraging safe road user behaviour, and in coordinating local resources for better road safety outcomes. The council can develop road safety policies and practices that the council staff and the community can adhere to such as safe cycling and pedestrian safety policies.

In summary, the council is active in the areas of transport and traffic planning, engineering, assessing development applications, planning, community services, managing fleets, parks and gardens and asset management. All these areas of the council have a role to play, in partnership with a range of stakeholders, in developing a sound approach to safer roads in the Local Government Area.

SAFER ROADS IS A SHARED RESPONSIBILITY

Responsibility for road safety is shared by all. While individual road users are expected to be responsible for complying with traffic laws and behaving in a safe manner, the burden of road safety responsibility does not just rest with the individual road user. Many organisations — the 'system managers' — have a primary responsibility to provide a safe operating environment for all road users. They include the government and industry organisations that design, build, maintain and regulate roads and vehicles. These and a range of other parties involved in the performance of the road transport system, and the way roads and roadsides are used. They all carry responsibility for ensuring that the system is forgiving when people make mistakes.

Road safety responsibilities also extend to various professional groups and the broader community. For example: health professionals have a role in helping their clients to manage their safety on the road and parents have a significant contribution to the road safety education of their children: not only through their direct supervision of learner drivers, but also by modelling their own driving and road user behaviour.

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LAUNCESTON'S ROAD NETWORK

a well developed system of roads

Urban and rural roads

Launceston has a well-developed network of arterial and local roads, and is currently a motor vehicle oriented city.

Launceston has 360 kilometres of urban roads and 360 kilometres of rural roads. This is made up of major urban roads, minor town streets and rural roads, as well as 68 signalised junctions and 57 roundabouts.

The city and its major roads are shown in Figure 3 (page 37).

Bus routes

Metro is Launceston's major provider of city and suburban public transport with five main bus routes: East Loop; North Loop; River Loop; South Loop; and West Loop.

The Launceston City Council provides a free *Tiger Bus* service for commuters and visitors: commuter run; city explorer; and river explorer.

Walking and cycling

The council has built and maintains a number of cycle ways to allow bicyclists to safely navigate the city. There are 35 kilometres of major (sealed) cycle ways throughout the city and surrounds. The council also owns and maintains 39 kilometres of multi- purpose tracks throughout its many parks. Cycling is promoted at many levels, as a valuable travel mode or recreational pursuit, for families, and those cycling for leisure or at the elite level.

In addition to the multiple purpose tracks in parks, the council also owns and maintains approximately 500 kilometres of footpaths. The recently adopted Pedestrian Strategy aims to increase walking by creating a city with a people friendly traffic systems and a place where people like and choose to walk.

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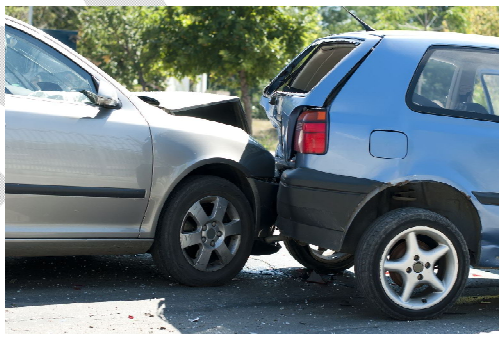
GUIDING PRINCIPLES

adopt the safe system principles

The Safe System principles form the basis for road safety programs in many countries. These principles have been adopted by all Australian jurisdictions as the guiding principle for delivering road safety outcomes, and they have been applied in the development of this strategy.

The principles are framed by the guiding vision that no person should be killed or seriously injured on roads. They seek to ensure that no road user is subject to forces in a crash which will result in death or an injury from which they cannot recover. Safe System acknowledges that human error is a feature of the road transport system and cannot be totally eliminated.



The Safe System framework uses four main themes to promote a reduction in road crashes and the incidence and severity of associated road trauma:

- Safer roads and road environments
- Safer people
- Safer speeds
- Safer vehicles

Although the theme that this strategy focuses on is safer roads and road environments, it also discusses elements of the remaining three themes as far as Council can influence.

Safe System Principles

safer roads
safer people
safer speeds
safer vehicles

No person should be killed or seriously injured on roads

Safer roads and road environments

This principle is concerned with improving the safety of road networks and surrounding environments for the benefit of all road users.

Activities include safety-conscious planning, design, regular road safety assessments and encouraging relevant authorities to consider all forms of transport and types of safe infrastructure when they respond to the mobility needs of road users.

Road safety is ultimately the responsibility of all road users, and road safety goals cannot be achieved by road safety agencies alone. Cooperation and collaboration is required between a range of government and non-government agencies, as well as the general public. While certain responsibilities within these four Safe System themes sit with

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different levels of government, the Launceston City Council is well placed to influence, negotiate and be actively involved in decisions about its road networks and participate in initiatives that increase the safety its users.

Safer people

This principle focuses on developing comprehensive programs to improve road user behaviour. Activities include encouraging the development of model safety legislation and enforcement of road safety laws and standards. These efforts are combined with public awareness and education.

The council is well placed to influence, negotiate and be actively involved in decisions about its road networks and participate in initiatives that increase the safety its users.

Road safety education is predominantly a state responsibility, working through the Community Road Safety Partnerships. The council can be actively involved in this by promoting its own campaigns.

Safer speeds

This principle relies on speed limits complementing the road environment to manage crash impact forces to within human tolerance; and all road users complying with the speed limits.

In road safety, the preferred intervention is to invest in safety upgrades but, speed limit reductions can provide an alternative effective measure. One of the challenges this poses for road safety agencies is determining speed limits appropriate to the road environment and when this should be reinforced with road improvements.

Setting of speed limits is a state responsibility but the council has a role in negotiating appropriate limits for its road network. The council can also influence speeds through road design and traffic management measures.

Safer vehicles

This principle addresses the need for improved vehicle safety by encouraging relevant global standards and mechanisms to increase uptake of new technologies such as collision avoidance systems that impact on safety.

In Australia, vehicle specifications and standards is a national government responsibility. The state has a role in enforcing these, which is particularly important for heavy vehicles. Local Government does not have a direct role apart from being responsible for its own fleet.

As managers of fleets, the council can ensure its own vehicle fleet is in a safe condition by purchasing, operating and maintaining vehicles that offer high levels of occupant protection. Fleet managers, works engineers, asset managers and procurement officers all play an important role to improve plant and vehicle management practice and be up-to-date on the latest technology to ensure safer vehicles.

The council can also promote the uptake of enhanced safety features and personal protective gear.

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INTERNATIONAL, NATIONAL AND STATE ROAD SAFETY GOALS

safer roads for everyone

Decade of Action for Road Safety

2011-2020 has been proclaimed by the United Nations as the decade of action for road safety to stabilise and reduce the forecast level and road traffic deaths around the world. The decade seeks to save 5 million lives by improving safety for roads and vehicles, and enhancing the behaviour of road users.

National Road Safety Strategy

In Australia, the National Road Safety Strategy (2011- 2020) aims to reduce the annual numbers of both deaths and serious injuries on Australian roads by at least 30 per cent.

On average, 4 people are killed and 90 are seriously injured daily on Australia's roads. (approximately 6.1 deaths per 100,000 people). It is worth noting that up to 50% of serious casualty crashes occur on roads controlled by Local Government.

The National Road Safety Strategy aspires to all levels of government to:

- Have assessed risk on their road network and refocussed road investment programs to treat higher-risk sections, in addition to more targeted Black Spot programs;
- Be assessing the benefits and costs of treatment; and
- Have, in accordance with Safe System principles accepted accountability and responsibility for the road safety performance of their networks.

Tasmanian Road Safety Strategy

Tasmania has developed its *Tasmanian Road Safety Strategy 2007-2016*, promoting shared responsibility and targeted responses to road safety problem areas. It accepts that drivers and riders make mistakes, and that crashes will occur. The strategy also calls on users to play their part and accept responsibility for their own safety by abiding by rules and limits, and driving to prevailing conditions.

In the period 1996-2005, 4,749 people were killed and seriously injured in Tasmania. This represents an average of 48 lives lost and 470 admitted to hospital every year.

In 2007-2011, the annual average was 40 fatalities and 284 serious injuries on Tasmanian roads.

Tasmania's strategy is linked to *Tasmania Together* goals around safety. The targets set are as follows:

- By 2010: 20% reduction in serious injuries and fatalities from 2005;
- By 2015: 20% reduction in serious injuries and fatalities from 2010; and
- By 2020: 20% reduction in serious injuries and fatalities from 2015.

The 2010 target has been exceeded with serious injuries and fatalities decreasing by 32.5% between 2005 and 2010. A subsequent action plan was devised in 2011 which included new initiatives to support meeting the second target of a further 20% reduction in serious injuries and fatalities by 2015. Future

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investments will be directed at road and roadside infrastructure to prevent run-off-road and head-on crashes, and broad-based speed reductions on open roads and in built up areas.

The Launceston City Council's vision for safer roads is in line with the national and state goals.

COUNCIL'S VISION FOR SAFER ROADS

reduce injuries on launceston's roads

In applying the Safe Systems approach and synergising with the international, national and state directions, the council has set a broad vision to reduce injuries on Launceston's roads.

The council is coordinating and providing a Safe System approach to everyone who lives, works, learns, spends leisure time or travels within or through Launceston. The Safe System approach will be utilised to provide and promote safer roads and roadsides, safer road users, safer vehicles and safer speed environments within the Local Government area. The council recognises that road users will continue to make mistakes that will result in road crashes, so it is important to provide as safe an environment as practicable and to promote safer vehicles and safer road user behaviours.

The council aims to:

- Eliminate serious casualty crashes on Launceston's roads;
- Reduce the number of crashes on Launceston's roads; and
- Make Launceston's roads feel safer for all road users, especially the most vulnerable.
- Create a road network that is consistent with no anomalies that could result in unsafe situations.

The council has deliberately not specified hard percentage-based targets and will seek to achieve continued directional downward trends in injuries throughout the duration of this strategy.

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THE COST OF ROAD CRASHES TO THE COMMUNITY

road trauma imposes a significant cost

The community expects a high level of road safety and the road transport system. This is reflected in the high profile of road safety nationally and in each state (for example, holiday road tolls), and the wide coverage given to road crashes and their aftermath in the media.

Road trauma imposes a significant cost on communities in terms of death and injury, economic losses, and pain and psychological suffering.

The total cost of crashes in Australia is approximately $20.64 billion per year, with the average cost of crashes of different severities is estimated as:

- Fatal crash $3,083,000
- Serious injury $ 307,500
- Other injury $ 17,000
- Non-injury $ 11,500

(Austroads: Guide to Road Safety, third edition, 2013)

For Launceston in 2012, the total cost of crashes is estimated at $17.2 million with the average cost for severities as follows:

- Fatal crash $9,249,000
- Serious injury $4,612,500
- Other injury $3,349,000

Despite relatively low numbers of fatalities and serious injuries, the cost to the community is high warranting intervention to achieve safer roads in Launceston.

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THE ROAD SAFETY PROBLEM IN LAUNCESTON

virtually all crashes involve human error

The first question that must be asked is: what is the road safety problem? How dangerous or safe are the roads of Launceston and are they getting better or worse?

These questions can be addressed by reviewing statistics and having an understanding of crashes.

10-YEAR ROAD CRASHES

Launceston experiences relatively low numbers of fatalities and serious injuries, however records a high number of crashes overall imposing a significant financial, social and health costs to the community.

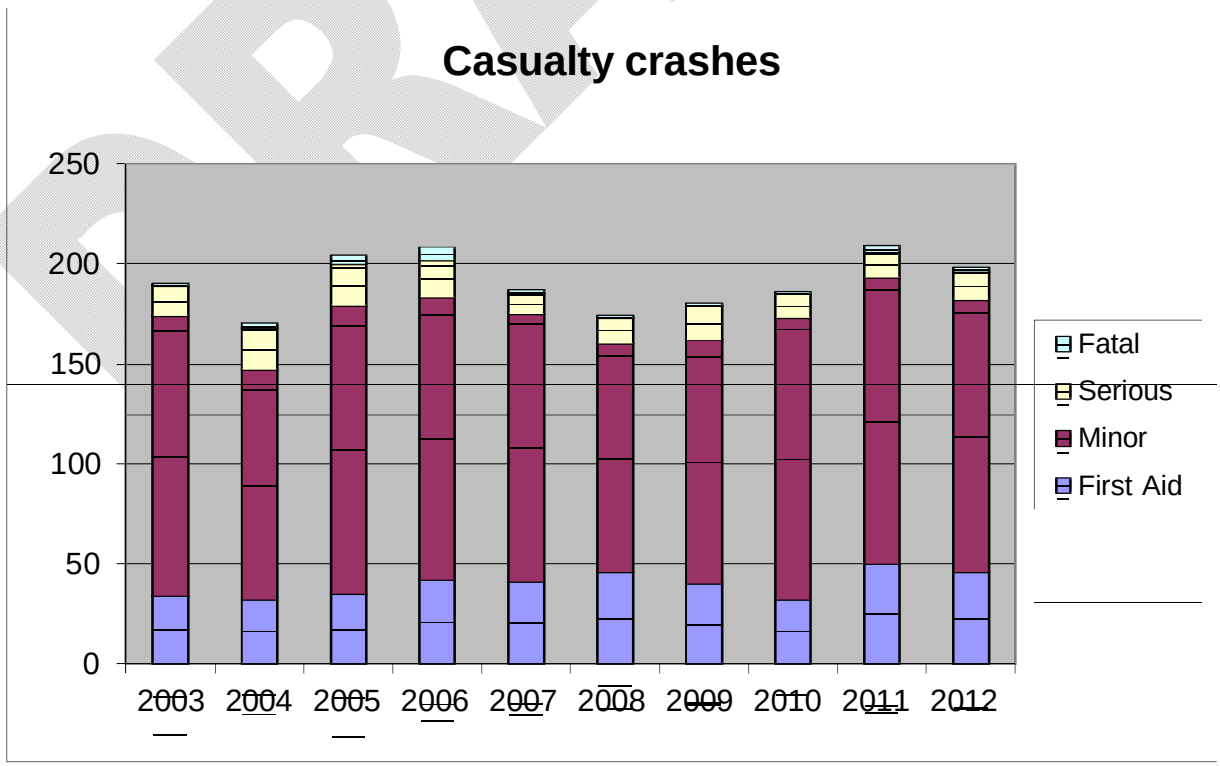
Australian road statistics

1,460 killed per annum
deaths per 100 000)

32,850 seriously injured per annum

Up to 50% of serious casualty crashes occur on roads controlled by local government

(National Road Safety Strategy 2011-2020)



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For the period 2003/12 Launceston's crash statistics at a glance show:

Statistic	Averages
Number of crashes: 8 534	853 per year 71 per month 2 per day
Fatalities: 22	2.2 per year
Serious injuries: 153	15 per year
Minor: 1301	130 per year 11 per month
First aid: 391	39 per month
Property damage: 6 050	605 per year 50 per month 2 per day
Severity unknown: 617	62 per year 5 per month

Table 2: 2003/12 crash records at a glance

Crash definitions:

Fatal	A person dies within 30 days
Serious	A person is admitted to hospital for 24 hours or more
Minor	A person is treated in hospital without an overnight stay
First Aid	Where an injury is treated without a hospital admission
Property	Property damage only

The following section provides an overview of road crashes for the past ten years. Under each item, a brief statement is provided about the Launceston City Council's response. Some of the actions are already occurring while others will be new initiatives and actions under this strategy. These responses are then listed under one of the Safe System principles in the Strategy Actions section of this document.

The number of total crashes in a five-year period fell from 4,510 crashes in 2003-07 to 4,024 crashes in 2008-12.

The council's response: work towards a further reduction in crashes by understanding where and how the crashes occur, and applying measures to improve the road network.

There were 15 deaths in 2003-2007 and 7 in 2008-2012. (53%↓)

The council's response: continue to improve the roads so that they are more forgiving when people make mistakes.

In the same period, there were 86 and 67 serious injuries respectively. (22%↓)

The council's response: maintain a system of road improvements and traffic management measures to further reduce the severity or eliminate incidences.

Minor and first aid injury crashes have remained fairly static except for a 25% drop in 2012.

The council's response: regular safety audits of existing roads and greater frequency for busier roads to ensure infrastructure is well maintained and apply engineering measures to minimise the impact of making mistakes.

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Property damage accounted for the majority of the crashes in both periods (approximately 70% of all crashes) - 3 251 and 2 799 respectively. (14%↓**)**

The council's response: monitor trends for common factors causing this type of crashes, raise community awareness of road environment safety, and support the work of road safety and related agencies in influencing road user behaviour

This is followed by minor injuries at 674 and 627. (7%↓**)**

The council's response: improve road network to a consistent standard.

Virtually all crashes involve people making mistakes.

The council's response: monitor high risk areas and focus attention to systemic problem areas in the road transport system, and support road safety initiatives in influencing road user behaviour.

WHO IS MOST AT RISK?

The highest risk group is the 17 – 29 year olds. This age group represents 19 % of the total Launceston population and accounted for 38% of all crashes. The second highest risk group is the 30-49 year olds, accounting for 27% of crashes.

The council's response: support the work of the Community Road Safety Partnership for these age groups.

Pedestrian and crashes involving motorcycles are consistent and increasing over the past decade.

The council's response: implement the Pedestrian Strategy, support road safety initiatives that are targeted at motorcyclists, and provide for the specific needs of vulnerable road users.

WHERE ARE THE CRASHES OCCURING?

There are 68 signalised junctions and 57 roundabouts in the Launceston City Council's road network.

Many of the roundabouts are on quiet residential streets compared to the signalised junctions that manage most of the urban traffic.

The low number and reduction in crashes at 'give way' controlled junctions is positive, however, more work can be done to reduce crashes at traffic signals and roundabouts.

Most of the crashes over the 10-year period took place on sealed roads in 50km/h and 60

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km/h speed zones.

The council's response: negotiate with DIER appropriate speed limits for its network, particularly for high-volume traffic and higher-risk sections. The council can also apply road design and traffic management measures to influence speeds.

In the last ten years, 38 road sections have recorded 5 or more crashes.

The council's response: introduced road improvements or traffic management measures in 9 of these road sections, resulting in a decline in crashes in 5 sections, no change in 2 sections and an increase in the other 2 sections. More work is required in this area to monitor improvement, as well as implement treatments for the remaining 29 sections.

In the last ten years, 27 junctions have recorded 5 or more crashes.

The council's response: road improvements or traffic management measures have been introduced in 6 of these junctions, resulting in a decline in crashes in 3 sections, no change in 2 sections and an increase in 1 section. More work is also required in this area to monitor improvements and implement treatments for the remaining 21 junctions.

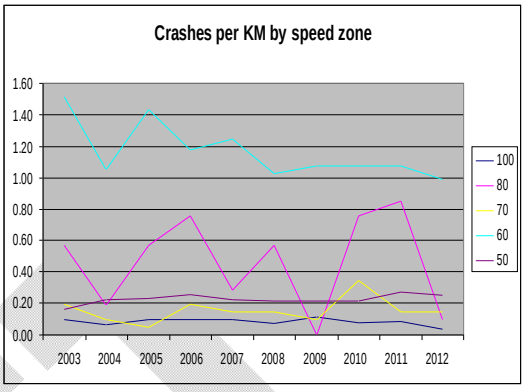

Table 3: crashes by speed zone

The most common type of crashes are:

Rear end collisions where vehicles are in the same lane;

The council's response: apply recommended crash type treat6ments (Austroads and Black Spot Projects) present potential projects to council's Road Safety Consultative Committee and introduce a campaign on leaving adequate space.

Cross traffic crashes (many at signal controlled junctions and involve a vehicle not stopping at a red light);

The council's response: apply recommended crash type treatments, and produce information that encourages consistent and compliant behaviour.

Vehicles leaving the road left off carriage way into an object or parked vehicle;

The council's response: apply recommended crash type treatments, present potential projects to Council's Road Safety Consultative Committee and work with road safety and related agencies in influencing road user behaviour.

Vehicles turning right across the path of oncoming traffic; and

The council's response: apply recommended crash type treatments; produce information that encourages safe, consistent and compliant behaviour and supporting road safety campaigns.

Pedestrian crashes.

The council's response: implement the Pedestrian Strategy, support road safety initiatives, lobby for traffic lights to be programmed with increased pedestrian early starts, longer crossing times and button free crossing, invest in quality infrastructure to support pedestrians, and apply recommended crash type treatments.

UNDERSTANDING CRASHES

Crashes are random, unexpected events, and mostly a result of a number of factors. Virtually all crashes involve human error. It will be the sole factor in many cases and most can be avoided with care and common sense. Human error is often a consequence of other factors such as inexperience, inattentiveness, alcohol/drugs, tiredness or illness.

Environmental factors and mechanical faults are also significant contributors to crashes.

Inadequate or poorly maintained infrastructure is a minor factor in most crashes, however, the other factors and the consequences of making mistakes can be influenced through engineering measures, including:

- Warning signage to highlight hazards and influence behaviour;
- Slowing vehicles to reduce the likelihood or severity of a crash;
- Guidance to ensure a mistake is less likely to be made;
- Protection to reduce the consequences of a mistake; and
    - Separation of different traffic types, speed and direction.

The Launceston City Council's aim through this strategy is to create and maintain safe roads and roadside environment, embedding features that help protect all users of its road network while at the same time balancing competing demands.

Statistic	Average per year/month/days
Number of crashes: 8534	853 per year 71 per month 2 per day
Fatalities: 22	2.2 per year
Serious injuries: 153	15 per year
Minor: 1301	130 per year 11 per month
First aid: 391	39 per month
Property damage: 6 050	605 per year 50 per month 2 per day
Severity unknown: 617	62 per year 5 per month

Table 4: Casualty crashes – traffic control

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COMPETING DEMANDS WHEN CONSIDERING GOALS FOR SAFER ROADS

supporting a range of social and economic activities

As road owner and manager, as well as a 'road safety agency', the Launceston City Council recognises its duty of care and is committed to taking reasonable actions to provide safe travel conditions. This includes being aware of deficiencies in the road transport system; assessing and prioritising them, and having a system for remedying them.

There are many expectations of the road transport system and competing demands must be acknowledged when considering goals for safer roads.

Broad roles of each level of government

National	*State*	*Local*
Allocate agreed infrastructure resources including for safety, across the national highway and the local networks *Regulating safety standards for new vehicles*	*Funding, planning, design and operation of the road network* *Managing vehicle registration and driver licensing systems* *Enforcing road user responsibilities*	*Funding, planning, design and operation of the road networks in their local area*

In addition to providing for the movement of people and goods to support a range of social and economic activities, the road transport system is also expected:

- To provide for all members of the community as road users in an equitable manner.
- Not to impact negatively on residential and recreational areas, or on areas with high scenic and conservation values.
- To avoid unacceptable levels of pollution.
- To deliver the benefits of mobility while retaining the quality of amenity and to do so at reasonable costs whilst maintaining the highest level of safety for its users.

IMPLEMENTING THE STRATEGY

cooperation and collaboration key to successful implementation

WORKING WITH OTHER STAKEHOLDERS

The goal of a Safe System framework is to prevent injuries from occurring on the road network, however, it seems these are almost a by-product of the competing demands on the road transport system. As such, road safety goals cannot be achieved by road safety agencies working in isolation. Cooperation and collaboration between a range of government and non-government agencies, as well as the general public will be crucial to successful implementation. While successful implementation will require a whole of community effort, the council's

Road safety is everyone's responsibility:

- ***individual users***
- ***'system managers' like Council, government and industry organisations that build, design, maintain and regulate roads***
- ***various professional groups***
- ***parents and community***

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Infrastructure Services Directorate will carry the primary responsibility for this Road Safety Strategy. Leadership starts with the Launceston City Council and its Executive Management Team. Collaboration and commitment among council directorates and relevant stakeholders will result in enhanced road safety outcomes for Launceston.

FUNDING

The Launceston City Council spends just under 10% of its annual operating budgets on roads. It will continue to fund projects through this budget and seek external funding as necessary.

One of the ways the council has funded road improvements is through the Australian Government's Black Spot Program.

How Council accesses Black Spot funding:

Each year DIER invites councils to submit projects under the Nation Building Black Spot Program. Council has a selection process to decide which projects are submitted.

1. ***All casualty crashes over a 5-year period are sorted by junction or road length.***
2. ***Those with more than 3 casualty crashes are selected and listed according to traffic volume.***
3. ***Of the eligible sites, those where engineering measures will potentially address the crash record are considered.***
4. ***The crashes are analysed and grouped on the national guidelines.***
5. ***A crash mitigation scheme is considered and the reduction in crashes estimated.***
6. ***The cost benefit ratio is based on the estimated annual savings over a 20-year period divided by the cost of the scheme.***
7. ***Projects assessed as worthwhile are submitted to DIER for consideration.***

The council has been successful in attracting significant funding, receiving $1.1 million (22% of a total pool of $5 million) for three years from 2008-2011. Crash records indicate that treatments applied to black spots have been effective in addressing the identified target crashes.

Where projects are not eligible for funding under the Black Spot Program, the council will undertake risk assessment and analysis to inform investment decisions.

This strategy provides a framework and clear pathway to implementation using the Safe System approach.

USING THE SAFE SYSTEM FRAMEWORK TO GROUP THE STRATEGY ACTIONS

The Strategy Actions have been grouped using the Safe System framework. This is followed by the Implementation Plan that outlines:

- Each action item;
- Lead or responsible agency;
- Timeframes; and
- Investment required.
- It is intended that annual operational plans are then developed by Infrastructure Services Directorate for each of the high level strategy actions.

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STRATEGY ACTIONS

safer roads and road environments

Objective: create and maintain safe roads and roadside environment, embedding features that help protect users of the road network

The strategy actions related to safer roads and road environment is the area with the largest number of items as they specifically target infrastructure treatments to:

- Address crashes;
- Prioritise road sections according to crash history treat with infrastructure treatments and/or speed reduction measures;
- Address safety issues for vulnerable road users;
- Address safety on key arterial routes, prioritised by crash history; and
- Undertake route safety reviews and implement findings.

In partnership with key stakeholders, the council to seek funding for treatment of crash locations and road hazards

The council will do this by:

- Researching casualty crashes to support its submissions for funding under the Federal Black Spot Program

- Conducting risk assessment and
- Analysis of projects that are not eligible for the Federal Black Spot Program and may potentially be funded by the council, and
- Analysing the crashes and presenting potential projects to the council's Road Safety Consultative Committee. (See Appendix 3 for Terms of Reference).

Council to arrange an independent and formal examination of future roads and traffic projects to ensure the potential for crashes is minimised or eliminated.

The council will do this by:

Adopting a Road Safety Audit Procedure for new road and traffic management schemes (see Appendix 5); and ensuring the road safety audit team is independent of the design team.

Council to ensure safety of existing roads

The council will do this by:

- Undertaking safety audits of existing roads every ten years using the Austroads Safety Audit Guidelines and repeat as follows:

    - Arterial and sub arterial roads, every 5 years
    - Collector roads, every 5 years
    - Local roads, every 10 years
    - Sealed rural roads, every 10 years
    - Unsealed rural roads, every 10 years; and

- Conducting safety audits with greater frequency for busier roads.

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In recognition that road safety assets such as traffic control devices, signs, lines and guideposts are maintained by the state road department, the council to establish an audit system to pass the necessary information to DIER

The Launceston City Council will do this by:

- regularly inspecting asset condition and conducting specific audits of road safety assets and repeating as follows:
    - Arterial and sub arterial roads, every two years
    - Collector roads, every two years
    - Local roads, every five years
      Sealed rural roads, every five years
    - Unsealed rural roads, every five years; and
- Reporting the results of inspections and audits to DIER.

The council to manage roads and the road infrastructure so they function to the best of their capacity

The council will do this by:

- Improving the road network to bring it up to a consistent standard;
- Maintaining an asset management plan for its roads and road infrastructure assets; and
- Through its annual operating budget, continuing to invest in road improvements and traffic management measures on identified problem road sections and junctions.

The council to encourage the community to be active in road safety issues

The Council will do this by:

- Utilising Council's community engagement mechanisms (such as *Your Voice Your Launceston* and street meetings) to seek input from the wider community and being responsive to the issues raised; and
- Leading an accountable team to be supported by a reference group such as the Road Safety Consultative Committee.

The council to initiate / continue comprehensive data collection and analysis to inform investment decisions and monitor the Safer Roads Strategy

The council will do this by:

- Investigating issues and identified risks by road users and the council officers, and referring them to the Launceston Traffic Committee as necessary;
- Investigating crash locations and applying appropriate treatments; and
- Keeping abreast of DIER published reports into the effectiveness of black spot projects.

The council to improve the road environments by providing a level of service and infrastructure appropriate to the road hierarchy and accident risk

The council will do this by:

- Jointly with DIER, using the traffic study to guide the development of medium to long term plans for improving traffic safety, road

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congestion, and road conflicts between different classes of vehicles;

- Utilising the cycling and pedestrian strategy frameworks to install infrastructure during road upgrades, new or specific projects, and support pedestrian and active travel including riding near schools and across the general community;

- Adopting the recommendations in Launceston's Tourism Plan in relation to way finding signage;

- Clearly marking crossing zones with pavement treatment;

- Lobbying for all CAD traffic lights to be programmed with increased pedestrian early starts, longer crossing times and button free crossing;

- Continuing to invest in projects that support attractive landscaping, high quality design features, coordinated street furniture program, and streetscape treatments that enhance road users' walking, riding and driving experiences; and addressing road segments using recommended and proven infrastructure treatments to crash types (Austroads and Black Spot guidelines).

Council to continually improve the safety of roads and roadside environment

The council will do this by:

- Strictly adhering to current standards and technical specifications, including retrofitting where practicable;

- Controlling and monitoring potentially distracting signage and billboards;

- Encouraging DIER to maintain high quality road surfacing and line marking;

- Maintaining other infrastructure such as lighting, to minimise driver distraction and to protect vulnerable road users including motor cyclists, riders and pedestrians of all ages and abilities;

- Providing high standard infrastructure that supports and promotes walkability and active travel modes across all ages and abilities;

- Installing traffic calming infrastructure or posted speed reductions as needed, in liaison with DIER and police; and

- Identifying routes for improving maintenance of roads and roadsides to cater for the specific needs of motor cyclists.

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safer people

Objective: communicate and promote key road safety messages, events and campaigns with emphasis on the Safe System prevention approach and the need for road user responsibility and compliance within that framework

Road safety education is predominantly a state responsibility, working through the Community Road Safety Partnerships. The strategy actions related to safer people therefore focus on the role of the council in promoting its own campaigns and supporting DIER with public awareness and education that improve road user behaviour.

Council to provide facilities, programs and services that promote and enhance road safety

Council will do this by:

- Retaining the Road Safety Transport facility in Lawrence Vale Road;
- Introducing a campaign on leaving adequate space (rear end crashes), in collaboration with DIER; and
- Providing resources, information and internet links on the council's website.

The council to support the work of other road safety and related agencies in influencing road user behaviour

Council will do this by:

- Continuing active membership of the Community Road Safety Partnerships program led by DIER;
- Promoting and expanding community-based health programs such as group walking, riding and Active Launceston programs;
- Producing information and resources that encourage safe, consistent and compliant behaviour as they relate to safe driving, walking and riding in Launceston (including: use of crossing infrastructure where provided, and highlighting posted speed limits); and
- Partnering/supporting and highlighting other agencies' road safety campaigns.

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The council to raise community awareness of roadside environment safety

The council will do this by:

- Utilising the provisions under the planning scheme to promote awareness of the potential and correct procedures for signage, including billboards; and

- Encouraging community to identify and report missing or damaged infrastructure.

safer speeds

Objective: balance speed with road environment to manage crash impact forces to within human tolerance through speed limits and forgiving road sides

Setting of speed limits is a state responsibility. Council's role in safer speeds is negotiating appropriate limits for its road network, particularly for high-volume traffic and/or higher-risk sections of the road network. The council can also influence speeds through road design and traffic management measures.

The council to ensure network-wide alignment of speed limits with the inherent risk and function of the road and roadside environment

The council will do this by:

- Working with DIER to address higher-risk sections of the road network and recommending appropriate limits;

- Seeking funding and partnerships to treat identified sections; and

- Monitoring crash statistics and analyse the history for trends.

The council to raise awareness of changes in speed limits of its road network

The council will do this by:

- Informing road users when DIER introduces a new default non- urban speed limit of 90 kph for sealed roads and 80 kph for unsealed roads;

- Ensuring correct signage is installed when

speed limits change and advising DIER; and

Supporting national and state speed awareness programs, particularly in local streets, high risk pedestrian and school speed zones.

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safer vehicles

Objective: improve the quality across the council's fleet and increase enhanced safety features and use of personal protective gear

These strategy actions address the need for improved vehicle safety. In Australia, vehicle specifications and standards is a national government responsibility.

With 85% of vehicles being imported in Australia, local government has little role in setting global standards. It does, however, have a role in managing its vehicle fleets to ensure high levels of occupant protection. It also has a role in encouraging the use of enhanced safety features and personal protective gear.

The council to apply proven fleet management

The council will do this by:

- Implementing its 'rear end' program of fitting Council vehicles with sensors to detect and brake when likely to collide;
- Making greater use of technological aids (such as alcohol interlocks, intrusive seatbelt reminder systems and intelligent speed adaptation technology);
- Improving vehicle management practices through attendance of relevant training and development opportunities by fleet managers, works engineers, asset managers and procurement officers; and
- Educating employees on their responsibilities to exercise safe driving behaviour.

The council to promote increased use of enhanced safety features and personal protective gear

The council will do this by:

- Highlighting the benefits and good practice examples of bicycle helmets for cyclists and for scooter users, and appropriate lights and reflectors for riding at night.

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IMPLEMENTATION PLAN

Action item	Lead Directorate/Agency	Timeframe				Investment
		Immediate	0-2 yrs	3-5 yrs	5-10 yrs	
Safer roads and road environments						
Seek funding for treatment of crash locations and road hazards	Infrastructure Services in partnership with key stakeholders	**Annual program**	✓	✓	✓	Capital Works Program and new funding
Independent and formal examination of future roads and traffic projects	Infrastructure Services	Road Safety Audit Procedure	✓	✓	✓	To be adopted
Regular safety audits of existing roads and greater frequency for busier roads	Infrastructure Services (using Austroads Safety Audit Guidelines)			✓	✓	To be adopted
Establish audit system to pass necessary information to DIER	Infrastructure Services			✓		To be adopted
Improve road network to a consistent standard and maintain asset management plan	Infrastructure Services	Annual Program	✓	✓	✓	Capital works program
Encourage community input and use Residents' Panel	Road Safety Consultative Committee		✓	✓	✓	Existing
Initiate and continue data collection and monitor the Road Safety Strategy	Infrastructure Services	Annual Program	✓	✓	✓	Existing
Provide level of service and infrastructure appropriate to the road hierarchy	Infrastructure Services	Annual program	✓	✓	✓	Capital works program
Continue to improve the safety of roads and roadside environment	Infrastructure Services	Annual program	✓	✓	✓	Capital works program

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Action item	Lead Directorate/Agency	Timeframe Immediate	0-2 yrs	3-5 yrs	5-10 yrs	Investment
Safer people						
Provide and maintain facilities, programs and services that enhance road safety	Infrastructure Services	Annual program	✓	✓	✓	Existing
Support the work of other road safety and related agencies in influencing road user behaviour	Infrastructure Services Development Services	Annual program	✓	✓	✓	Existing and explore external funding
Raise community awareness of road environment safety	Infrastructure Services Development Services	Annual program	✓	✓	✓	Existing
Action item	**Lead Directorate/Agency**	**Timeframe Immediate**	**0-2 yrs**	**3-5 yrs**	**5-10 yrs**	**Investment**
Safer speeds						
Network-wide alignment of speed limits	Infrastructure Services DIER	Annual program				Existing and explore external funding
Promote changes in speed limits of its road network	DIER Infrastructure Services	Annual program				
Action item	**Lead Directorate/Agency**	**Timeframe Immediate**	**0-2 yrs**	**3-5 yrs**	**5-10 yrs**	**Investment**
Safer vehicles						
Apply proven fleet management	Infrastructure Services	Annual program				
Promote increased use enhanced safety features and personal protective gear	Infrastructure Services Development Services	Annual program				

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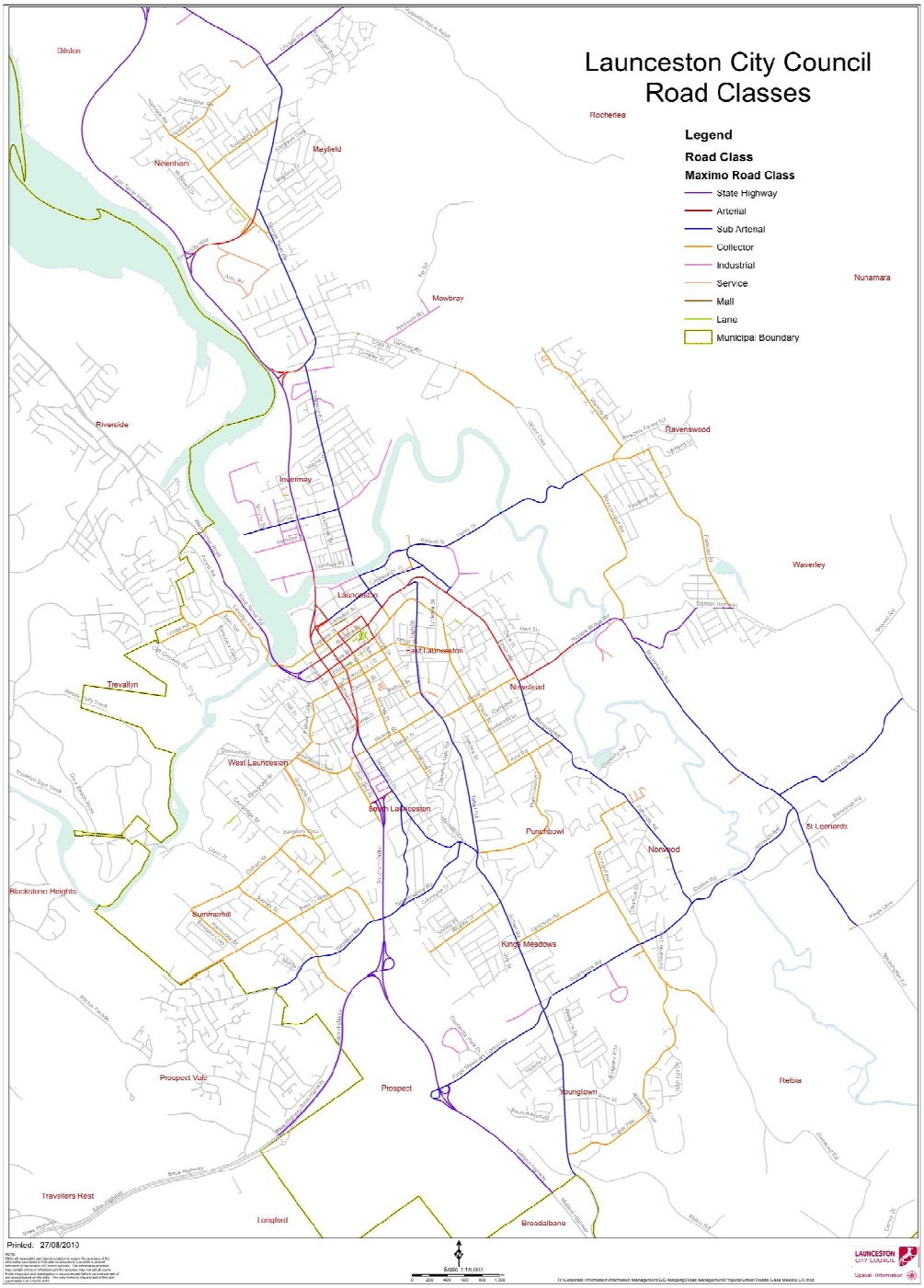

Figure 3 – Launceston City Council Road Classes

REFERENCES

Austroads Safety Audit Guidelines

Australian National Road Safety Strategy 2011-2020

Australian Government - Nation Building Program - Black Spot Projects - Notes on Administration

DIER: Our Safety, Our Future - Tasmanian Road Safety Strategy 2007-2016
DIER: Tasmanian Road Safety Strategy 2007-2016, Second Action Plan 2011-2013
DIER: The AusLink Black Spot Program in Tasmania
DIER: Non-Urban Road Network Strategy
DIER: A Review of Serious Casualty Pedestrian Crashes in Tasmania (Feb 2012)
DIER - A Review of Fatal Road Crashes in Tasmania (Apr 2010)
(http://www.transport.tas.gov.au)

Institute of Public Engineering Works Australia: *Best Practice Approach to Road Safety in Local Government.* (http://www.ipwea.org.au/RoadSafety/AboutRS/BestPractice)

Lahausse J, Van Nes N, Fildes B, Langford J and Keall M (2009), *Assessing Community Attitudes to Speed Limits,* Monash University Accident Research Centre (http://www.transport.tas.gov.au/ data/assets/pdf_file/0006/52998/Assessing_Community_Attitudes_to_Speed_Limits_-_National_Report.pdf)

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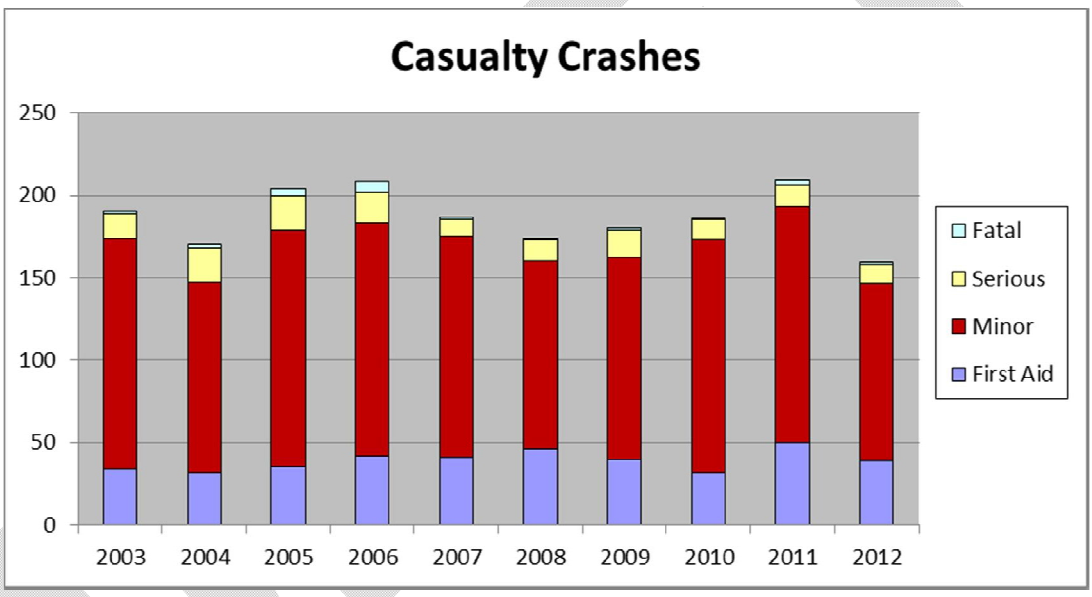
Appendix 1 - 10 Year Crash Records

Are crash & casualty numbers increasing or decreasing?

The following graph illustrates the trends in numbers of crashes over the 10 years, 2003-2012. Crashes are the events that result in a police report accessed through the DIER database.

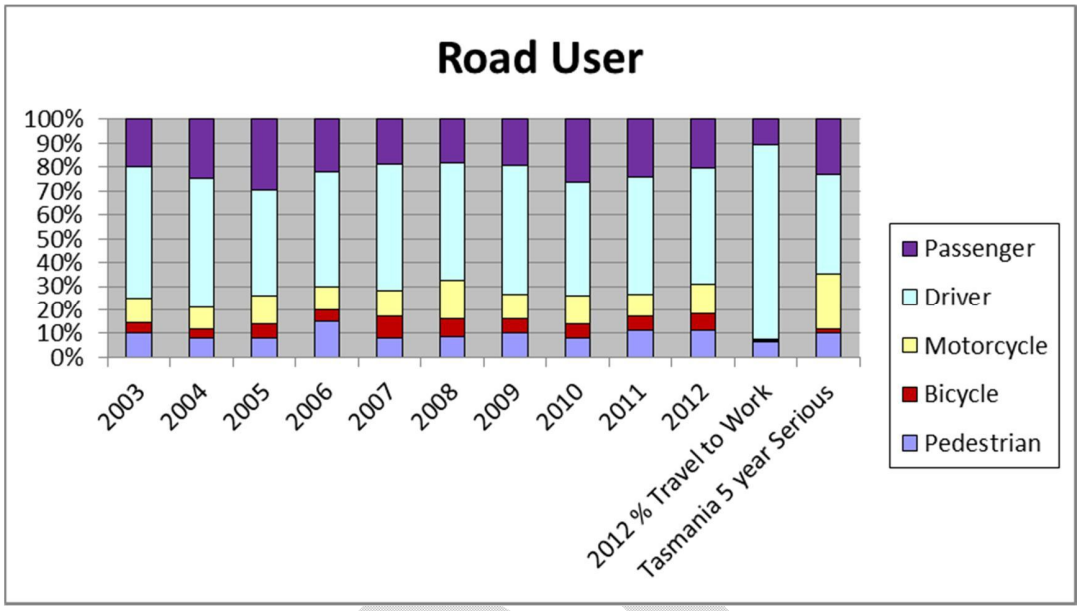
The total crash figures indicate a general downward trend in crashes over the last ten years. This is most noticeable for serious and fatal injury crashes and those resulting in property damage. Numbers of minor and first aid injury crashes have remained fairly static except for a significant drop in 2012.



Numbers and severity of casualties, as would be expected, follow a similar trend to the numbers of crashes.

Who was involved in the crashes?

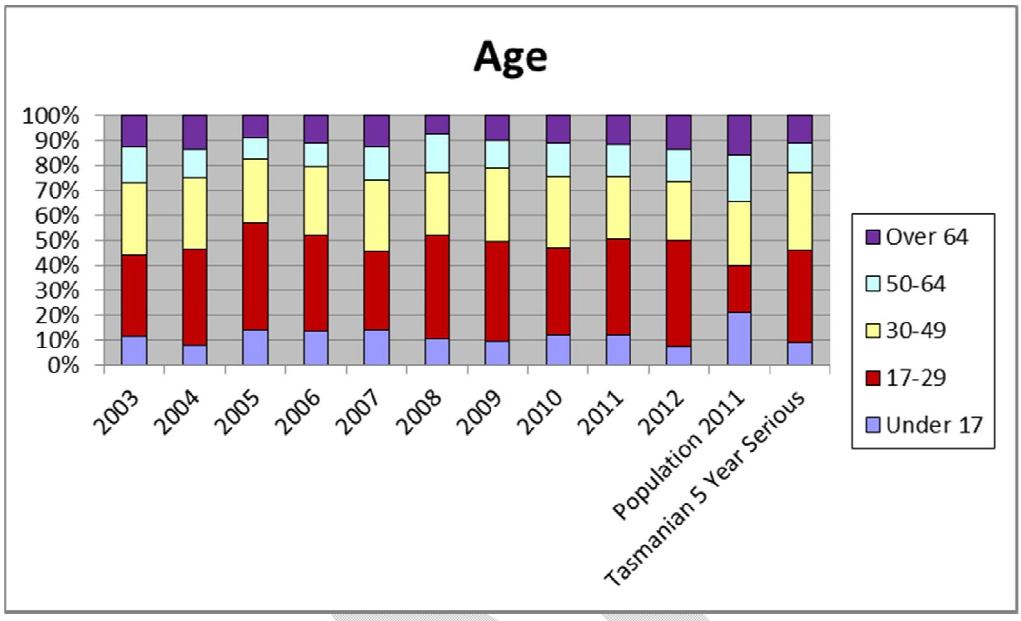
Noticeable trends in the following graph include an increase in the numbers of passengers injured and a recent increase in pedestrian injuries.



To determine a meaningful rate it would be necessary to know how many road users there are in each category. The travel to work figures from the 2006 census provides some indication of this. These show under representation of drivers but overrepresentation of all other road users involved. The proportion of pedestrians involved in crashes is closest to the proportion that travels to work on foot. The proportion of pedestrians involved in crashes in Launceston is less than the figure for Tasmania (1996-2005, 11%) but the proportion of bicyclists is higher (Tasmania - 4.0%).

Which age group is involved in crashes?

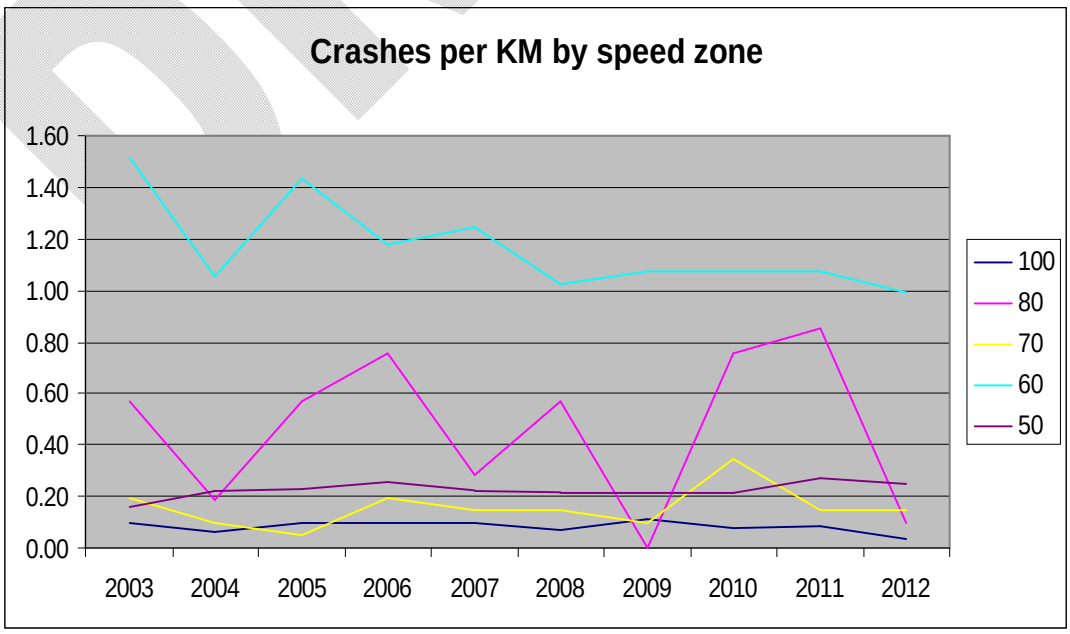
The age distribution of those involved in casualty crashes is presented in the following graph. Numbers remain fairly constant but using the 2006 census data indicates an overrepresentation of 17-29 year olds in crashes, followed by those aged between 30 and 49.



The Tasmanian Road Safety Strategy has some figures for serious casualties:

- 8.9% of serious casualties are children, more than Launceston.
- One third of serious casualties involving 16-25 year olds, similar to Launceston.
- 11% of serious casualties involving those over 66, similar to Launceston

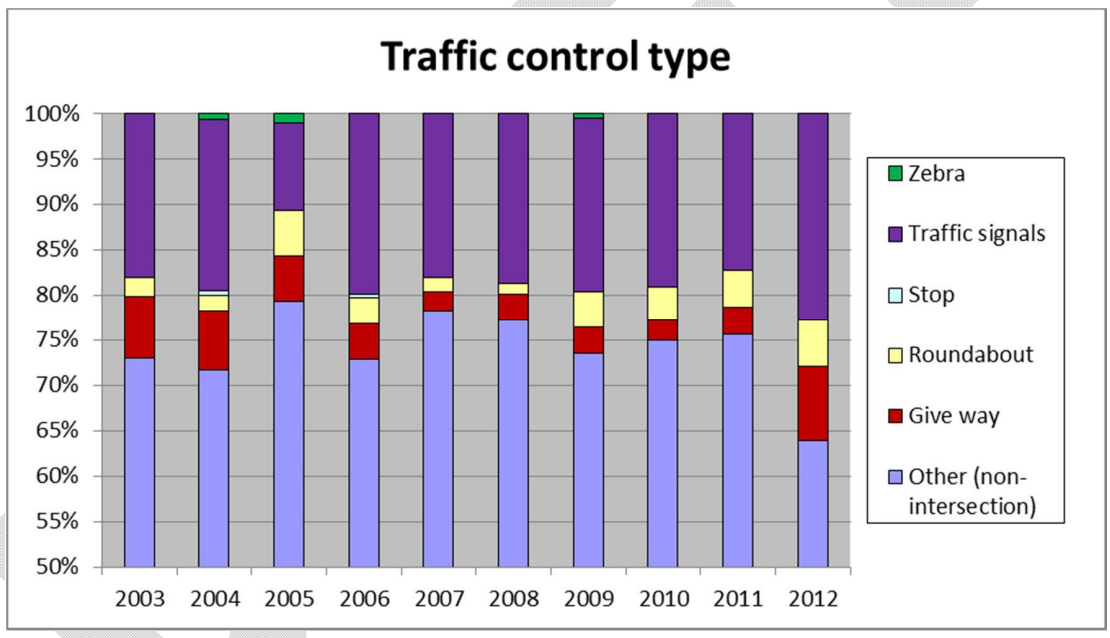
Where did crashes happen and in what speed zone?



This graph gives details of crashes per kilometre in different speed zones by year. In addition to this, volumes of traffic would help to determine a comparative rate but are difficult to compile for a whole network. The 60 kph roads have the highest crash rate but are generally the arterial roads that carry the highest volume of traffic. The crashes on these roads are also showing an encouraging downward trend.

Where did crashes happen: in what location and what traffic control type?

There are 68 signalised junctions in the Launceston area and 57 roundabouts. Many of the roundabouts are on quiet residential streets compared to the signalised junctions that will manage most of the urban traffic. Considering the large proportion of 'give way' intersections, the low number of crashes at 'give way' controlled junctions is positive.



Tables 8 and 9 in Appendix 1 list locations in Launceston with five or more crashes, firstly on road links and secondly at junctions. By utilising traffic flow data and road length these locations are given a relative crash rate to indicate the higher risk sites. These are shown on the following map:

Insert map

Because of very low traffic volumes the crash rate at the junction of Gleadow Street and Holbrook Street was significantly higher than any other location; the next site is Canning Street/George Street.

What happened?

Police crash records are classified with a description of the pedestrian or vehicle manoeuvre. There are 80 different definitions under 10 categories.

- Rear end crashes are clearly the highest proportion, and also the most difficult to address.
- Cross traffic crashes are the next highest, many of these will be at signal controlled junctions and involve a vehicle not stopping at a red light.
- Numbers of vehicles leaving the road is also significant. Around a quarter of DCA171 crashes occurred on 100kph roads and the same numbers on 60 and 50 kph roads.
- Vehicles turning right across oncoming traffic form a significant number.
- Pedestrian crashes are consistently high and increasing.

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Table 1: Crash Severity by year

Year	Fatal	Serious	Minor	First Aid	Property Damage	Not known	Total Crashes
2003	1	15	140	34	658	56	904
2004	2	21	115	32	701	53	924
2005	4	21	144	35	687	70	961
2006	6	19	141	42	586	58	852
2007	2	10	134	41	619	63	869
2008	1	13	114	46	639	61	874
2009	1	17	122	40	650	55	885
2010	1	12	141	32	583	69	838
2011	3	13	143	50	536	68	813
2012	1	12	107	39	391	64	614

CRASH DEFINITIONS

FATAL: Where a person dies within 30 days
SERIOUS: Where a person is admitted to hospital for 24 hours or more
MINOR: Where a person is treated in hospital without an overnight stay
FIRST AID: Where an injury is treated without a hospital admission
PROPERTY: Property damage only

Table 2: Casualty Severity by year

Year	Fatal	Serious	Minor	First Aid	No injury	Not known	Not stated	Casualty No.
2003	1	15	171	37	1860	172	1	224
2004	2	25	147	44	1944	168	0	218
2005	4	29	183	50	1820	109	34	266
2006	7	22	183	56	1716	56	95	268
2007	2	10	164	62	1755	71	106	238
2008	1	13	143	60	1694	79	91	217
2009	1	19	146	60	1771	80	121	226
2010	1	16	167	63	1547	111	89	247
2011	3	15	187	71	1485	94	76	276
2012	1	15	147	60	1238	178	69	223

FATAL: Where a person dies within 30 days
SERIOUS: Where a person is admitted to hospital for 24 hours or more
MINOR: Where a person is treated in hospital without an overnight stay
FIRST AID: Where an injury is treated without a hospital admission
PROPERTY: Property damage only

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Table 3: Casualty Crashes - Road user

Year	Cyclist	Driver	Motor cycle pillion	Motor Cycle rider	Other	Passen-ger	Pedes-trian
2003	9	123	0	23	2	44	23
2004	8	118	0	20	0	54	18
2005	15	117	1	31	1	79	22
2006	14	129	1	24	1	59	40
2007	22	126	1	24	1	45	19
2008	16	107	1	34	1	39	19
2009	14	121	0	23	1	44	23
2010	14	117	2	28	1	65	20
2011	17	135	2	23	1	67	31
2012	16	108	2	26	0	46	25
Av %	6.0	50.0	0.4	10.7	0.4	22.6	10.0
2006 %	0.89	75.55		0.51		10.08	7.39
2012 %	0.77	80.88		0.72		10.94	6.19

Table 4: Casualty Crashes - Age

Year	Under 17	17-29	30-49	50-64	Over 64	Not stated
2003	26	72	64	32	28	2
2004	18	84	62	25	29	0
2005	37	112	68	22	23	4
2006	36	103	73	26	29	1
2007	33	74	68	32	29	2
2008	23	89	55	33	16	1
2009	21	90	67	25	22	1
2010	30	85	69	33	27	3
2011	33	107	69	36	31	0
2012	17	93	52	29	29	4
Av	27.4	90.9	64.7	29.3	26.3	
L'ton 2006	13626	11529	16730	10993	9340	
L'ton 2012	13664	12104	16461	11822	10137	
% Population	21.3	18.9	25.6	18.4	15.8	
% Crashes	11.4	37.8	26.9	12.2	10.9	

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Table 5: Casualty Crashes - Sealed/unsealed

Year	Sealed	Unsealed
2003	184	5
2004	166	4
2005	199	5
2006	207	3
2007	182	7
2008	170	4
2009	174	6
2010	184	2
2011	204	5
2012	156	2

Table 6: Casualty Crashes - Speed Zone

Year	110	100	90	80	70	60	50	40
2003	4	33	0	6	4	89	52	1
2004	8	23	0	2	2	62	73	0
2005	3	34	1	6	1	84	74	1
2006	9	33	1	8	4	69	84	2
2007	2	34	0	3	3	73	72	2
2008	6	25	0	6	3	60	70	3
2009	2	39	0	0	2	63	71	3
2010	11	27	0	8	7	63	71	0
2011	10	29	2	9	3	63	89	4
2012	0	11	0	1	3	58	82	4
Av	*5.5*	*28.8*	*0.4*	*4.9*	*3.2*	*68.4*	*73.8*	*2*
Road length km		351.6		10.6	20.4	58.7	326.0	1.1
Crash/km		0.08		0.46	0.16	1.16	0.23	1.82

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Table 7: Casualty Crashes - Traffic control

Year	Give way	Round about	Stop	Traffic signals	Zebra	Other
2003	13	4	0	34	0	138
2004	11	3	1	32	1	122
2005	10	10	0	19	2	157
2006	8	6	1	41	0	151
2007	4	3	0	34	0	148
2008	5	2	0	32	0	132
2009	5	7	0	34	1	131
2010	4	7	0	35	0	138
2011	6	8	0	34	0	149
2012	13	8	0	36	0	101

Table 8: Casualty Crashes 2003-2012. Location, Road Section, 5+ crashes

Roads	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	MVKM	Date
Alanvale Road	0	3	0	0	0	0	2	2	0	1	0.32	2011
Bathurst Street	0	0	0	3	1	1	2	1	2	1	0.10	
Brisbane Street	0	2	1	1	1	4	2	1	1	0	0.32	
Charles Street	0	1	1	1	1	2	0	1	3	3	0.22	
David Street	1	1	0	1	1	0	0	2	1	0	0.26	
Elphin Road	2	1	1	0	4	1	3	1	5	2	0.17	2007
Forster Street	0	0	1	0	0	0	3	1	1	1	0.39	
George Street	2	1	1	2	0	1	1	0	1	1	0.39	
George Town Road	1	1	7	4	2	0	4	3	5	3	0.25	2010
Glenwood Road	0	0	1	2	1	0	0	2	1	0	0.90	
Golconda Road	2	4	2	4	0	2	3	4	2	2	0.24	
Henry Street	4	4	1	1	1	0	0	0	0	2	0.27	
High Street	0	1	2	0	1	0	1	2	1	1	0.10	
Hillside Crescent	0	1	1	1	0	0	1	1	1	0	0.26	
Hobart Road, Kings Meadows	6	7	2	5	4	1	2	6	7	1	0.35	2002
Hobart Road,Youngtown	0	0	1	3	0	2	2	2	4	1	0.30	2012
Invermay Road	5	2	5	3	4	3	4	2	3	5	0.22	2009
Invermay Road,Mowbray	3	4	2	2	1	5	2	3	4	8	0.47	
Lambert Street	1	0	0	0	1	1	0	0	2	0	0.75	
Lower Charles Street	0	1	1	1	0	1	1	0	0	0	0.22	

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Table 8: Continued												
Mayfield Street	1	0	1	1	2	1	1	0	1	0	1.43	2012
Norwood Avenue	0	0	0	0	1	2	1	0	2	0	0.42	
Paterson Street	1	1	2	3	1	0	0	3	0	2	0.38	
Peel Street West	1	1	2	0	0	0	0	0	3	1	0.43	
Penquite Road	2	0	4	1	1	0	0	0	1	2	0.17	
Pioneer Parade	0	1	0	0	0	0	1	2	0	1	9.41	
Pipers Brook Road	0	0	1	1	0	1	1	0	1	0	0.42	
Ravenswood Road	0	1	2	0	1	0	1	0	0	0	0.13	
Second River Road	1	0	1	1	1	0	1	0	1	2	1.04	
St John Street	1	0	1	0	1	0	0	3	2	0	0.36	
Talbot Road	0	0	2	2	0	0	0	0	1	1	0.11	
Vermont Road	1	1	1	2	0	0	1	1	1	1	0.10	2009
Warring Street	0	0	1	1	0	0	0	0	2	2	0.68	
Wellington Street, Launceston	1	0	6	4	4	4	3	2	5	2	0.22	
Wellington Street, South Launceston	1	2	2	3	3	4	1	3	4	4	0.18	2011
Westbury Road, Prospect	1	1	1	0	1	0	0	0	1	0	0.06	
Westbury Road, South Launceston	0	1	1	0	2	1	1	2	1	1	0.17	
York Street	1	1	2	3	4	1	3	3	3	1	0.32	

Notes:

- Excludes: Locations on State roads
- MVKM - Crashes per million vehicle KM
- Date - Completion of traffic management measures or road improvement

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Table 9: Casualty Crashes 2003-2012. Location, Junction, 5+ crashes

Junctions	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	MV	Date
Arthur Street/ High Street	0	1	2	0	0	1	1	0	0	0	0.08	
Balfour Street/ Bathurst Street	0	0	0	2	4	2	0	0	0	0	0.10	
Balfour Street/ Wellington Street	1	0	1	1	0	1	0	0	0	1	0.05	
Bathurst Street/ Brisbane Street	2	1	1	1	1	1	0	1	0	0	0.08	
Bathurst Street/ Canning Street	1	0	1	1	0	0	0	1	1	0	0.06	2008
Bathurst Street/ Frederick Street	2	1	1	1	2	0	1	0	1	0	0.10	
Bathurst Street/ York Street	0	2	1	1	1	0	1	2	1	0	0.08	
Boland Street/ Esplanade/Tamar	1	0	2	1	0	2	1	1	1	0	0.06	2012
Brisbane Street/ Wellington Street	0	1	1	0	0	0	1	1	1	3	0.07	
Canning Street/ George Street	0	3	1	2	0	1	1	0	3	1	0.47	
Charles Street/ Cimitiere Street	1	1	0	2	0	0	0	1	0	0	0.06	
Charles Street/ Elizabeth Street	0	1	3	2	1	2	0	0	0	0	0.18	
Charles Street/ Paterson Street	0	0	1	0	1	2	1	1	1	1	0.11	2011
Cimitiere Street/ Tamar Street	1	2	0	1	3	3	0	1	0	0	0.15	
Frederick Street/ Wellington Street	2	0	2	1	1	1	0	2	0	0	0.07	2008
George Street/ York Street	1	0	0	0	2	0	1	2	1	2	0.16	
George Town Road/ Lilydale Road	0	1	0	1	0	0	2	0	1	0	0.08	
Gleadow Street/ Holbrook Street	1	1	1	1	0	0	2	1	0	0	1.53	2010

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Table 9: Continued

Goderich Street/ Lindsay Street	1	0	1	0	0	0	0	2	4	1	0.07	
Hobart Road/ Opossum Road	0	0	0	1	0	1	4	0	2	2	0.14	
Hobart Road/ Punchbowl Road	1	2	0	0	0	1	1	0	0	0	0.08	
Howick Street/ Wellington Street	1	0	1	2	1	3	0	0	1	0	0.08	
Normanstone Road/ Westbury Road	2	0	1	0	0	2	1	0	0	1	0.11	2011
Paterson Street/ St John Street	0	0	1	0	2	0	1	1	0	0	0.10	
Paterson Street/ Wellington Street	2	0	0	1	0	2	1	2	0	2	0.08	
Wellington Street/ Westbury Road	1	0	2	0	1	1	0	0	0	0	0.04	
Wellington Street/ York Street	1	3	0	0	1	1	0	1	1	2	0.08	

Notes:

- Excludes: Locations on State roads
- MV - Crashes per million vehicles
- Date - Completion of traffic management measures or road improvement

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Table 10: Casualty Crashes - Definitions for Classifying Accidents (5+ crashes)

Year	100	102	110	113	121	130	132	147	160	171	173	174	180	181	183	184
2003	12	1	14	8	13	32	6	5	2	8	6	1	5	10	11	1
2004	6	4	18	4	9	28	1	1	10	8	5	3	5	13	6	2
2005	5	4	19	7	6	26	8	5	7	13	8	5	10	6	6	4
2006	15	9	25	6	4	27	8	5	8	8	3	3	4	10	7	7
2007	8	3	18	6	8	24	7	10	6	8	6	5	4	7	11	1
2008	3	10	18	4	15	20	1	4	6	8	4	10	4	8	9	2
2009	9	6	14	4	10	26	2	6	4	8	2	5	7	10	8	4
2010	5	6	17	8	13	16	2	7	6	15	8	7	3	6	10	7
2011	12	6	15	4	9	32	3	8	6	16	4	7	2	15	9	3
2012	6	3	18	7	12	16	4	7	7	9	9	4	1	6	3	2
Total	181	154	286	171	220	377	174	205	222	272	228	224	225	272	263	217

DCA

100 Pedestrian crossing road, hit by vehicle approaching from the right
102 Pedestrian crossing road, hit
110 Cross traffic
113 Vehicle turns right across path of vehicle approaching from the right
121 Vehicle turns right across path of oncoming vehicle
130 Vehicles in same lane, rear end
132 Vehicle hits rear of right turning vehicle
147 Vehicle emerges from driveway into path of vehicle
160 Vehicle hits parked vehicle on path
171 Left off carriageway into object or parked vehicle
173 Right off carriageway into object or parked vehicle
174 Out of control on carriageway (straight)
180 Off carriageway right bend
181 Off right bend into object/parked vehicle
183 Off left bend into object/parked vehicle
184 Out of control on carriageway (bend) by vehicle approaching from the left

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Table 11: Recommended treatments per crash-type

DCA Code	Crash description	Recommended treatments
100	Pedestrians crossing road hit by vehicle	• Central median • Pedestrian refuge • Pedestrian crossing • Pedestrian overpass/underpass • Improved lighting • Improved signals (early start) • Parking controls • Reduce vehicle speeds
110	Cross traffic	• Street closure • Traffic islands on approaches • Extend median through intersection • Grade separation • Priority signs
121	Vehicle turns right across path of oncoming vehicle	• Add right turn arrow • Ban right turns • Street closure • Traffic islands on approaches • Extend median through intersection
130	Vehicles in same lane, rear end	• Right turn lanes • Non-skid surface • Reduce vehicle speeds
171	Left off carriageway into object or parked vehicle	• Guard rail • Non-skid surface • Seal shoulder • Edge lines
181	Off right bend into object or parked vehicle	• Guard rail • Non-skid surface • Seal shoulder • Edge lines • Advisory speed limits • Reconstruct superelevation

Based on:Black Spot Projects, Notes on Administration, Australian Government 2009

- Guide to Road Safety Part 8: Treatment of Crash Locations, Austroads 2009

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Appendix 2: Compliance with other Launceston Strategies

Document title	Links to road safety
Launceston Vision 2020 (2006)	This document presents community vision for the development of Launceston. The main relevant goal is making the CBD more pedestrian friendly.
Annual Plan 2011/2012	• Establish a long term solution to the movement of traffic and heavy vehicles through the urban areas of Launceston to reduce congestion and accommodate growth. • Provide and promote safe City environments.
Strategic Plan 2008-2013	• Establish a long term solution to the movement of traffic and heavy vehicles through the urban areas of Launceston to reduce congestion and accommodate growth. • Provide & promote safe City environments.
Ten year major works program 2007-2017	Contains eight specific road safety improvement schemes, all of which have now been completed.

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Appendix 2: Continued

Launceston Community Plan (May 2010)	A safe & secure community • Make Launceston 'Safer by Design' • Lead Agency: Launceston City Council • Partners: Department of Infrastructure, Energy and Resources, Cityprom, Metro • Actions already underway or completed: • Continuing to install infrastructure to maintain and enhance safety such as ……. improved street lighting, improved pedestrian safety, and improved shared road use – grant application submitted for funding to further extend the cycle ways network. • Maintain and enhance road safety campaigns • Lead Agency: Department of Infrastructure, Energy and Resources • Partners: Road Safety Task Force, Launceston City Council Actions already underway or completed: • Supporting ongoing review and implementation of road safety strategies and continued enforcement of traffic regulations – Council is a partner in the State Government Community Road Safety Partnership programme. • Actions to be addressed in one-two years: • Support ongoing road safety public awareness campaigns
Parking & Sustainable Transport Strategy	Report identifies 1% of people cycle to work for all or part of their journey and 6% of people walk to work. It suggests that walking and cycling infrastructure must be delivered in the context of travel demand management and integrated with wider transport and land use management and operational policies. The integration will ensure that pedestrians and cyclists are automatically considered and prioritized, and that opportunities to incorporate walking and cycling improvements into other projects and programs are taken up. Greater use of public transport, walking and cycling for travel to the city centre is an essential outcome of the strategy.

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Document title	Links to road safety
Launceston Public Space Public Life A vision for city spaces and overall strategies about how and where to strengthen and invite more public life. The recommendations focus on policy making and practical interventions in the public realm	The focus of the study was the city centre (1.32 km2) with the boundaries of the core study being North Esk River (north), Tamar St (east), Canning St (South) and Margaret St (west) – these are the most intensely used areas in the city and considered the main feeders to city centre in terms of pedestrian movement to and from the city. The recommendation focus on capitalizing on amenities, ensuring a people-friendly traffic system and a city that is better for walking, a diverse city centre and encouraging people to come into the city: Strengthen the connections between the city and the riverfront Give higher priority to pedestrians to create more lively and social environments, and make walking the most attractive mode of transport Adding amenity for pedestrians, link benches in the pedestrian network, restoring laneway linkages and connecting fragmented green network Missing links identified: to Seaport Marina (boardwalk on the waterfront is isolated from the city centre), Brickfields Reserve, Royal Park and the esplanade at the North Esk River. Key points of entry to the inner city walking network are not clearly defined. The North Esk River is not an integrated part of the walking network because the road system and the levees form a barrier.
Transport Asset Management Plan	The Transport Asset Management Plan was adopted by Council in November 2012. The Plan is the key document outlining infrastructure risks, level of service provided by Council and the capital and operational funding required to deliver new and maintain our road, bridge and footpaths.

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Document title	Links to road safety
Cycling Infrastructure Strategy	Council approved the Launceston Cycling Infrastructure Strategy [3] in February 2009. The strategy contains a number of principles, including: *All roads in Launceston are bike routes - The whole road network is a 'cycling network', identifying specific routes is a method of prioritising investment. Cyclist's needs should not be ignored on roads that are not on an identified 'network'.* The strategy also identifies an arterial bike route network which includes a number of the links that are along roads also identified in the Black Spot programme. The aims of the two programmes are complementary. Black Spot schemes have therefore been designed to accommodate the needs of cyclists either specifically as part of the arterial network or so that the scheme does not have an adverse impact on cycling. Some traffic management measures can make roads less comfortable for cyclists, particularly those that reduce lane widths and force cyclists to share space with faster motor vehicles. Black Spot schemes often include improved delineation which addresses crash patterns involving vehicles leaving the road. The provision of bicycle lanes (or at least edge lining) contributes towards this benefit.
Pedestrian Strategy	The Launceston Pedestrian Strategy outlines Council's actions to make Launceston a great walking city – a city with a people friendly traffic system, and a place where people like and choose to walk. Its overall aim is to encourage walking as a legitimate mode of transport by creating an environment where walking is a safe, convenient, stimulating and appealing experience for everyone in every neighbourhood in Launceston. This document provides for a system of infrastructure to encourage more pedestrian activity. In recognition that the built environment can hinder or help an individual to be more active and healthy, it outlines policies and practices that ensure safe, direct, attractive, comfortable and ideal pedestrian conditions.

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Tasmanian Road Safety Strategy (covers period 2007-2016)	The strategy has had two action plans, the first operating 2007/08-2009/10 and the second 2011-2013. The focus of the action plans are: First Action Plan 2007/08-2009/10 • Safer travel speeds • Flashing lights at school speed zones • Safer vehicle speeds in shared urban spaces • Variable speed limits at high crash locations • Demonstrations of safer speed limits • Review of speeding penalties • Public education • Enforcement • Best practice infrastructure • Flexible safety barrier along existing median • Flexible safety barrier along sides of roads • New painted median with flexible safety barrier • Safer roads program • State Black Spot program • MAIB Black Spot program • Auslink Black Spot program Best practice infrastructure • Flexible safety barrier along existing median • Flexible safety barrier along sides of roads • New painted median with flexible safety barrier • Safer roads program • State Black Spot program • MAIB Black Spot program • Auslink Black Spot program

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Jurisdiction	Links with this Strategy
	• Increased safety for young road users • Novice driver reforms • Disadvantaged young people learner licence support • Public education • Enforcement • Resources for schools • Enhanced vehicle safety • -Vehicle safety business case for government fleet • Public education campaign on choosing safer vehicles • Community based education campaign on choosing safer vehicles • Continue state support for Australian New Car Assessment Program • Enforcement of heavy and public passenger vehicle standards • There is continued support for Community Road Safety Partnerships, School bus safety, Motorcycle safety, Heavy vehicle safety and automatic number plate recognition. • Second Action Plan 2011-2013 • Safer travel speeds • Safer rural travel speeds • Investigate reduced speed limit on 60kph roads • Implement point to point speed enforcement • Pedestrian safety - variable speed limits • Review of speeding penalties • Educate community about the impact of speeding • Ongoing actions as the first action plan • Best practice infrastructure • Safe system - mid barriers • Safe system - side barriers • Tactile centre line marking • Road safety audits

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Jurisdiction	Links with this Strategy
	• Second Action Plan 2011-2013 • Safer travel speeds • Safer rural travel speeds • Investigate reduced speed limit on 60kph roads • Implement point to point speed enforcement • Pedestrian safety - variable speed limits • Review of speeding penalties • Educate community about the impact of speeding • Ongoing actions as the first action plan • Best practice infrastructure • Safe system - mid barriers • Safe system - side barriers • Tactile centre line marking • Road safety audits • Motorcycle safety measures • Promote safe system approach to road design • Enhanced delineation • Ongoing actions as the first action plan • Increased safety for young road users • Investigate further changes to the Graduated Licensing System • Investigate ways to encourage young drivers to drive safe vehicles • Ongoing actions as the first action plan • Enhanced vehicle safety • Review mandatory safety standard for government vehicles • Develop & promote vehicle fleet safety standards for commercial fleets • Ongoing actions as the first action plan

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Jurisdiction	Links with this Strategy
	• Other complementary initiatives include: • Intelligent speed enforcement • Alcohol interlock program • Electronic message signs • Enhanced collection of traffic data • Investigate inattention as a crash factor
Australian National Road Safety Strategy (adopted in 2011, it covers period to 2020 and follows a previous strategy covering the preceding decade, 2001-2010)	The strategy follows the safe system principles and its actions are based around: • Safe roads • Safe speeds • Safe vehicles • Safe people • The main strategic challenges of the new strategy are: • Single vehicle run off road crashes • Intersection crashes • Head on crashes • Heavy vehicle crashes • Pedestrian and cyclist casualties • Motorcycle crashes • Young road users • Drink driving • Failing to wear a seat belt • Illegal and inappropriate speed

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Appendix 4: Road Safety Consultative Committee: Terms of Reference

Purpose

- The primary purpose of Launceston City Council's Road Safety Consultative Committee is to review the multi year Black Spot Program and Road Safety Program projects within Launceston.
- The recommendation of the Committee will help to inform the council when making a decision on the multi year programs.
- The Launceston Road Safety Consultative Committee is a Special Committee of the council as defined in the Local Government Act (Tas) 1993, s.24.

Role

- To be briefed and provide comment on the multi year Black Spot Program and on the current year schemes for submission to the Department of Infrastructure Energy and Resources (DIER) for inclusion in the Federal Black Spot Program.
- To be briefed and provide comment on the multi year Traffic Safety Program and on the current year schemes to be funded in the council's own Traffic Safety Program.
- To consider reports on the effects of previously implemented Black Spot Schemes and Traffic Safety Schemes

Membership

Member groups of the Road Safety Consultative Committee will include:

- Members representing Launceston City Council
  - Two Aldermen (one to be Chairman)
  - Director Infrastructure Services
- Organisations responsible for emergency & response
  - Tasmania Police
  - Tasmania Ambulance Service
  - Tasmania Fire Service
  - State Emergency Service
- Organisations using roads for commerce
  - Taxi Combined
  - Metro
  - Tasmanian Truck Owners & Operators Association
  - Freight businesses -Toll
- Organisations representing individual users of the road system
  - Child Health Association Tasmania (Neighbourhood Walking Groups)
  - Royal Automobile Club of Tasmania (Motor Car Users)

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- Tamar Bicycle Users Group
- Tasmanian Motorcycle Council

- Organisations representing the traffic engineering and road safety industry
  - Department of Infrastructure Energy and Resources Road Safety Division
  - Department of Infrastructure Energy and Resources Traffic Management Division
  - Institute of Public Works Engineers Australia (Tas)

- Representatives of the Launceston Community
  - Tasmanian Ratepayers Association
  - Two independent community representatives (not being executive members of other represented organisations) with relevant skills, appointed by the council. Invitations for these positions are to be called for by public advertisement to coincide with bi-annual council elections and to be appointed by the members representing the Launceston City Council

Organisations listed as members of the committee shall have sole discretion to nominate representatives (if any) and to change from time to time.

Meetings

The committee will normally meet in June/July each year as many times as necessary to provide recommendations to Council on the multi year programs for 'Black Spot' and Road Safety projects.

Protocol

Unless otherwise specified, the Meeting Procedure adopted by Launceston City Council will prevail over the workings of this committee.

How the Committee will operate

The committee will comment on the multi year programs for black spot and traffic safety schemes to enable recommendation to be made to the council. To achieve this there will be an initial meeting involving a bus tour of candidate sites that will present safety issues and potential solutions. On the day an information session will follow the bus tour and hence this initial meeting is likely to extend to 5-7 hours to address 20-30 projects. A subsequent meeting(s) will then be held approximately one month later which will table any further information requested by the committee at the initial meeting. The goal of the subsequent meeting is to determine the committee's recommendations on those schemes that are nominated for the multi year program.

Resources

Council will provide officer resources to organise meetings, take and distribute minutes and ensure recommendations are forwarded to the council when considering the adoption of the multi year programs.

Technical: ISD Infrastructure Assets Department;

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Administration: ISD Projects Department

Honorariums

The council will not pay any honorariums or expenses to any member on the committee.

Review

The Terms of Reference and committee membership will be reviewed every two years from the date of adoption of this version.

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Appendix 5: Road Safety Audit Procedure

PURPOSE:

Road Safety Audit is a formal examination of a future road or traffic project (or an existing road). This policy sets out how the road safety audit will be used in Launceston to ensure that new road and traffic schemes are introduced with minimal potential for crashes.

SCOPE:

Capital and Operations and privately funded road and traffic schemes and projects. All changes to the layout of existing roads. All new roads. All new subdivision roads.

PROCEDURE:

For projects valued at less than $100,000 (excluding junction design)

Process Step		Detail	Special Instructions
	Form 76 issued.	Form 76 commissions ISD Projects to carry out work.	Form to include requirements for Safety Audit
	ISD Projects to complete design	Design to be completed in liaison with Asset officer and DIER	
	ISD Projects to obtain DIER scheme approval		
	ISD Projects design officer to carry out Safety Audit	Audit to use Austroads check lists	See 'Road Safety Audit', 2nd Edition Austroads 2002
	ISD Projects design officer to complete 'exceptions' report.	Report to highlight issues identified by safety audit.	Report to be added to job file.
	'Exceptions' to be resolved through meeting or correspondence.	Meeting to include designer, design manager, asset officer & DIER	Notes of meeting to be added to job file.
	Design to be amended as necessary.		
	ISD Projects officer to complete 'pre-opening' check.	Check implemented scheme against design plan and documentation.	Rectify any outstanding issues.

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For projects valued $100,000-$500,000 (plus all junction design under $100,000)

Process Step		Detail	Special Instructions
	Form 76 issued.	Form 76 commissions ISD Projects to carry out work.	Form to include requirements for Safety Audit
	ISD Projects to complete design	Design to be completed in liaison with Asset officer and DIER	
	ISD Projects to obtain DIER scheme approval		
	ISD Projects to prepare Safety Audit brief	Brief to include reasons for scheme, design standards used and any departure from standard.	
	Safety Audit Completed	Audit to use Austroads check lists Audit to be carried out by team of at least two experienced LCC officers independent of the design.	See 'Road Safety Audit', 2nd Edition Austroads 2002
	Safety Audit team to complete 'exceptions' report.	Report to highlight issues identified by safety audit.	Report to be added to job file.
	'Exceptions' to be resolved through meeting or correspondence.	Meeting to include designer, design manager, asset officer & DIER	Notes of meeting to be added to job file.
	Design to be amended as necessary.		
	Safety audit team to carry out 'pre opening' audit.	Check implemented scheme against design plan and documentation. Use Austroads guide check lists	Rectify any outstanding issues and document any changes.

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For projects valued over $500,000

Process Step		Detail	Special Instructions
	Form 76 issued.	Form 76 commissions ISD Projects to carry out work.	Form to include requirements for Safety Audit
	ISD Projects to complete design	Design to be completed in liaison with Asset officer and DIER	
	ISD Projects to obtain DIER scheme approval		
	ISD Projects to prepare Safety Audit brief	Brief to include reasons for scheme, design standards used and any departure from standard.	
	Safety Audit Completed	Audit to use Austroads check lists Audit to be carried out by experienced consultant team external to LCC.	See 'Road Safety Audit', 2nd Edition Austroads 2002
	Consultant team to complete 'exceptions' report.	Report to highlight issues identified by safety audit.	
	'Exceptions' to be resolved through meeting or correspondence.	Meeting to include designer, design manager, asset officer & DIER	Report & Notes of meeting to be added to job file.
	Design to be amended as necessary.		
	Carry out 'pre opening' audit.	Audit to be carried out by designer, asset officer & DIER Use Austroads guide checklists	Rectify any outstanding issues and document any changes.

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PRINCIPLES:

Road Safety Audit is an independent check of road and traffic management schemes to reduce the potential for the changes to result in additional crashes.

Road Safety Audit will be carried out based on the principles contained in the Austroads Guide, including:

- The road safety audit team is independent of the design team.
- The structure of the road safety audit report, identifying potential problems and recommending solutions.
- The designer (or client) is responsible for making changes to the design,or implemented scheme, as a result of the road safety audit.
- A response to the road safety audit, noting points accepted and rejected and any changes to the design will be documented.

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Appendix 6: Effectiveness of Black Spot Schemes in Launceston

This Appendix details the black spot allocations that have been made to the Launceston City Council over the last three years, successfully implemented schemes and the anticipated benefits.

Tasmanian projects

The Department of Infrastructure Energy & Resources (DIER) allocates funding to projects in Tasmania. The number of nominations is usually far greater than the funding available and only a small proportion is funded. The details for the last three years, of projects in Tasmania, and those submitted by the council are detailed in the table below.

	Tasmania	Launceston City Council
2008/09		
No. of nominations	48	6
No. of approved projects	17	4
Value of approved projects	$1,515,000	$350,000
2009/10		
No. of nominations	45	10
No. of approved projects	20	6
Value of approved projects	$1,659,000	$500,000
2010/11		
No. of nominations	66	12
No. of approved projects	26	6
Value of approved projects	$1,828,365	$243,000
2011/12		
No. of nominations		5
No. of approved projects		2
Value of approved projects		$80,000

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Launceston projects

The Launceston City Council has been successful in attracting significant resources to address black spots. Of the 29 Councils across Tasmania, the Launceston City Council was granted $1.1m (22%) out of a pool of $5m for the 3 years 2008-2011. The results for the last three years are detailed in the following table.

Project	5 year casualty record	Proposed measures	Funding	Benefit/ Cost Ratio
2008/09				
VERMONT ROAD/ CLARE STREET	3	Right turn lane	$30,000	8.40
GEORGE TOWN ROAD/ PARKLANDS PARADE	6	Median	$40,000 +$5,000 LCC	4.26
PENQUITE ROAD - Amy Road to Hoblers Bridge Road	5	Median	$80,000 +$40,000 LCC	3.06
INVERMAY ROAD - Lindsay Street to Forster Street	14	Remove median parking	$200,000	
2009/10				
GLEADOW STREET/ HOLBROOK STREET	4	Islands & kerb extensions	$30,000	17.79
WALKERS AVENUE	3	Road humps	$40,000	14.10
GEORGE TOWN ROAD – Newnham Connector to Lilydale Road	15	Median/right turn lane with islands.	$150,000	10.83
TALBOT ROAD – Lawrence Vale Road to Punchbowl Road	6	Median/right turn lane with islands.	$60,000	9.55
PENQUITE ROAD – Amy Road to Quarantine Road	6	Median/right turn lane with islands.	$150,000	4.36
WELLINGTON STREET – Westbury Road to Normanstone Road	3	Median/right turn lane with islands.	$70,000	4.28

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2010/11				
ABBOTT STREET/ CAMPBELL STREET	3	Roundabout	$80,000	7.51
WESTBURY ROAD/ NORMANSTONE ROAD	3	Squaring approach to Westbury Road	$21,000	14.15
BRIDGE ROAD	4	Central island, edge lining	$25,000	19.65
HOBART ROAD, Napoleon Street to Poplar Parade	6	Refuges, right turn & edge lining	$55,000	6.69
MAYFIELD STREET, George Town Road Hargrave Crescent	4	Road humps	$20,000	42.58
PIPERS BROOK ROAD	4	Seal shoulder, edge & centre markings, signs	$42,000	6.44
2011/12				
GLEN DHU STREET	3	Refuges, right turn lane & edge marking	$30,000	11.48

Measures used & success: research

The traffic management measures used in the Black Spot Schemes are supported by state, national and international research. The benefits of central median islands and line marking have been questioned in Launceston and will be the focus here.

- **State Research**

In 2007 DIER published a report into the effectiveness of black spot projects in Tasmania [(2)]. This report assessed projects completed up to 2003 with three years of 'after' data available. There were 12 turning lane and median treatments assessed. A comparison was made with expected reductions in crashes contained in the national Black Spot guidelines [(1)] (DoTaRS) and research from the Roads & Traffic Authority, New South Wales (RTA). The following is reproduced from the report:

- **Median Treatments and Turn Lanes**

Median treatments separate opposing vehicles and narrow traffic lanes. The median provides width for right turning traffic to wait for a gap without obstructing through traffic and allows pedestrians to cross the road in two stages. The narrower traffic lanes tend to reduce vehicle speeds which also improve safety.

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- **Evaluation results:**

12 sites treated
34% reduction in casualty crashes
6.7 average benefit-cost-ratio (BCR)

Casualty crash reductions: Crash type	DoTaRS expected reductions	RTA expected reductions	Actual reductions
Head on	-90%	-40%	*-100%**
Opposing turns	-30%	-40%	-63%
Rear end	-40%	-60%	-26%
Vehicle hits pedestrian	-50%	-50%	-66%
Loss of control	-30%	0%	*+8%**

**These reductions were based on too small a number of crashes to be statistically reliable.*

- **Discussion:**

Median treatments and turn lanes achieved good reductions in the number of casualty crashes. Opposing turns reduced by 63%. This is considered to be attributable to the driver of a right turning vehicle not being intimidated by following through vehicles and consequently becoming more selective in gap acceptance. The reduction in rear end collisions was lower than expected.

- **National Research**

The 'Black Spot Projects, Notes on Administration' [(1)] contains estimated crash reductions for a number of different treatments. The expected reductions for median treatments and turn lanes are contained in the table above.

- **International Research**

The UK 'Molasses' database of the effectiveness of crash reduction schemes indicates reductions of around 33% in link crashes following scheme implementation.

- **Launceston Examples**

A number of schemes involving central median islands have been completed in recent years. It is too early to come to firm conclusions regarding many of these but the crash data below indicates that they have been successful in addressing the target crashes identified.

Implemented Traffic Safety Scheme	Completion date	Target injury crashes	
		Before	After
Invermay Road (Forster Street to Mowbray Connector)	1993	Unknown	8 (10 years)
Invermay Road (Mowbray Shopping Area)	1999	Unknown	4 (10 years)
Hobart Road (Kings Meadows Shopping Area)	2004	5 (4 years)	2 (6 years)

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Hobart Road (Highgate Street to Napoleon Street)	July 2008	6 (5 years)	0 (3 years)
Vermont Road/Clare Street	December 2008	3 (5 years)	0 (2 ½ years)
George Town Road (Parklands Parade)	November 2009	4 (5 years)	0 (1 ½ years)
George Town Road (University Way to Lilydale Road)	March 2010	12 (5 years)	1 (1 year)

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Appendix 7 - Road safety issued raised through 'Your Voice, Your Launceston' consultation, June 2012

This is a summary of the issues raised

Item	Location	Problem	Comment
1	The Northbound West Tamar Highway where it becomes single lane		This road is the Department of Infrastructure Energy & Resources (DIER) responsibility
2	Penquite Road from Newstead to Quarantine Road		Black Spot scheme recently introduced
3	The intersection of the East Tamar Highway and Newnham Link.		This is a DIER responsibility
4	Turning left into the Esplanade from Charles Street	There is a sign to give way to pedestrians but it is difficult to see who may be there until the last moment.	Project in 2012/13 budget to remove left turn slip and bring under signal control
5	Roundabouts.	Should not have bushes or be built up to obscure oncoming traffic	Roundabouts are designed to be slow speed environments giving sufficient time to respond to other traffic. Increased visibility can lead to more crashes.
6	Corner of Paterson and Charles streets.	Giving way to the left is fine at the intersection of George Street and Brisbane Street but not on the corner of Paterson Street and Charles Street.	Layout to be reviewed
7	On-street parking on either side of a driveway	Perhaps there should be a minimum distance such as 1metre	Parking bay markings provided where this is a problem

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8	Hobart Rd and Riseley Street, Kings Meadows	A dangerous intersection due to cars travelling south on Hobart Road and turning right in to Riseley Street in front of cars travelling north along Hobart Road	Operation to be reviewed
9	Guy Street (two comments)	A dangerous street due to parked cars narrowing the Street to one lane yet cars still travel both ways.	Recently discussed by Launceston Traffic Committee, no changes proposed
10	Bathurst Street and Balfour Street intersection	Numerous near-hits from cars when crossing	Consider an early pedestrian start.
11	Turning left	A car should veer left out of the traffic flow and then go on doing their left turn.	Edge lines help to facilitate this
12	Southern outlet/Kings Meadows Connector	Roundabout needed	DIER responsibility, would be supported by City Council
13	Traffic signals	Early pedestrian starts needed, particularly at multilane sites	Proposed at a number of CBD sites

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