SEPTEMBER 2018

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This document sets out the results of a project undertaken to develop a new road safety strategy for the City of Stonnington, for the five-year period 2018 to 2022. The new strategy is named the ‘Towards Zero’ Road Safety Strategy 2018 - 2022, as a way of declaring publicly the City’s commitment to the eventual elimination of death and severe injury from all roads within the City.

The Vision
The City of Stonnington is committed to creating an inclusive, healthy, creative, sustainable and road smart community.

The ‘Towards Zero’ Road Safety Strategy Objective
To promote safe road-based travel by reducing death and serious injury on roads within the City of Stonnington and by aligning with the targets set under the Victorian Government’s Towards Zero Action Plan (2017 - 2022), on the journey to ultimately achieving zero road deaths and serious injuries.

The Approach to Creating Safe Travel on Roads within Stonnington
To achieve the ‘Towards Zero’ Road Safety Strategy objective, the City of Stonnington commits to the globally recognised Safe System approach in order to achieve its ultimate safety objective of zero road deaths and serious injuries.

Key principles underpinning the Safe System approach:
- The health and well-being of our community is paramount
- As humans, we all make mistakes, and
- We are very vulnerable; our biomechanical tolerance to sustaining serious injury is low relative to the speeds at which we commonly travel.

The indicative risk of being killed in a road crash is depicted in Figure 1. It shows, for various impact speeds, the risk of death for three of our most threatening crash types: impacts with pedestrians, vehicle-to-vehicle side-impacts at intersections and vehicle-to-vehicle head-on collisions. While only three of our major crash types are depicted in Figure 1, we recognise that cyclists and motorcyclists are among our most vulnerable road users.

In the absence of specific evidence on their risks of being killed in a crash, as a function of impact speed, we use the pedestrian risk relationship to best represent the risks of these three largely unprotected groups. While every crash has its unique aspects, recognising these indicative risk relationships is central to our ability to eventually eliminate death and severe injury from our roads.

We need to progressively develop a transport system that accommodates our mistakes and, in so doing, share in the responsibility of creating a vastly safer way of leading our lives as we move about.
Internationally, the ‘Safe System’ is acknowledged as the most advanced and effective, long-term approach to eliminating road trauma. The Safe System guides us to address safety through the following five key pillars:

- in vehicles;
- on roads;
- by better matching and managing speeds;
- through behaviour change involving community engagement, education and enforcement support, and
- through good governance and management.

The Safe System approach, previously adopted by Stonnington, is the foundation of both the national road safety plan, and Victoria’s road safety strategy and action plan: Towards Zero 2016 - 2020.

City of Stonnington at a Glance

The City of Stonnington predominately comprises of young single people and mature-aged adults with families. The former are more strongly attracted to locations such as South Yarra, Prahran and Windsor, where rental accommodation is available, and tertiary institutes, public transport options and entertainment precincts are located. While there are no clear lines of demarcation, families seem more likely to gravitate towards the central and eastern parts of the municipality.
Stonnington’s population continues to grow, with an estimated increase of 26 per cent over the next two decades (refer Figure 3). In keeping with global trends, the age-profile of Stonnington’s population is projected to change markedly. The proportion of older residents over 75 years will rise from 7.5 per cent in 2016 to an estimated 9.2 per cent by 2036. This means there will be disproportionate growth in the demand for services for older people and the City will continue to adapt to accommodate these changing needs, including in the way it designs and manages its transport system.

As shown in Figure 4, Stonnington’s population is expected to grow, from the 2017 base-year, by around 9 per cent over the lifetime of the ‘Towards Zero’ Road Safety Strategy (to the end of 2022).

With increased population comes increased demand on the traffic network, and yet road space availability is finite with little capacity to be extended to any significant degree. In keeping with the City’s vision and numerous plans for enhancing city life (including the Stonnington Health and Wellbeing Plan 2017 - 2021; Sustainable Transport Policy; Cycling Strategy 2013 – 2018; Children, Youth and Family Strategy 2018 – 2028; Chapel Street Masterplan 2013; Council Plan 2017 – 2021; Access and Inclusion Plan 2014 – 2017; Cultural Diversity Policy 2015 – 2019; Sustainable Environment Strategy 2018 - 2022; Older Persons’ Strategy 2008 – 2012; the Open Space Strategy), the challenge is to promote and facilitate active trips through...
increased walking, cycling and use of public transport options, while enhancing the safety of our most vulnerable road users.

**Forecast population**

City of Stonnington

![Bar chart showing population forecast for City of Stonnington from 2011 to 2036 with a 9% increase.](image)

Population and household forecasts, 2011 to 2036, prepared by .id, November 2016.

Figure 4: Population forecasts for the City of Stonnington prepared at November 2016 (source - .id the population experts)

### The Challenge of Vulnerability

**Most Vulnerable**

- Pedestrians
- Riders of mobility scooters

**Least Vulnerable**

- Cyclists
- Scooter riders and motorcyclists
- Occupants of light trucks and vans
- Occupants of passenger cars
- Public transport passengers
- Occupants of trucks

Figure 5: Depiction of the relative vulnerabilities of various road user groups
Our Highest Priorities
Council will use all its available road safety resources to reduce the risk of severe road trauma during the life of the strategy. A key part of our approach, will involve focusing on the highest priority problems that most commonly contribute to death or severe injury. A necessary prerequisite to successfully addressing key road safety problems is to build a thorough understanding of the nature, diversity and extent of the serious casualty crash problem. As a result, a comprehensive review of the incidence of serious road casualties was undertaken for Stonnington over the five-year period July 2011 to June 2016.

In setting priorities, the relative levels of vulnerability of different road user groups was considered. The Vulnerability Scale depicted in Figure 5 is well-aligned with the priorities that support liveability, sustainable transport, residential amenity and healthy, active forms of transport.

Appendix A provides a detailed account of the problem of serious casualties on roads within the City of Stonnington. The key challenges are:

- **The overall problem** - a total of 10 fatalities and 632 serious injuries occurred on Stonnington’s roads over the five-year period July 2011 to June 2016 (refer Figure 6, below). There has been a gradual increase in serious casualties over this period. No reliable trend is evident for fatalities.

![Figure 6: The spatial distribution of the 10 fatalities and 632 serious injuries that occurred on Stonnington’s roads over the five-year period 2012 - 2016.](image-url)
- **The problem by age** - while the adult age ranges contribute most to the serious road casualty picture, the young (15 - 24 years), the 25 - 39 years age-group and those aged 75 years and older are all over-represented relative to their percentages in the population.

- **The problem by speed zone** - speed zones of 60 km/h claimed most serious casualties (45 per cent), while 40 or 50 km/h zones accounted for some 30 per cent.

- **The problem by road class** - the highly-trafficked arterials accounted for 72 per cent of all serious casualties, while 9 per cent occurred on CityLink and 19 per cent on local streets.

- **The problem by road user type** - a strong majority of serious casualties (62 per cent) arose from “vehicle to vehicle” collisions, including where motorised vehicles collided with cyclists. Pedestrians comprised 17 per cent of all serious casualties.

- **The problem among the most vulnerable** - pedestrians, cyclists and motorcyclists are our most vulnerable road users and comprised the majority (56 per cent) of serious casualties in Stonnington. Over the five-year period 2012 to 2016, there were:
  - 141 (22 per cent) serious casualties involving motorcyclists;
  - 107 (17 per cent) involving pedestrians and
  - 104 (16.5 per cent) involving cyclists.

- **The problem involving roadside hazards** - there have been 90 serious casualties (14 per cent) resulting from vehicles striking roadside poles, trees, and other rigid objects, or losing control.

- **The problem at intersections** - serious casualties at intersections comprise 53 per cent of the total that have occurred across the City. The vast majority (85 per cent) of these serious casualties occurred at intersections on the arterial network. Many occurred at intersections which already have traffic signals and the majority involved vehicles moving between arterials and local streets.

- **The problem along tram routes** - serious casualties predominate along Stonnington’s tram routes, with Malvern Road standing out as having a higher spatial concentration with 65 serious causalities (10 per cent) occurring on this one route.

- **The problem of loss of control** - 46 (71 per cent) involved the most vulnerable of road users, pedestrians, cyclists and motorcyclists. Loss of control crashes (including situations where a cyclist or motorcyclist loses control after swerving to avoid a car door) among the latter two groups were common.
Key Strategic Directions

The following key strategic directions form the core of Stonnington’s ‘Towards Zero’ Road Safety Strategy.

1. Ensure Safe System thinking is included within Stonnington’s range of policies and programs that intersect with road safety interests:
   - Establish a cross-disciplinary steering group to coordinate road safety and social improvement activities (primarily internal, but involve external stakeholders where appropriate) in order to maximise positive impact on local communities.
   - Enhance Council policies and programs as they are progressively updated to reflect Safe System thinking in areas that intersect with safety on Stonnington’s roads.
   - Agree on and monitor a set of Safety Performance Indicators that link Council actions with death and serious injury on the road;
   - Build in safety-assured contract provisions for providers of transport services to Council and Council staff.

2. Identify and introduce Safe System-compatible measures either temporarily or permanently:
   - Stonnington will be subject to major construction works over the coming five years, including the construction of the new Melbourne Metro Rail project. The impact on surroundings that inevitably accompanies such change can afford opportunities to improve for Stonnington residents, amenity and safety aligned with Safe System principles, for example:
     - Collaborate with VicRoads and Melbourne Metro Rail Authority (MMRA) to minimise the safety impacts of the MMRA project within Stonnington. This would likely involve working closely on the new Human Impact Route Assessment (HIRA) tool.

3. Communicate with the Stonnington community through program delivery to inform, explain and respond to concerns:
   - Conduct community engagement programs that promote the value of slower speeds in terms of safety, liveability, active transport and health and wellbeing. Focus especially on where improved amenity and safety are planned.
   - Implement new materials being developed (with translations) under the Victorian Towards Zero Strategy banner to support enhanced program delivery to older persons.
   - Actively pursue the L2P program subject to future funding being secured under the Towards Zero Strategy (2016 - 2020).
   - Support through local community channels the message to completely separate drinking from driving.
   - Build on existing forms of communication with the Stonnington community by including targeted safety messages suited to each group.
• Promote the use by community of the ‘Walk this Way’ app to objectively assess safety needs in high risk areas, such as around schools and where older citizens congregate.

4. Ensure that the greatest emphasis is placed on protecting those who are most vulnerable when using Stonnington’s roads:
   • Identify and support cycle links between principal bike routes;
   • Support low risk walking and cycling by reviewing the designs of existing roundabouts within the City for the potential to retro-fit raised pedestrian crossings (as used successfully in the City of Port Phillip – see photo below) and identify opportunities to build new roundabouts with this safety feature.

   ![Image of raised pedestrian crossing](image_url)

• Investigate, scope and develop pedestrian priority treatments at T-intersections.
• Employ the ‘Walk this Way’ risk-assessment app to objectively star-rate pedestrian safety needs and prioritise investment in safety improvements.

5. Reconfigure speed limits and infrastructure to align the traffic system with Safe System principles:
   • Continue to roll out 40 km/h in local streets and, in partnership with VicRoads, identify and implement 40 km/h speed limits around public transport hubs to support safe travel; support with community education and traffic-calming, where appropriate. Where communities are supportive, lower limits should be introduced to make further substantial reductions in the risk of injury to our most vulnerable road users.
   • With a view to expanding the program, subject to the trial outcome and to community acceptance, trial a 20 or 30 km/h speed limit in a conducive local traffic area, with a supportive community;
   • Identify and plan for increasingly installing traffic-calming measures in local and collectors streets (e.g., roundabouts with speed platforms) to support safer local travel.
• In partnership with VicRoads, encourage the implementation at major intersections of advance profile treatments, fully controlled right turn signals and dwell-on-red functionality.

6. Promote and actively support innovation and demonstration projects that align with Safe System thinking:
• Chapel Street Safe System Demonstration - ensure Safe System principles are built into the Chapel Street Master plan to protect all users, especially pedestrians and cyclists; potential measures include:
  o 30 km/h with lower speed shared space provisions
  o improved separation of cyclists from vehicular traffic, especially the opening of the doors of parked cars;
  o main intersection treatments including fully controlled right turns, dwell-on-red, hook turns for cyclists and entry profiles to moderate speeds.
• Trial left-in/left-out management of traffic at intersections on a designated arterial road segment in partnership with VicRoads. Intersections on routes with 60 km/h or higher speed limits and low-risk turning provisions would be candidates for a trial;
• Identify a tram route in collaboration with VicRoads where a reduction in the speed limit to below 60 km/h is trialled and assessed;
• Explore the feasibility of working with the Alcohol and Drug Foundation (ADF) and local police to identify opportunities to implement best practice to reduce intoxication, drug-taking, assaults, drink-walking and drink-driving.

7. Advocate and promote the purchase and use of vehicles with best available levels of crash avoidance and injury prevention:
• Update Stonnington’s Safe Vehicle Purchase/Lease policy, specifying proven new safety technologies such as Lane Keep Assist and Auto-emergency Braking.
• Liaising with Council's economic development department, encourage adoption of 'Towards Zero' Safe Travel policies/practices among local businesses.
• Build in safety-assured contract provisions for providers to Council in relation to both safe vehicles and safe behaviours.
• Promote to residents links to safe new and used car websites (e.g., www.howsafeisyourcar.com.au).

8. Partner with key agencies to maximise safety impact and access to supporting resources:
• Establish a constructive dialogue and relationships with VicRoads regionally; these are critical to the City being able to comprehensively address key safety risks for all road users, across all of its road classes.
• Establish a productive dialogue and relationship with the Safe System Road Infrastructure Team, given the Team’s aim of helping to transform Victoria’s road network to a vastly safer form, as well as its role as a funding agent.
• Work closely with Yarra Trams, PTV, VicPol and VicRoads to ensure that a sharply focussed and coordinated approach is mounted to address the most pressing safety problems within Stonnington.
• Work closely with operational police with regard to targeting key safety risks, including speeding and drug-/drink-drive enforcement, driven by evidence-based intelligence and local knowledge.

A Framework for Managing Achievement Against SPIs
The implementation plan includes a selection of Safety Performance Indicators, chosen to match actions with the proposed directions and actions of the strategy. The concept is outlined in Figure 7, below.
• **L2P program supported through Stonnington youth services
• etc.

Figure 7: Indicative process for establishing Key Performance Indicators and Safety Performance Indicators for the Stonnington Road Safety Strategy 2018 - 2022.

*To be negotiated by partners VicPolice

**L2P programs – Learners to probationary drivers licence program
Appendix A – Description of the Serious Casualty Problem Within the City of Stonnington (July 2011 - June 2016)

Trends Over Time
A total of 10 fatalities and 632 serious injuries occurred on Stonnington’s roads over the five-year period July 2011 to June 2016. There has been a gradual increase in serious casualties over this period. No reliable trend is evident for fatalities.

Figure 8: Deaths and serious injuries by year for the City of Stonnington for five-year period July 2011 to June 2016

Age Profiles
While the adult-age ranges contribute most to the serious casualty picture, the young (15 - 24 years), the 25 - 39 years age-group and those aged 75 years and older are all over-represented relative to their percentages in the population.

Figure 10: Deaths and serious injuries by population and age group for the City of Stonnington for five-year period July 2011 to June 2016
• **Those aged 75 years and older** make up 61 of 642 serious casualties (almost 10 per cent), with 67 per cent involved as vehicle occupants and 26 per cent as pedestrians. This age group is over-represented according to population rates, and is at elevated risk due to factors such as increasing physical frailty and declining agility.

• **Those aged between 15 and 24 years** comprise 123 (19 per cent) of the City’s serious casualties. Substantial numbers of this age group were seriously injured or killed as vehicle occupants (47 per cent), motorcyclists (23 per cent), bicyclists (15 per cent) and pedestrians (13 per cent). Actions will be targeted to the particular risk factors and the locations where these types of severe injury predominate.
Those aged between 25 and 39 years account for 225 (35 per cent) of the 642 serious casualties across Stonnington. Substantial numbers were seriously injured or killed as vehicle occupants (40 per cent), motorcyclists (26 per cent), bicyclists (22 per cent) and pedestrians (12 per cent). Actions will be directed at high risk locations and routes, as well as at the factors that heighten risk for this age bracket.

Time of Day Profiles
Serious casualty numbers rise sharply in the morning peak but have an extended over-representation from around mid-afternoon to after 6 pm. This profile of occurrence is not unusual in that it tends to follow the patterns of travel and activity.

Figure 9: Deaths and serious injuries by time of day for the City of Stonnington for five-year period July 2011 to June 2016
**Speed Zones**

Speed zones of 60 km/h claimed most serious casualties (45 per cent), while 40 or 50 km/h zones accounted for some 30 per cent.

![Image of speed zone signs]

**Figure 11:** Deaths and serious injuries by speed zone for the City of Stonnington for the five-year period July 2011 to June 2016

**Road Class**

The highly-trafficked arterials accounted for 72 per cent of all serious casualties, while 9 per cent occurred on CityLink and 19 per cent on local streets.
**Major Crash Types**

A strong majority of serious casualties (62 per cent) arose from “vehicle to vehicle” collisions, including where motorised vehicles collided with cyclists. Pedestrians comprised 17 per cent of all serious casualties.
In More Detail
Our Most Vulnerable Road Users
Pedestrians, cyclists and motorcyclists - our most vulnerable road users - comprised the majority (56 per cent) of serious casualties in Stonnington. There were 141 (22 per cent) serious casualties involving motorcyclists, 107 (17 per cent) involving pedestrians and 104 (16.5 per cent) involving bicyclists, over the five-year period 2012 to 2016. The locations of the crashes producing these serious casualties are shown below in Figures 14-16.

Motorcyclists
Motorcyclist serious casualties align strongly with the main east-west arterials and account for four of ten fatalities – more than any other road user group.

Figure 14: The spatial distribution of 141 (22 per cent) motorcyclist serious casualties for the five-year period 2012-2016.
Pedestrians

Pedestrian serious casualties are widely spread across the municipality, with a strong predominance along major east-west arterials, as well as Chapel Street.

Figure 15: The spatial distribution of 107 (17 per cent) pedestrian serious casualties for the five-year period 2012-2016.

Cyclists

Cyclist’s serious casualties are concentrated within activity centres such as Chapel Street and the main intersecting roads. Some cyclists serious casualties
occur on local streets and a number are aligned along the Dandenong Road boundary.

Figure 16: The spatial distribution of 104 (16.5 per cent) bicyclist serious casualties for the five-year period 2012 – 2016

Collisions with Roadside Hazards and Loss-of-Control Crashes
There have been 90 serious casualties (14 per cent) resulting from vehicles striking roadside poles, trees, and other rigid objects, or losing control. The extent and spatial spread of this problem is shown in Figure 17, below. Both fatalities involved motorcyclists striking rigid objects.

Of the 22 loss-of-control serious casualties, 20 (91 per cent) involved motorcyclists and two (9%) involved bicyclists. Many of these loss-of-control serious casualties have occurred along tram routes.
Collisions at Intersections

Serious casualties at intersections comprise 53 per cent of the total that have occurred across the City. The vast majority (85 per cent) of these serious casualties occurred at intersections on the arterial network. While many occurred at intersections which already have traffic signals, the majority involved vehicles moving between arterials and local streets. In 46 per cent of these serious casualties, a driver or passenger was injured. Among the remaining serious casualties, 22 per cent involved a motorcyclist, 18 per cent, a pedestrian and 13 per cent, a bicyclist. The spatial distribution of these intersection serious casualties that occurred on arterials is shown in Figure 18 below.
Figure 18: The spatial distribution of 290 (45 per cent) serious casualties at intersections along arterial roads for the five-year period 2012 - 2016.

Tram Routes in Stonnington
Serious casualties predominate along Stonnington’s tram routes. Malvern Road stands out as having a higher spatial concentration with 65 serious causalities (10 per cent) occurred on this one route. If an innovative solution can be found for Malvern Road, there is potential to adapt and apply it to like-routes such as High Street and Toorak, Wattletree, Burke and Glenferrie Roads. While there is a mix of crash types, 46 (71 per cent) involved the most vulnerable of road users - pedestrians, cyclists and motorcyclists. Loss of control crashes among the latter two groups were common. The spatial distribution of these serious casualties is shown in Figure 19.
Figure 19: The spatial distribution of 65 (10 per cent) serious casualties along Malvern Road for the five-year period 2012 - 2016.