

## **Confidential: For committee members only**

16 January 2013

### **LEGISLATIVE COUNCIL SELECT COMMITTEE**

Dear Members

#### **RURAL ROAD SPEED LIMITS**

##### **Terms of reference:**

To enquire onto and report upon -

- (1) The issue of the Government's proposed rural road speed limit reduction from 100km/h on sealed roads and the potential impacts/benefits on the communities; and
- (2) Any other matters incidental thereto.

I wish to express my opposition to the proposed introduction of a 90km/h rural speed limit in Tasmania. It is not acceptable that the need for this seems to be based, as stated in Safer Roads – Saves Lives strategy paper, on the government's conclusion that it is too difficult to provide low cost safety treatments to address rural road crashes because they are too dispersed.

I believe there is much more that can be done in implementing low cost physical and other measures that will have direct impact on road users for effective safety outcome without imposing lower speed limits on rural road users.

There is also clear evidence from the past implementation of such a lower general rural speed limit across the whole State that the measure is likely to have little impact on reducing the crash record in Tasmania.

### Strategy Paper - general

It appears that the Safer Roads – Saves Lives strategy paper is intended to detail the government's case for a 90km/h speed limit on rural roads and a paper on the DIER website indicates it is to apply to all rural roads in Tasmania other than the current 110km/h speed limited roads.

There is no identified ownership of the strategy paper i.e. whether it is a DIER document or an external agency. There also does not seem to be any indication how the 90 and 100km/h speed zones will be imposed, as a regulatory general rural speed limit of 90km/h and signing of 100km/h zones, signing of all speed limit or retention of current regulations with extensive signing of 90km/h speed limits. Which ever way it is proposed will be highly confusing for road users. There are also clear reasons why such a mass change in speed limits is not warranted, as detailed below.

The strategy paper on the surface appears to present a compelling case to support the proposed speed limit reduction strategy by use of terms and descriptions that create a supportive sentiment to the reader. The strategy paper has however not presented all the necessary facts and available material that needs to be included with this assessment.

### Rural crash causes

It has long been known in DIER that around two thirds of fatal crashes and therefore a high proportion (possibly at least half) of all casualty crashes are caused by or have involved law breakers i.e. unlicensed drivers, unregistered vehicles, drivers with excessive alcohol or drugs, occupants not wearing seat belts, driving in excess of the speed limit etc. These law breaking drivers make up a small proportion of the driver population but they are responsible for a disproportionately high number of casualty crashes, nearly all on rural roads. **It is most probable that proposed reduction to the rural speed limit will not have any significant effect on such drivers and their driving habits. Therefore it must be questioned if this was taken into account in the predicted crash reductions with this strategy; otherwise the prediction that is made on expected casualty crash reductions is clearly wrong.**

### Strategy Paper - detail

The accuracy of the statistical data in the strategy paper can be questionable when the strategy paper indicates the Tasmanian road network is a little over 18,000km and there is 14,500 km of non urban roads, while DIER's – Tasmanian State Road hierarchy document indicates the total road network in Tasmania is approximately 24,000km and I have seen indications of total kilometres even more than this.

Both Figure 3 and Table 1 of the paper presents serious casualty crash numbers, but the totals for each year are different in the Figure compared with the Table, seemly referring to different measure and therefore not allowing for comparisons that need to be made.

The discussion in the paper around Figure 3 also suggests that only seat belts, BAC at 0.5, speed cameras and 50km/h urban limit has contributed to the reduction of serious crash rate over the last 35 years. It has neglected to make mention that large investments in traffic management measures have had as much if not more general safety benefit for the community.

In examining the bar chart (Figure 3), there is a clear drop in the crash rate from 1979 which was when LATM and other physical/sign/markings measures began to be implemented throughout Tasmania at high crash sites and again there is a further drop in the crash rate after 1989 which was when the Federal Government's Black Spot Program commenced (and continues to this day) with over \$13.5m spent on some 365 safety improvement projects in the first three years. **This clearly shows that traffic management measures, even low cost signing, marking and delineation measures, can have a major impact on reducing crashes.**

In the discussion on Page 6 of the paper I have issues with the inferences in statements such as:

- *40% of crashes are in 100km/h speed zones, more than any other speed zone – the number of kilometres of road with 100km/h speed is more than all other speed zones combined, over 60%;*
- *Many of the non urban roads to which a 100km/h speed limit applies cannot be safely driven at 100km/h (or many of these roads cannot safely support travelling at 100km/h) – this is the case for all roads with any speed limit including lower 60km/h and even 50km/h speed limits in urban areas and therefore the statement gives a wrong perception of current speed zoning practices and the applicable speed limits.*

#### Lack of attention to rural road crashes

Black Spot funding over the past 20 years has been directed more at urban areas because these project these provided the greatest return on investment and were easier to gain acceptance while rural areas were given the required attention, hence the current focus on rural crashes. However this does not mean that there are no cost effective solutions than can be implemented with a more enlightened approach to addressing the problem and analysis techniques, including getting away from fully desk-top problem identification - solution development.

Notwithstanding crashes by law breakers, the paper identifies that 65% of serious casualty crashes are runoff road crashes. Surely this is an area where low cost mass-action safety improvements along whole road lengths or higher crash road sections would achieve significant and direct improvements through a more progressive crash analysis approach to the problem.

**My experience in the traffic management and speed limit management over nearly four decades has shown that direct interventions at problem locations and provision of signing and other guidance measures at hazards has a much greater success in crash reduction than through application of a speed limit.**

I strongly support the advice in Australian Standard 1742.4:

*Experience and research has demonstrated that arbitrarily imposed speed limits that are too low attract poor levels of compliance regardless of the level of enforcement. Ideally, limits should be set such that road users can readily understand the reasons for setting them at a particular level. The limits will then be more likely to be voluntarily observed by the majority of motorists and therefore be effective in regulating traffic flow, reducing crashes, maximizing safety for vulnerable road users and controlling the environmental effects of traffic, such as noise pollution. However, this is not always possible and that is why it is important to have a sound basis for setting the limits.*

*Due to substantially increased levels of police enforcement, mainly resulting from the introduction of automated methods of infringement detection, it is important to ensure that the setting of speed limits is soundly based. Authorities therefore need to ensure that their methods of setting speed limits can be justified as being appropriate for both the environment and all road users, not just motorists.*

*Where the speed limit exceeds the maximum safe speed of travel due to an isolated geometric deficiency or hazard, advisory speed signs displayed in conjunction with the relevant warning signs (see AS 1742.2) shall be used to advise drivers of the need to reduce speed. Speed limits shall not be applied specifically for this purpose.*

*Speed limits should be set to maintain a balance between a driver's reasonable understanding of the reasons for setting them at a particular level and an acceptable level of environmental amenity for all road users and abutting land use.*

*The speed limit shall not be so low that a significant number of drivers will not be able to understand the reason for it and hence tend not to observe it.*

### Proposal for three rural speed limits

The current speed zoning criteria are (or have been up to recent times as there have been many deviations from the criteria in the last few years) based on road function and level of frontage development. Generally the criteria aim to set a speed limit which complements the driver perceptions of the appropriate speed limit for the road. However the proposed strategy will introduce a speed zoning regime with three rural speed limits – 90km/h, 100km/h and 110km/h.

There was some confusion by motorists what the general rural speed limit is some years after the change from 110km/h to 100km/h (110km/h remaining only on the national highway). Now **with wide speed 90km/h and 100km/h limits in rural areas (and 110km/h on some other roads), the confusion will be very high and remain so** as there will be total reliance to be vigilant on seeing speed limit signs and remembering the last sign rather than on the roadside environment and driving to the conditions which should give guidance on the speed environment (without reliance on regulatory signs) and with periodic traffic intervention measures warning drivers where change in road characteristics require the need for different reactions or changes in behaviour immediately ahead.

### Lack of uniform practices

The community and local government consultant process to decide on what speed limits should apply to each road will lead to different speed limits being applied to roads of the same character in different regions and parts of the state despite what is stated in the strategy paper. This is evident from what is currently occurring in built up areas. There will be lack of consistency of practice.

A classic example of this is with Springfield Avenue in Glenorchy with the reduction of the speed limit to 50km/h and the level of enforcement/traffic infringement notice issue two years after the speed limit changes (see attached).

### Proposed Strategy not expected to be successful

#### ***Speed reduction***

There is the question of just how successful this strategy will be in reducing in reducing vehicle speeds and also crashes. I expect the predicted crash reductions in the strategy paper analysis are based on significant reductions in vehicle speeds being achieved with no regard for the major addition to the crash record that law breakers have. **However I note the reports on the trials with 90km/h in the Kingborough and Tasman**

**Municipalities indicate that speeds have not been reduced significantly; perhaps only 1-2km/h.**

While inferences throughout the paper give the perception that most 100km/h roads cannot be driven at around this speed, this is not the case. Road characteristics vary along their length not only in cross section but also in alignment with straight sections able to support the current rural speed limit while curves can vary to allow travel speeds from below 45km/h (hairpin bends) to 95km/h. Motorists modify their speed where required on straight road sections where cross sections characteristics require this and also when there is oncoming traffic (or other factors).

**I believe it will be impossible to set a clear division (even with numeric or quantitative criteria) between 90km/h and 100km/h roads for motorists to not be confused and end up driving to the road conditions (as always) with travel speeds up to current speeds.** The proposed criteria will be open to various interpretations. The real concern is that a lowest common denominator approach with safety will be taken with the lower limit being imposed.

The question arises as to how the start and end to quite winding sections of road will be dealt with. Currently DIER does not like to sign the rural speed limits, instead installing end speed limit signs even where there is a relatively straight alignment. They have indicated that this practice will change by removal of the end speed limit signs back to a practice which existed some 10 years ago. However the two (or three) rural speed limit strategy will clearly require a much wider application of end speed limit signs to avoid signing 90km/h on roads that may not be able to practically support such a speed limit otherwise much more of the rural road network will be subjected to the 90km/h speed than would be required under any proposed (subjective criteria).

### ***Crash reduction***

The major aim with the proposed strategy is to reduce casualty crashes on rural roads. However the proposal is to reduce the speed limit on lesser trafficked roads where the total crash numbers are also lower.

The theoretical estimate of expected crash number of 120 crashes in six years with all roads reduced to 90km/h yet 100 crashes in six years with 90km/h on lower standard roads is not plausible as most crashes occur on higher volume roads that are of higher standard. As example the crash numbers for the 100km/h and 110km/h speed zones indicates the crash rate per kilometre of road for the 110km/h roads is at least three times that for 100km/h roads. If the authorities really believed this strategy will be effective and were serious at reducing crash then the national highway would be the first set of roads to change.

The expectations with crash reductions from this strategy are the result of an 'academic exercise'.

It is most important to recall that Tasmania already has had **a rural road speed limit reduction applied to all rural roads (other than the national highway) some 20 years ago**. The general rural speed limit was reduced from 110km/h to 100km/h and it is most appropriate to learn from this 'real life' application. Regrettably the neither the strategy paper nor, from I have read, other reference papers make mention of this speed limit change and its impact on reducing crashes.

I have received from the DIER crash database **indicates there was no measurable reduction in casualty crash numbers per year on rural roads after the introduction of the 100km/h general rural speed limit**, in fact there appears to have been no change in crash numbers. Because the speed reduction applied to all rural roads in the State except the national highway and the change was from the higher 110km/h speed to 100km/h, if this type of strategy is effective then there should have been a significant crash reduction to the over 400 casualty crashes and around 200 serious casualty crashes per year on rural roads across Tasmania at that time. This single fact places the greatest improbability on the success claims stated in the strategy.

A table summarising the crash numbers by year is attached. I note the number of serious casualty crashes reduced by 10-15% some 10 years later, I expect from a range of other strategies and improvements over that time.

### Police enforcement

Indications are that there will not be a significant reduction in vehicle speeds in rural areas with the proposed strategy. This will create a major bonus for Police attaining their TIN numbers for each financial year (as with Springfield Avenue) and more.

Police do not carry out speed enforcement along problem sections of any roads. Their practice is to assess where the maximum number of TIN's can be issued (mostly if not always on straight sections of road or straight road approaches) and carryout enforcement on that section of the road even though the travel speeds are quite safe at all times or at the time of enforcement along that section of the road, i.e. enforcement of law breakers rather than unsafe driving.

### Conclusions

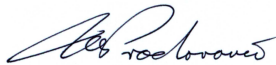
There may be some feeling of doubt about what I have stated above having regard to the resources and organisations involved with the strategy paper content.

However I have endeavoured to outline some of my main concerns with the proposed strategy based on my extensive experience with traffic management measures, crash

reduction strategies and speed limit management. However I do not have the time or resources and access to relevant data to prepare a full technical paper for the Committee.

All of the issues and concerns I have raised collectively should be sufficiently compelling to the Committee for at least rigorously questioning of the strategy claims and further explore each of the matters raised, but hopefully conclude that the strategy should not be supported and other effective crash countermeasures need to be explored and implemented.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Milan Prodanovic', written in a cursive style.

Milan Prodanovic



## Tasmanian Roads and Functional Classification Systems

Tasmania has a road network covering approximately 24,000km. It includes:

- ◆ **major highways**, connecting cities and ports.
- ◆ **urban connectors** - linking suburbs with commercial areas;
- ◆ **residential streets**; and
- ◆ **forestry roads** within individual coupes.

Its roads serve a variety of essential functions - ranging from: vehicle, pedestrian and cycle access to adjoining activities; to roads which facilitate movement between areas.

Understanding and setting a clear direction for the function of each road across the State is a core element in achieving DIERs transport outcomes. For example:

- ◆ A priority for reliable and least-cost freight connections between an industrial area and ports requires a road with a strong movement function, minimal property access and consistent, high operating speeds.
- ◆ Where reliable and efficient road freight connections to ports are not a priority, the function of roads gives greater precedence to access, allowing numerous intersections, lower speeds and property accesses.

The classification of roads by function into a hierarchy assists DIER with ongoing transport system management by ensuring that the planned function and use of roads are clarified across the entire network. The use of a road hierarchy provides a number of benefits including:

- ◆ decreasing **through traffic** in residential streets;
- ◆ **enhancing road safety** - reducing the risk of crashes by minimising the number of access points and therefore potential conflicts on major routes;
- ◆ **ensuring right activity in right location** - locating commercial activities in areas where street networks cater for pedestrian and vehicular access;
- ◆ **strategic investment** - increasing the rate of return from investment by concentrating on corridors that provide the greatest community benefit; and
- ◆ **effective road design** - ensuring road design is directly related to planned use and function.

## Periodic Review

Gradual changes in population and industry can have significant effects on road use. Industrial locations, mines, forestry coupes and tourist attractions can open and close within short time frames. Periodic reviews will occur to ensure that the hierarchy responds to measured or anticipated changes in use.

## State Roads and the State Road Hierarchy

The State-owned road network consists of 3,650km of road. It is a subset of the broader road network that focuses on connectivity and movement functions at State and regional levels.

The State road network primarily consists of roads that provide connectivity between cities, major towns, rural catchments and key port and air transport hubs.

To plan and manage this network within a clear and strategic framework, DIER has adopted a five-tier hierarchy.

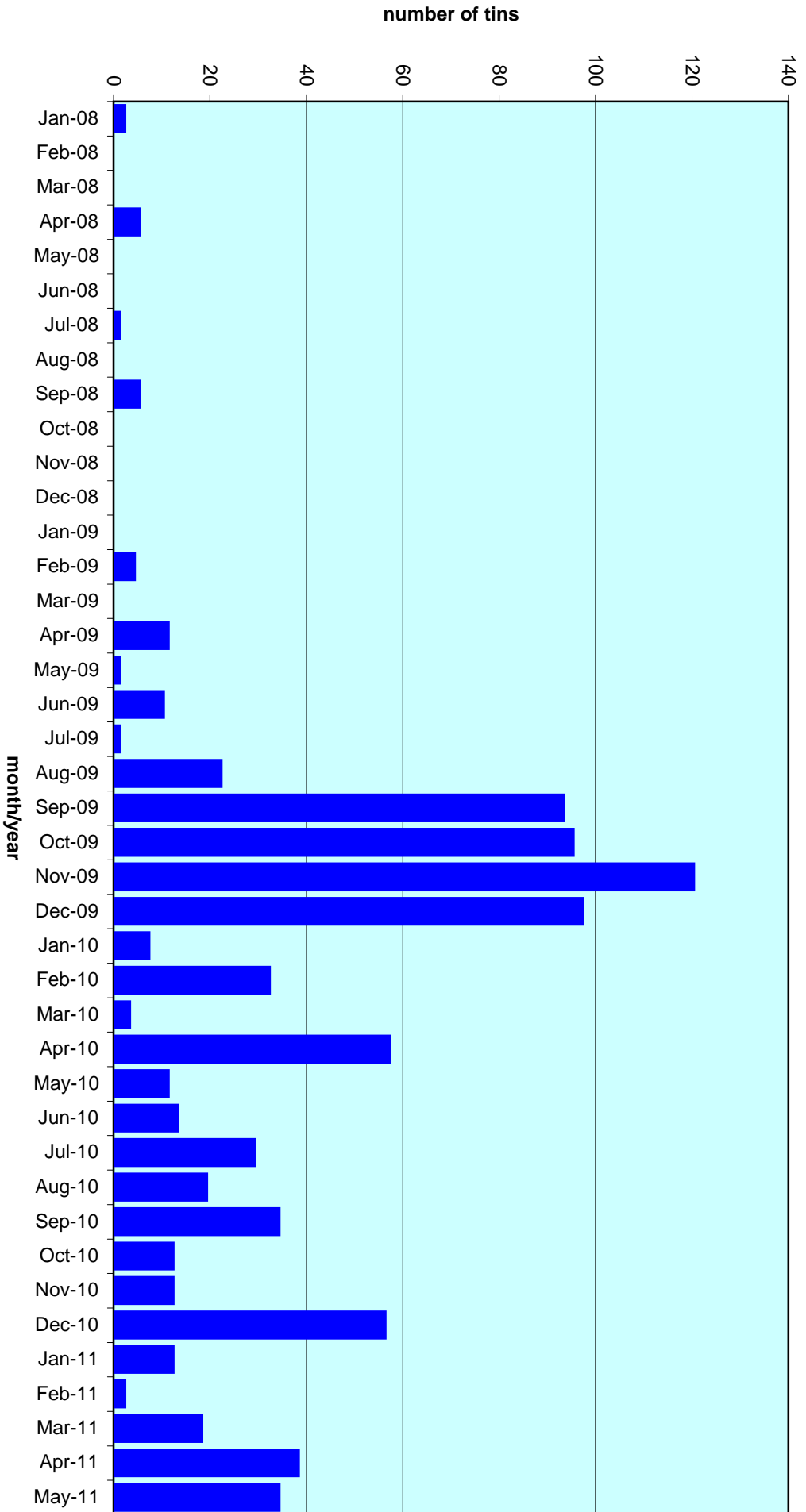
In addition to the benefits created by using this classification system, the hierarchy enables DIER to take a strategic approach to the management and planning of the State's transport system.

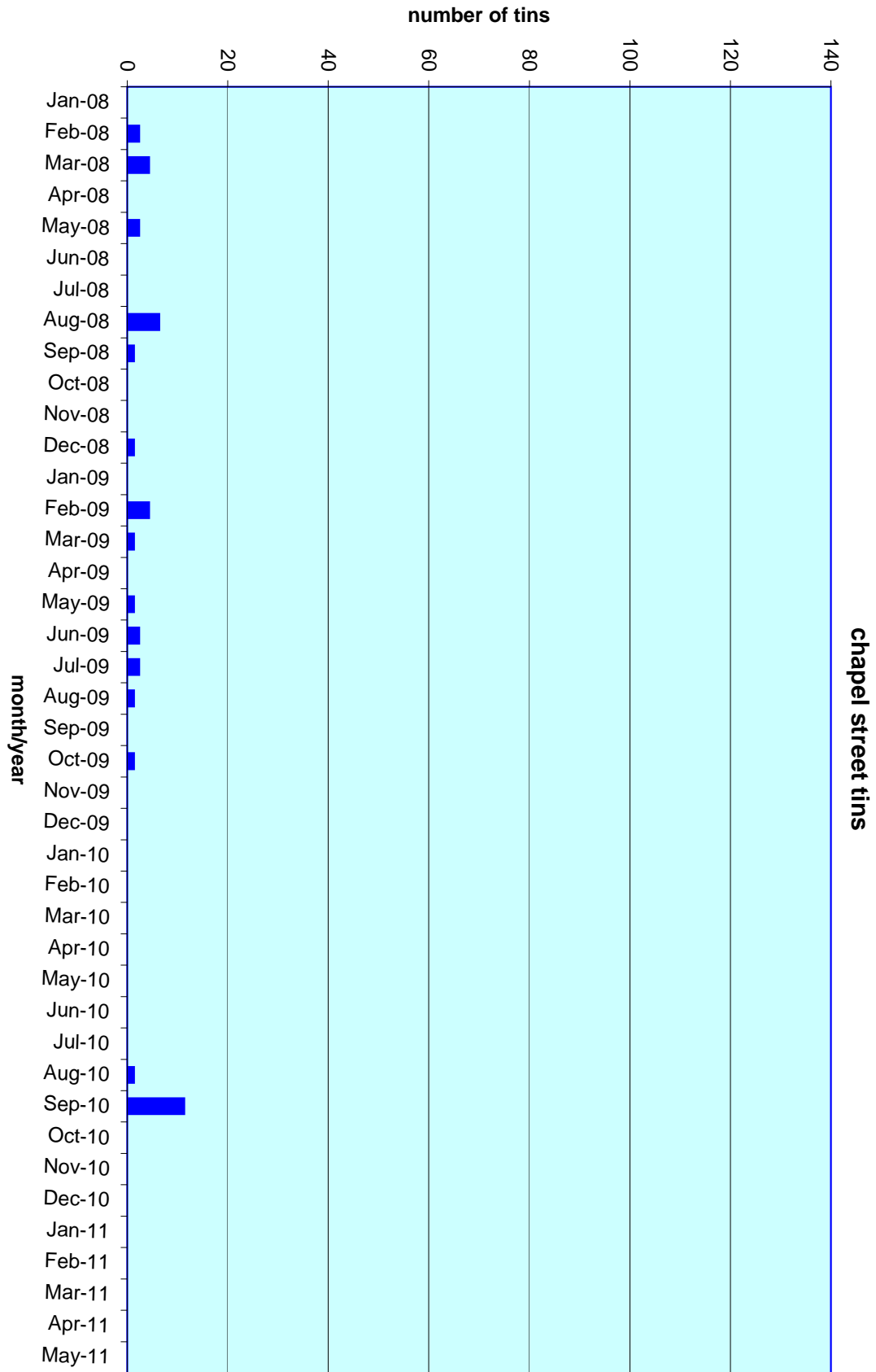
## System and Network Planning and Investment Priorities

The State Road hierarchy is based primarily on the need to provide connectivity at a State level for key corridors between cities, major towns, ports and rural catchments. The economic and social benefits provided by roads directly relates to their function and use. The road hierarchy also provides a framework that is used to direct investment resources to maximise State and regional benefits.

In addition, the hierarchy enables choices to be made regarding the relative function and priority given to parallel and duplicate routes, ensuring major traffic flows are directed to suitable infrastructure.

springfield ave speeding tickets





REPORTED CASUALTY CRASHES BY YEAR FOR ALL ROADS IN TASMANIA WITH SPEED LIMIT GREATER THAN 80KM/H												
YEAR	1989	1990	1991	1992	1993	1994	2001	2002	2003			
FATAL	25	35	35	37	25	28						
SERIOUS INJURY	155	199	166	168	181	164						
TOTAL SERIOUS CASUALTY	180	234	201	205	206	192	175	174	180			
TOTAL CASUALTY CRASHES	321	451	427	396	412	424						