

Community Attitudes to Speed Limits

Final Report

Client Contact

Jonathan McGuffie
Senior Policy Analyst
Department of Infrastructure, Energy and Resources
Land Transport Safety Policy Branch
10 Murray Street, Hobart, 7000, Tasmania
Phone: 03 6233 5186
Email: Jonathan.McGuffie@dier.tas.gov.au

AMR Interactive Contact

David Span - Research Director
Ogilvy House, 72 Christie Street, St Leonards, NSW 2065
Ph: 02 9020 6700
Email: david.span@amrinteractive.com.au

Project 3826
August 2009



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1. Executive Summary

Background

The Department of Infrastructure, Energy and Resources (DIER) commissioned survey research to investigate community attitudes to current speed limits and possible changes to speed limits.

DIER is also participating in a national study of community attitudes to speed limits being conducted by the Monash University Accident Research Centre.

Complimenting this research are demonstration projects being undertaken in the Tasman¹ and Kingborough² Municipalities where rural default speed limits have been reduced: moving to 90 km/h for sealed roads and 80 km/h for unsealed roads.

Research Objectives

The objectives of the research were to assess community knowledge of, and attitudes towards, existing speed limits and possible changes to speed limits on various types of roads in Tasmania. This report seeks to summarise the findings of this research including assessments of responses from difference demographic sub-groups and from different localities.

Method

The population base for the survey was the general public aged 18 years and over, across Tasmania. Quotas were set by gender, age and self-reported rural/urban area. A total of 789 respondents were interviewed in the final sample.

The survey was conducted by telephone by Enterprise Marketing and Research Services (EMRS) during 9-17 June 2009. Results were weighted to be representative of the population on age, gender, and location.

Results

Overview

The survey has provided useful information about knowledge, attitudes and behaviour of people in Tasmania on the topic of speeding. The analysis of the results can be used to assess the degree of acceptability of reducing speed limits and how reductions in limits can be promoted.

Perceptions of Relationships with Speed Limits

People were most likely to believe that a reduction in speed limits reduces the *severity* of crashes, and much less likely to believe that it would lead to a *reduction* in crashes. Perception of a *reduction* in crashes had the strongest relationship with acceptance of reduced speed limits, and hence this is the perception which, if more people are persuaded to accept, has a greater potential to improve acceptance of reduced speed limits.

A further issue with the perception of the impact of speed limits on the incidence of crashes was that many people did not consider that reducing speed limits was the best way to address speeding or the causes of crashes.

¹ Tasman Safer Speed Trail commenced on 19th December 2008.

² Kingborough Safer Speeds (KiSS) Demonstration commenced on 24th September 2007.



About half of people also believed that police enforcement of speeding was about revenue raising.

Knowledge of Limits and Behaviour

Knowledge about 'default' speed limits on unsigned sealed and unsealed country roads was mixed. The level of accuracy was greater for sealed roads. Few knew that a limit of 100 km/h applied on unsealed roads, with the majority nominating much lower limits.

For both sealed and unsealed roads, the reported typical speeds that would be driven when the driver was free to choose a speed were lower than the nominated speed limits for many people, indicating a relatively conservative approach by these people. Over half of people reported a typical speed on unsealed roads in this situation of no more than 70 km/h.

Acceptance of Lowering Speed Limits

The relatively poor knowledge about default speed limits on unsealed roads, along with the relatively low speeds reported by drivers, suggests that reducing this limit may be easily implemented. The large majority considered a speed limit of 100 km/h too high for such roads, and there was strong support for a speed limit of no more than 80 km/h.

Knowledge of the current default speed limits on sealed two-lane undivided rural roads was slightly higher, but less than half of the people questioned nominated the correct speed limit. Many people again reported typical driving speeds below the current default limit with around two-thirds reporting typical travel speeds of 90 km/h or less. The majority of respondents considered 90 km/h or less to be more appropriate for these types of roads.

More than half of people questioned reported driving at speeds of at least 110 km/h on major arterial roads and highway. Three quarters (74%), however, believed that a limit of 110 km/h on these roads was 'about right' and a further fifth (20%) considered it to be too high. This level of acceptance reduced to about two thirds (64%) considering 100 km/h as 'about right' or 'too low'. These results highlight some opposition to a reduction in limits on highways and major arterial roads. The substantial overlap in considering both 110 km/h and 100 km/h as 'about right' indicates that many people do not consider a 10 km/h hour difference as significant.

Demographics

Females reported safer attitudes, safer behaviour, and greater acceptance of lower speed limits compared with males. Drivers aged over 75 years also tended to report the most positive attitudes and behaviours. In contrast, drivers aged 18-20 years had a mixed profile. While they were among the least accepting of reducing speed limits, their perceptions and reported behaviour tended not to be quite as poor as the middle age groups, particularly in the 21-55 years range. These middle age groups in particular reported higher average levels of speed and had on average poorer perceptions about the impact of speed limits on various outcomes.

There were few differences between the different locations that were assessed, and also little difference between people reporting they live in rural areas compared with urban areas. People in rural areas were more likely to nominate higher default speed limits on country roads. In addition, people living in Launceston and rural Tasmania (other than Kingborough) reported higher driving speeds and lower acceptance of reducing limits on country roads.



*The Kingborough Trial*³

The similarity of Kingborough to Hobart on some of these measures is an indication of a positive impact of the trial reduction in speed limits in Kingborough.

There was also greater nomination of a 90 km/h speed limit on sealed roads in Kingborough, in line with the trial, and a trend for greater knowledge of an 80 km/h speed limit on unsealed roads. However, people in Kingborough were also the most likely to agree that police were 'revenue raising' through targeting speeding, which is possibly a backlash to the trial.

Conclusions

- There was relatively strong acceptance of reducing default speed limits on rural roads with:
 - 91% of people believing a limit of 80 km/h on unsealed roads was 'about right' or still too high; and,
 - 78% of people believing a limit of 90 km/h on two-lane divided roads was 'about right' or still too high.
- Fewer people supported the introduction of lower speed limits on major arterial roads and highways, with 64% of people believing that a limit of 100 km/h would be 'about right' (60%) or too high (4%).
- The survey suggests people are more likely to support a reduction in speed limits if they believe that the reduction will result in fewer crashes. It would therefore be beneficial when promoting speed limit reductions to establish stronger community understanding of the relationship between speed limits and crash frequency.
- The impact that reduced speeds have on the *severity* of crashes should also be promoted, as this perception had strong credibility.
- The speeds people reported as typically travelling at where shown to correlate with acceptance of a reduction in speed limits: the higher the reported speeds, the lower the acceptance. Extra enforcement activity, to encourage compliance with reduced limits, may be required where drivers tend to already drive at or over the existing speed limit.
- In regard to demographic sub-groups:
 - males were less accepting than females of reductions in speed limits, less accepting of the impact of reducing limits, and reported higher driving speeds;
 - people aged over 75 years were the most positive about reducing speed limits, and reported the lowest average speeds;
 - people aged 18-20 years were less accepting of reductions, although their reported speeding behaviour and perceptions of the impact of speed limits were not as poor on average as people aged 21-55 years (the latter may reflect a positive impact of the 80 km/h speed limit applying to learner drivers and provisional drivers during their first year of licensure); and
 - the similarity of Kingborough to Hobart on some measures of driving speeds and acceptance of reducing limits on country roads is an indication of a positive impact of the trial reduction in speed limits in Kingborough.

³ 56 respondents were interviewed in Kingborough. Only 3 respondents were interviewed in Tasman, and this area was not addressed separately.



2. Background and Objectives

Background

The Department of Infrastructure, Energy and Resources (DIER) commissioned research consultants to undertake and evaluate a telephone survey investigating community attitudes towards prevailing speed limits and possible changes to speed limits in Tasmania.

This report is complimentary to national research being conducted by the Monash University Accident Research Centre (MUARC) into community attitudes towards speed, in which Tasmania is participating.

It also complements demonstrations of safer speed limits being conducted in the Kingborough and Tasman Municipalities. Reduced rural default speed limits, on gravel and sealed roads, have been introduced in these areas, namely:

- (a) a reduction in the rural default speed limit from 100 km/h to 90 km/h on sealed roads and from 100 km/h to 80 km/h on gravel roads; and
- (b) higher standard arterial roads, Southern Outlet, Huon Highway and Algona Road to retain 100 km/h speed limit.

Evaluations of the demonstrations are being conducted at regular intervals to assess community awareness and acceptance of these changes, and to assess changes in mean free travel speeds and crash figures.

Research Objectives

The objectives of the research were to assess:

- community knowledge of speed limits on various types of roads in Tasmania;
- current speeding behaviour;
- attitudes to current speed limits;
- attitudes to changes in speed limits;
- responses among different demographic sub-groups; and
- differences for respondents from Kingborough and Tasman localities, where trials of reduced speed limits are in progress.

The research focuses on knowledge and attitudes towards speed limits on:

- two-lane, sealed undivided rural roads;
- unsealed (gravel) rural roads; and
- major arterial roads (highways).



3. Method

Respondents

The population base for the survey was the general public aged 18 years and over, across Tasmania. Interlocking quotas were set by gender, age and self-reported rural/urban area, with equal size for each of the 12 cells (n=65) for a target sample of n=780. The quota grid is shown in Table 1, along with the final cell sizes. In the final sample of 789 respondents, 10 of the 12 cells were within a ± 5 range of the target cell size.

Respondents living in rural areas (self-reported) were over-sampled to be approximately half of the total sample.

Table 1. Final sample distribution by self-reported area, gender and age group

Gender	Age group (years)	Mainly or totally RURAL (n)	Mainly or totally URBAN (n)	Total (n)
Male	18-30	54	64	118
	31-55	64	64	128
	56+	66	70	136
	<i>Sub total</i>	184	198	382
Female	18-30	67	67	134
	31-55	66	68	134
	56+	63	76	139
	<i>Sub total</i>	196	211	407
Total		380	409	789

Survey Implementation

The survey was conducted by telephone by EMRS during 9-17 June 2009. Sampling was initially through random selection of households across Tasmania. Targeting of nominally 'rural' postcodes was introduced after the first few days of surveying in order to efficiently oversample respondents reporting living in mainly/totally rural locations. The distribution by rural/urban locations in the first, random, part of the surveying was used in the weighting of the results to the general adult population.

Questionnaire

The questionnaire covered a range of topic areas:

- perception of relationships between speed limits and crash outcomes;
- knowledge of default speed limits on different types of roads;
- typical speeds driven on different types of roads in good conditions; and
- attitudes toward current and lower speed limits on different types of roads.

The full questionnaire for the telephone survey is provided in Appendix A.



4. Results

Analysis of the Results

Weighting of Survey Results

The respondents in the survey were weighted by age, gender, and location (Hobart, Launceston, Kingborough, and the rest of Tasmania) using 2006 Census data from the Australian Bureau of Statistics. In addition, the self-reported urban/rural distribution in each location in the first part of the survey, before targeting of rural postcodes, was used for weighting to this variable.

Full details of the weighting are included in Appendix B. Individual weights were limited to a band of 0.3 to 3.0.

General Analysis

Results have generally been reported as percentages in tables and graphs. It is possible for 'rounding differences' of $\pm 1\%$ to occur when adding individual percentage results that sum to 100%.

The results from the survey are based on a sample of people in the population. This means that the results will not be exactly the same as if the entire population was surveyed. Tests of statistical significance were used to judge whether or not differences between sub-groups should be considered as real differences, rather than just a result of chance. For example, if 30% of males and 45% of females report a particular behaviour, a test of statistical significance assesses whether the difference is considered to be a result of *chance* or a real *difference*. The test looks at how *probable* it is that a difference of at least the magnitude measured in the survey would occur if there was no real difference in the population. This is expressed as a *p* value: the lower the *p* value, the more confidence that the measured difference is real.

Chi-square tests have been used to assess differences between groups, and statistical significance has been reported using a significance level of $p < .01$. The *p* values have been placed in the charts against the relevant demographic groups, and in the body of the text for additional analyses.

The impact of the weighting was taken into account for conducting statistical analyses on the final data, by reducing the sample size (see Appendix B).

Comparisons

The main comparisons of results are by:

- location (live in: mainly rural area, mainly urban area);
- gender (male and female); and
- age (18-20, 21-30, 31-55, 56-75, over 75 years).

In addition, results for the Kingborough locality (n=56) were compared with Hobart, Launceston and the rest of Tasmania, and differences between the locations highlighted. There were only 3 respondents surveyed in the Tasman locality, and this area was not assessed separately.

As an illustration of the level of the validity, or precision of the results, an overall sample on the order of 600 gives 95% confidence that the true population result is within $\pm 4\%$ of the measured



result⁴ (which applies to results for the total sample, taking into account the impact of weighting the sample). This interval increases with lower sample sizes. The interval is $\pm 6\%$ for a sample of 300 (which applies to each area and gender group); and $\pm 10\%$ for a sample of 100.

Relationships with Acceptability of Reducing Speed Limits

Additional analyses were undertaken to assess relationships between acceptance of lower speed limits on different types of roads and:

- acceptance of relationships between reductions in speed limits and specific outcomes;
- speeds driven; and
- demographic sub-groups.

Driving Profile

More than nine in ten (94%) people reported currently driving (Figure 1). The normal level of driving during the week was well distributed between the four categories presented in the survey, with half of the people surveyed driving more than 100 km in a week. The amount of driving was greater for people in rural areas, with about two fifths (39%) reporting normally driving more than 200 km in a week compared with a quarter (25%) of people in urban areas. The difference by gender was greater, with over two fifths of males (44%) driving more than 200 km compared with a sixth (17%) of females. People aged over 75 years were the least active drivers, with only one sixth (16%) normally driving more than 100 km a week. People aged 31-55 years were the most active drivers, with about six in ten (59%) driving this distance.

Drivers in the survey were asked about the type of roads that most of their trips were driven on. About half (54%) of drivers overall had most of their trips on a combination of roads in built-up and rural areas. Over a third (37%) of drivers drove mostly on roads only in built-up areas, while only one in ten (10%) drove mainly in rural areas.

As expected, drivers living in mainly urban areas were much more likely than other drivers to have most of their trips only in built-up areas (60% vs 12%) (Figure 2). Female drivers were also more likely than male drivers to have most of their trips only in built-up areas (44% vs 29%).

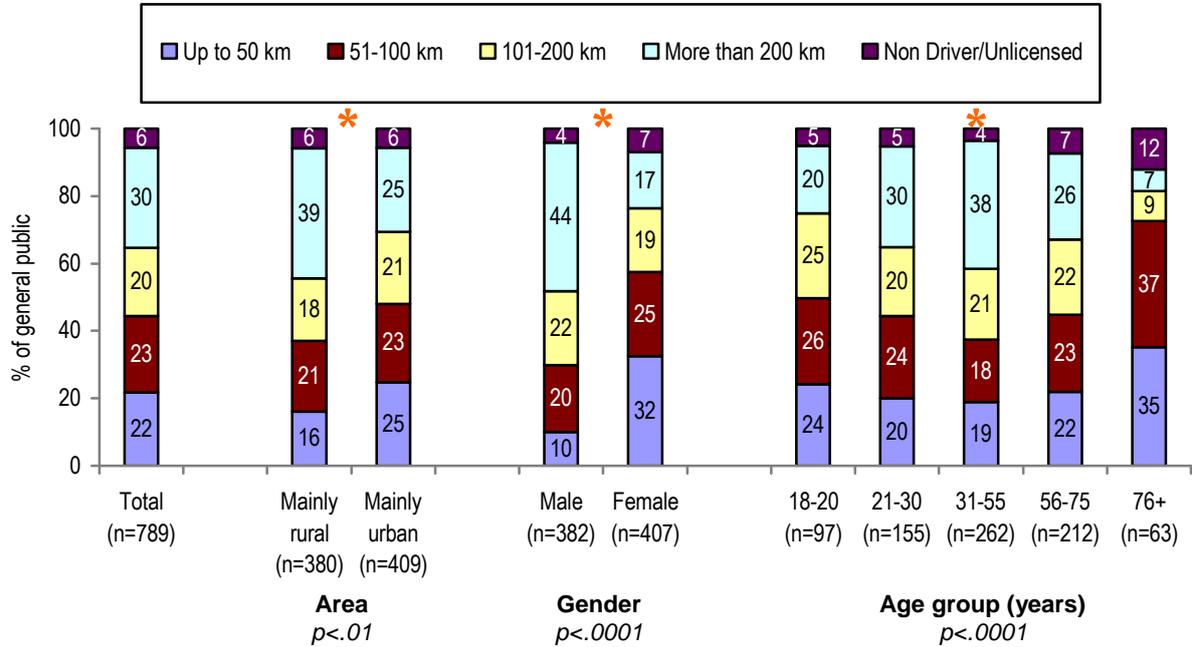
⁴ A 95% confidence interval is a conventional approach. The maximum interval size, which occurs for a survey result of 50%, is shown.

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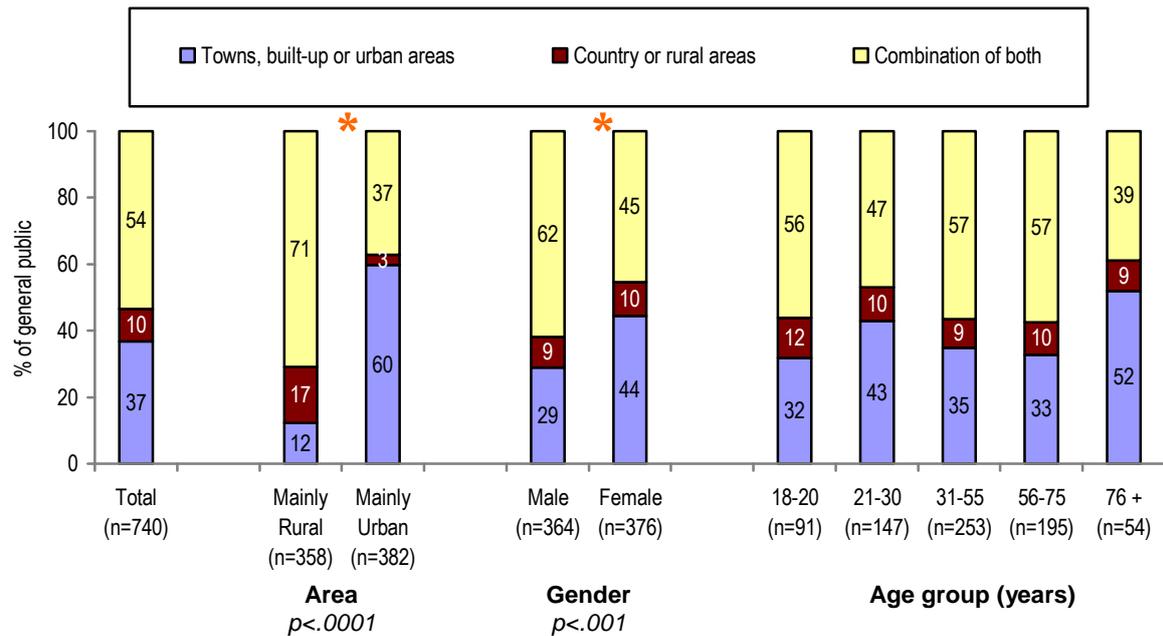


Figure 1. Q5. "On average, how far would you normally drive a vehicle in a week?" by area, gender and age (weighted data)
BASE: All people



* Statistically significant difference between groups ($p < .01$)

Figure 2. Q6. "In what type of area are most of your trips as a driver?" by area, gender and age (weighted data)
BASE: Current drivers



* Statistically significant difference between groups ($p < .01$)



Perceptions of Speed Limits

Overview

Respondents were asked about whether or not they considered each of four relationships with speed limits as true or false and, for the first three shown below, whether the relationship would constitute a reason to reduce speed limits. The four relationships were:

- reducing limits will reduce crashes;
- reducing limits by 10 km/h would not significantly impact travel times;
- reducing speed limits would reduce the severity of injuries in a crash; and
- the police target speeding to make money for the government.

Relationship with Crashes

Two fifths (40%) of people believed that lowering the current speed limits would reduce crashes (Figure 3). Females (49%) were more likely than males (32%) to believe this relationship to be true. There was also a trend for people aged over 75 years to be the most likely to believe this relationship.

About three quarters (72%) of people considered that, if a reduction in speed limits reduced crashes, then this would be a reason to support a reduction, including two fifths (42%) considering it would be a 'major' reason (Figure 4). Females were again more supportive than males, with about four fifths (82%) considering it would be a reason compared with about three fifths (61%) of males.

Reasons for the Ratings

Respondents were asked to explain the belief they had expressed about the relationship between speed limits and the incidence of crashes. These reasons have been categorised as being positive toward a reduction in speed limits, giving a conditional response, or against a reduction. Sub-categories of responses were also identified within the positive and negative groupings. These categories, along with the more common responses, are presented in Table 2 (positive/conditional responses) and Table 3 (negative responses).

Overall, about a third (35%) of people gave a positive response, and about two thirds (65%) gave a negative response. There was little difference between demographic groups. People who believed the relationship to be true were more likely to give a positive response, and less likely to give a negative response. However, about half (57%) of this group still gave some type of negative reason.

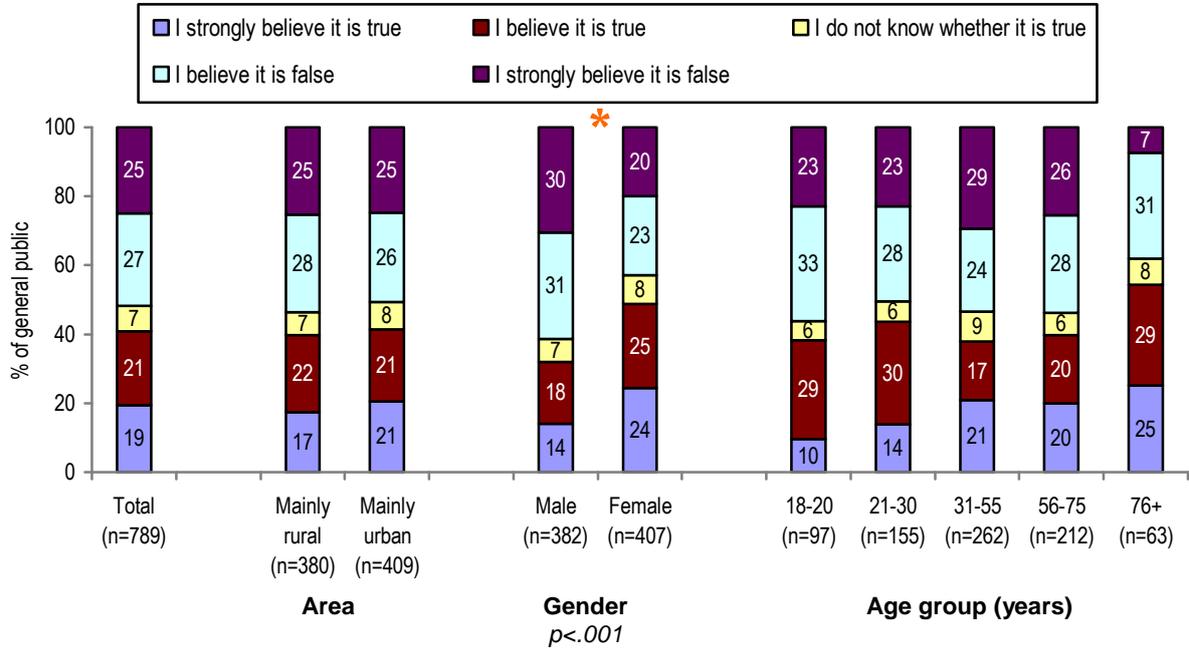
Key positive issues concerned reducing the risk of crashing. Key negative issues centred on perceptions that reducing limits does not address the causes of speeding, or does not address the causes of crashes.

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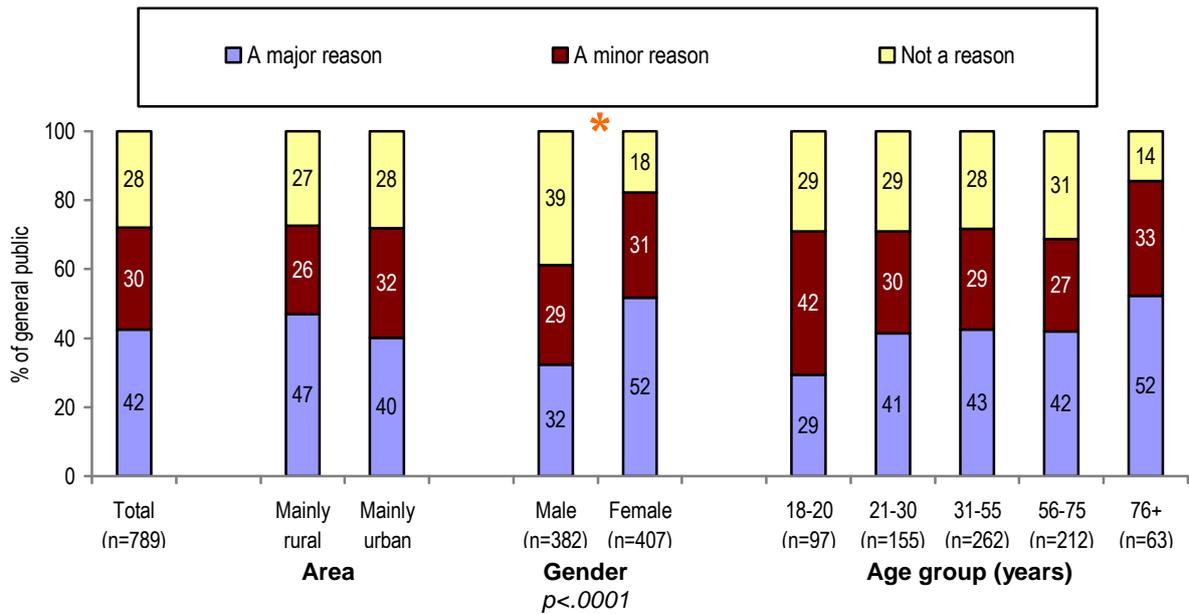


Figure 3. Q7. “Lowering the current speed limits would reduce crashes on the roads.” by area, gender and age (weighted data)
BASE: All people



* Statistically significant difference between groups (*p* < .01)

Figure 4. Q8. “If this statement were true, would it be a reason for you to support a reduction in speed limits?” by area, gender and age (weighted data)
BASE: All people



* Statistically significant difference between groups (*p* < .01)

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Table 2. Q7a. Positive and conditional comments given for stated belief about the relationship between a reduction in speed limits and a reduction in crashes

Main reasons for rating (including category nets)	Total (n=789) %	AREA		BELIEF IN RELATIONSHIP	
		Mainly Rural (n=380) %	Mainly Urban (n=409) %	True (n=319) %	False (n=418) %
TOTAL POSITIVE (NET)	35.1	33.0	36.2	43.7*	30.7
Reduce <u>risk</u> of crashes (net)	30.6	29.4	31.2	36.4	27.8
Speed kills/causes accidents/people are going too fast	11.6	8.7	13.0	13.3	11.1
Slowing down will help/Reduces risk of crashing	8.0	7.9	8.1	10.9	6.3
More time to think and react when going slower	5.4	6.6	4.8	5.3	6.0
Roads not built for speeding/can't handle speeding	2.6	3.1	2.3	3.7	1.8
Other impact on crashes (net)	4.4	3.4	5.0	6.2	3.5
Might reduce the injury/severity	2.8	2.5	2.9	4.5	1.7
Impact is softer when going slower	1.7	0.9	2.1	1.8	1.9
CONDITIONAL SUPPORT (NET)	5.5	6.6	4.9	3.8	5.9
Depends on the roads	2.3	3.4	1.7	1.5	2.6

* Statistically significant difference between groups ($p < .01$)

Table 3. Q7a. Negative comments given as reasons for stated belief about the relationship between a reduction in speed limits and a reduction in crashes

Main reasons for rating (including category nets)	Total (n=789) %	AREA		BELIEF IN RELATIONSHIP	
		Mainly Rural (n=380) %	Mainly Urban (n=409) %	True (n=319) %	False (n=418) %
TOTAL AGAINST (NET)	65.4	64.3	66.0	57.6	70.5*
Not addressing causes of speeding (net)	34.4	35.8	33.7	33.8	33.8
Speeders do so regardless of limits / Take no notice	17.7	20.6	16.3	19.5	15.9
Change attitudes not speed limit	6.2	6.6	6.1	5.4	7.1
People need to drive to the conditions	6.4	6.6	6.3	5.3	6.9
Not addressing causes of crashes (net)	31.5	29.0	32.8	25.5	36.3*
People need better training/education to handle speeds	10.5	8.1	11.8	8.3	12.9
Speed limits are fine it's other factors	8.9	8.3	9.2	7.2	10.3
Inattentiveness and complacency cause accidents	6.3	5.3	6.8	5.4	6.9
It's the idiots/hoons that cause the problems	4.7	3.6	5.2	4.7	4.7
Negative impact (net)	8.9	9.4	8.6	6.8	9.6
Going slow irritates people/causes more problems	5.7	7.5	4.8	4.3	7.4

* Statistically significant difference between groups ($p < .01$)



Impact on Trip Times

About half (55%) of people believed that lowering speed limits by 10 km/h would not significantly impact trip times, including about a fifth (19%) who 'strongly' believed it to be true (Figure 4). Acceptance of no significant impact was lowest among the youngest age group of 18-20 years (44% believing it be true), increasing with age to peak among people aged 56-75 years (61% believing it be true). The increase, however, did not continue among people aged over 75 years (51%).

About two thirds (64%) of people considered that, if there was no significant impact on trip times, this would be a reason to support a reduction in speed limits (Figure 6). This included about a third (30%) who considered that it would be a 'major' reason. The likelihood of considering this as a reason for supporting a reduction increased broadly with age, and was much higher among females (73% considering it a reason) than males (54%).

Reducing Severity of Crashes

Belief that lowering speed limits would reduce the *severity* of crashes was much higher than for the previous two relationships, with 86% of people believing this to be true (Figure 7). This included about half (52%) 'strongly' believing it to be true. While over four fifths of both females (89%) and males (83%) believed the relationship to be true, females (60%) were more likely than males (40%) to 'strongly' believe so.

About four fifths (83%) of people considered that, if a reduction in speed limits reduced the severity of crashes, then this would be a reason to support a reduction (Figure 8). This incidence included over half (57%) considering it would be a 'major' reason.

Females (70%) were much more likely than males (43%) to consider that a relationship between reduction in speed limits and a reduction in severity of crashes would be a 'major' reason to reduce limits. The majority of males, however, still considered such a relationship as at least a 'minor' reason.

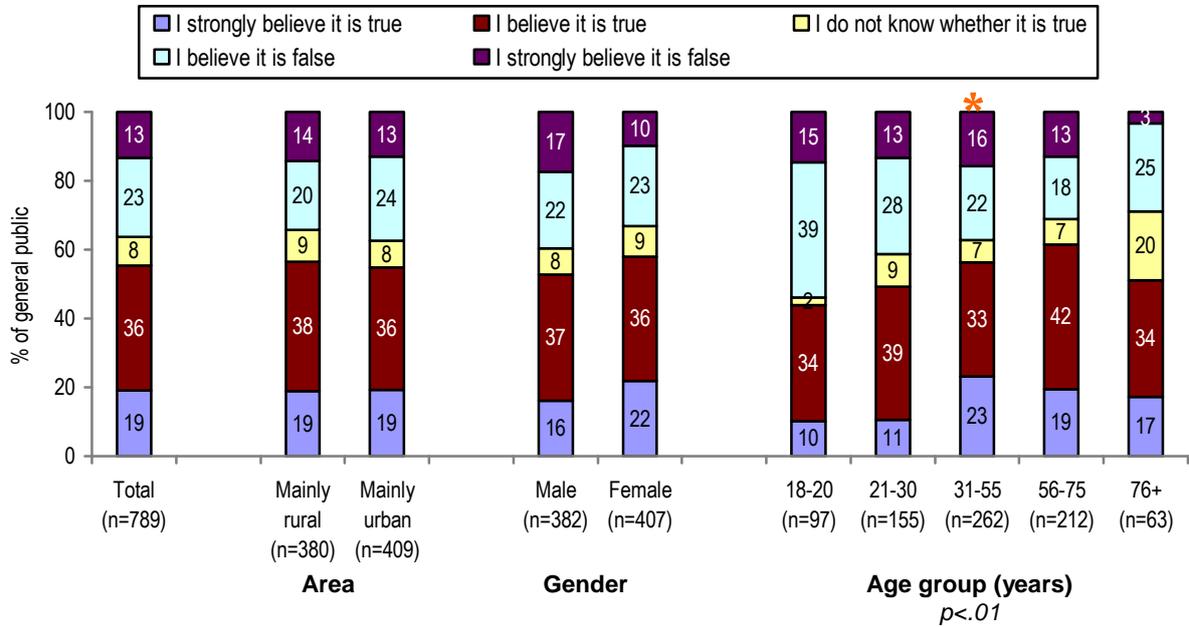
Police Revenue Raising

About half (48%) of people believed that police targeting speeding motorists was revenue raising, including about a fifth (21%) 'strongly' believing it to be true (Figure 9). Males were marginally more likely than females to believe it was true (54 vs 41%). The incidence increased with age to peak at over half (56%) of 31-55 year olds, and decreased with further increases in age to only about a fifth (19%) of those aged over 75 years.

- **Kingborough:** There was a trend for people in Kingborough to be more likely to consider that this was true:
 - Kingborough - 68% true;
 - Hobart - 50%;
 - Launceston - 39%; and
 - Rest of Tasmania: 46%.

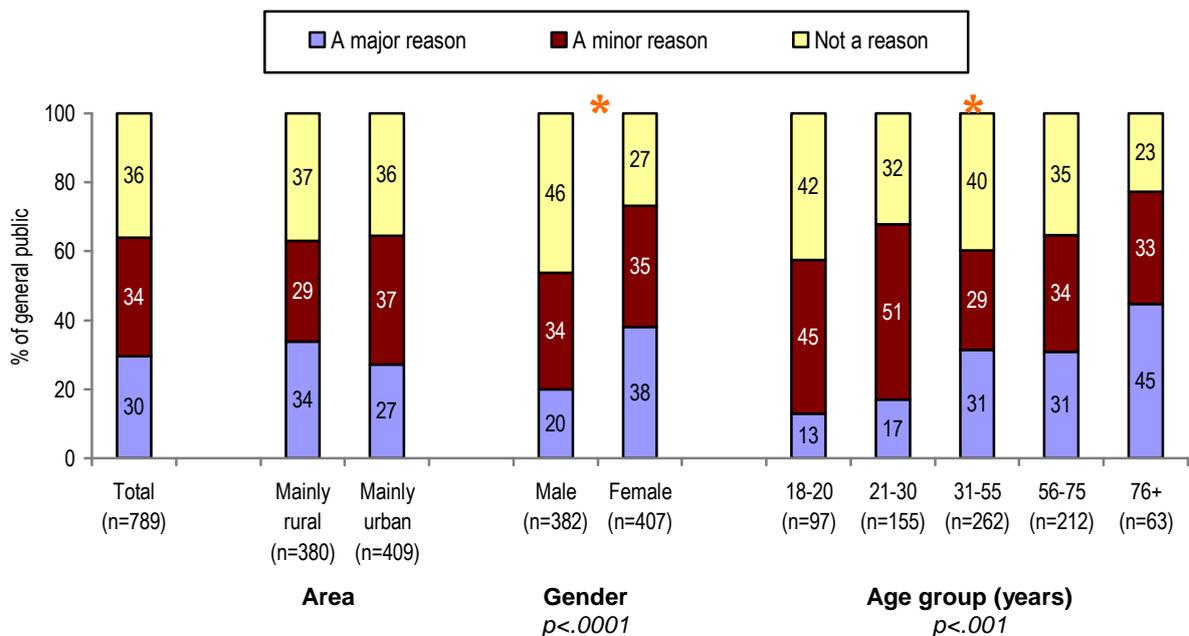


Figure 5. Q9. “A reduction of all current speed limits by 10 km/h would not significantly impact trip travel times.” by area, gender and age (weighted data)
BASE: All people



* Statistically significant difference between groups (*p* < .01)

Figure 6. Q10. “If this statement were true, would it be a reason for you to support a reduction in speed limits?” by area, gender and age (weighted data)
BASE: All people



* Statistically significant difference between groups (*p* < .01)

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Figure 7. Q11. “Lowering the current speed limits would reduce the severity of injury when a crash occurs.” by area, gender and age (weighted data)
BASE: All people

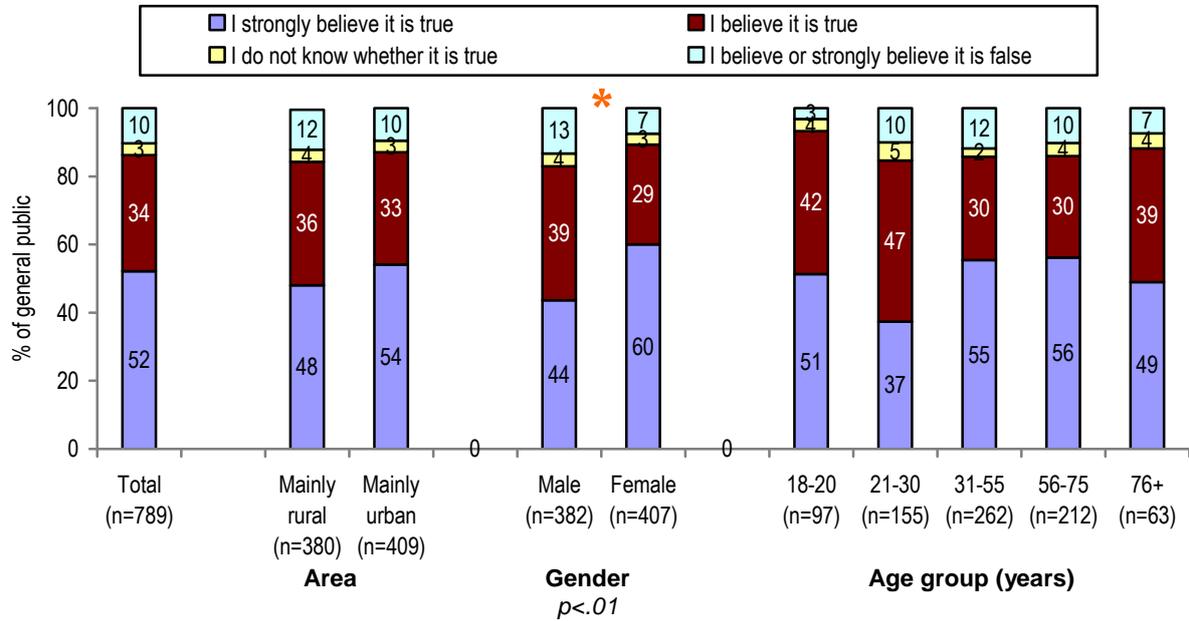


Figure 8. Q12. “If this statement were true, would it be a reason for you to support a reduction in speed limits?” by area, gender and age (weighted data)
BASE: All people

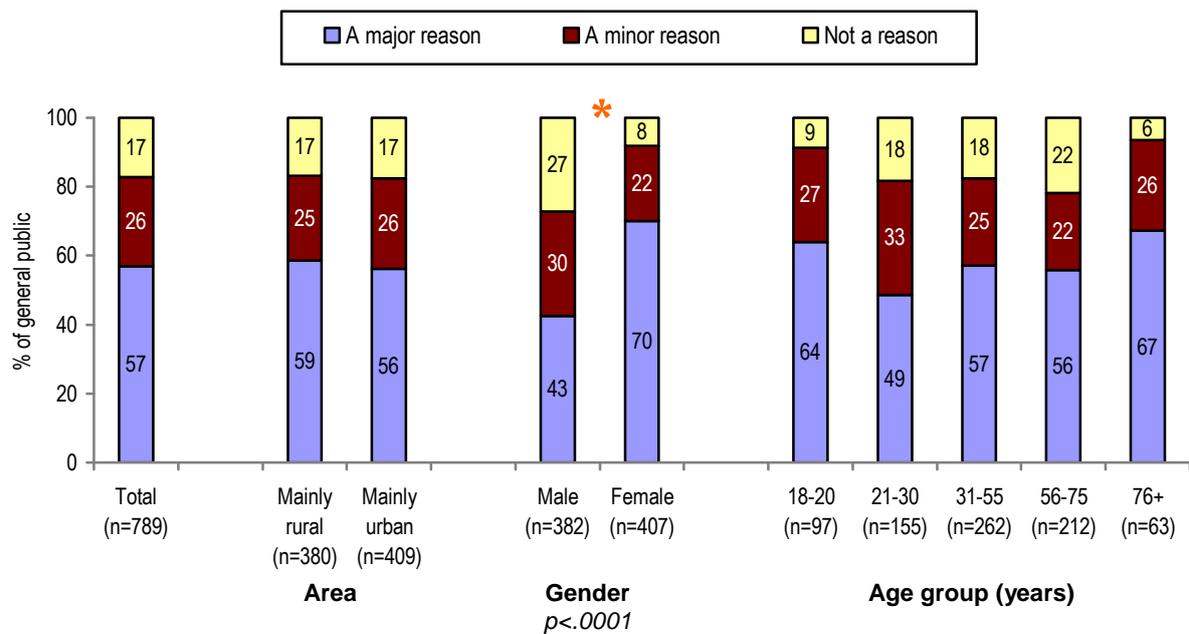
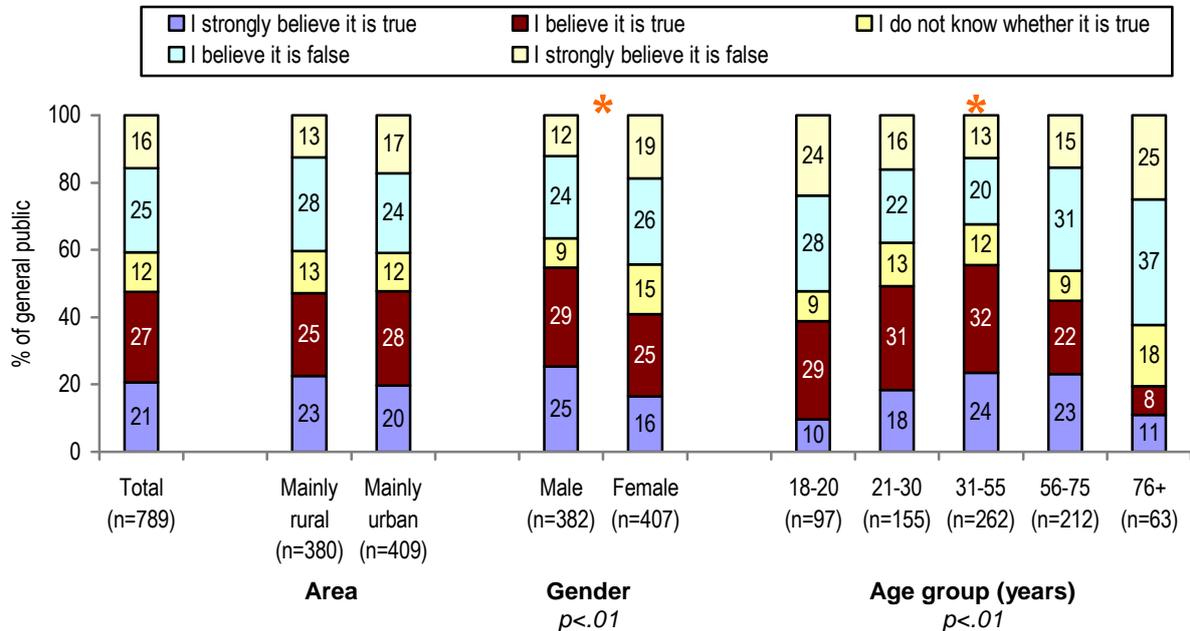




Figure 9. Q13. “Some people believe that the main reason police target speeding motorists is to make money for the government.” by area, gender and age (weighted data)
BASE: All people



* Statistically significant difference between groups (p<.01)

Speed Limits and Types of Roads

Overview

Respondents were presented with three types of roads:

1. two-lane undivided rural roads (the normal sealed country roads, not the big highways or major arterial roads);
2. unsealed, gravel roads in country areas; and
3. major arterial roads and highways.

For certain types of road, they were asked about the following:

- the default speed limit if not signed (types 1 and 2 only);
- the typical speed travelled when there is no traffic congestion and they are free to choose travel speed (all);
- consideration that the current default speed limit (types 1 and 2 only) or signed (type 3) limit is appropriate ; and
- consideration that a specified lower speed limit than the default (types 1 and 2 only) or signed (type 3) limit is appropriate.

Some respondents in the survey did not answer the questions around speeds driven. These included some who were ‘unsure’, some who did not drive on such roads or who responded that they were not drivers, and some who responded that it ‘depended’ on conditions. Those who were ‘unsure’ were retained for presentation of results and analysis.



Sealed Two-Lane Undivided Rural Road

Knowledge of Speed Limit

Nearly half (46%) of people correctly nominated a default limit of 100 km/h for a sealed, two-lane, undivided rural road. This limit was more likely to be given by people in mainly rural areas (57% vs 40% in mainly urban areas) and by males (57% vs 36% for females) (Figure 10). The correct nomination was greatest among the age groups in the 21-75 years band (47-53%). Younger people (34%) were marginally less likely to nominate 100 km/h. Older people (over 75 years) were the least likely to nominate this speed (26%), and a substantial proportion (31%) of this age group were unable to nominate a limit at all.

- **Kingborough:** Few people (6% of the total survey population) nominated a default speed limit of 90 km/h overall. People in Kingborough (where the default limit is 90 km/h) tended to be more likely to nominate 90 km/h as the default limit on these sealed roads, although the incidence was still not very high (20%).

Typical Travel Speed

When asked about the typical speed they would drive on this type of road, about a third (34%) nominated 100 km/h or more (Figure 11). Male drivers were more likely than female drivers to nominate at least 100 km/h (45% vs. 25%). The relationship with age again showed a broad U-shaped distribution, with the greatest incidence of speeds of 100+ km/h being reported by drivers aged 21-30 years (49%) and 31-55 years (41%). The oldest group of drivers, over 75 years, was the least likely to report this level of speed (6%).

The majority of people (62%) reported driving at speeds of 90 km/h or less on this type of road. Females were more likely than male drivers to nominate driving at speeds of 90 km/h or less (71% vs. 53%). There was no real disparity between urban (63%) and rural (61%) drivers who reported driving at 90 km/h or less. Drivers aged 21-30 years (46%) were the least likely to report driving at speeds of 90 km/h or less. The high incidence of drivers in the 18-20 year old bracket reporting driving at 80 km/h or less (53%) may be attributable to the fact that the maximum speed limit for learner drivers and provisional drivers during their first year of licensure is 80 km/h.

- **Kingborough:** There was a trend for people living in Kingborough to be similar to those in Hobart in being less likely to report typically driving at 100+ km/h (26% and 24% respectively). People in Launceston (54%) were most likely to report driving at this speed, greater than for people in the rest of Tasmania (35%) ($p < .0001$).

Attitudes to Speed Limits

About half (53%) of people considered that a speed limit of 100 km/h for a sealed two-lane undivided rural road was 'about right', and almost all the rest (45%) considered this limit to be too high (Figure 12). Females were much more likely than males to consider the limit too high (55% vs 33%), and the incidence increased with age from about a third (34%) of people aged 18-20 years to over half of people aged 56-75 years (51%) and those older (55%).

When considering a speed limit of 90 km/h for this type of road, more than half (56%) felt the lower limit was 'about right' and about a fifth of people (22%) considered the limit too high (Figure 13). In other words, 78% of people felt that the reduced default speed limit of 90 km/h was 'about right' or still too high. Females were still more likely than males to consider the limit too high (27% vs 17%), while the age trend was much weaker.



- **Kingborough:** People in Launceston were marginally more likely than people in the other locations to consider that speed limits of 100 km/h or 90 km/h were too low. The results for Kingborough did not differ significantly from the other areas.

Summary

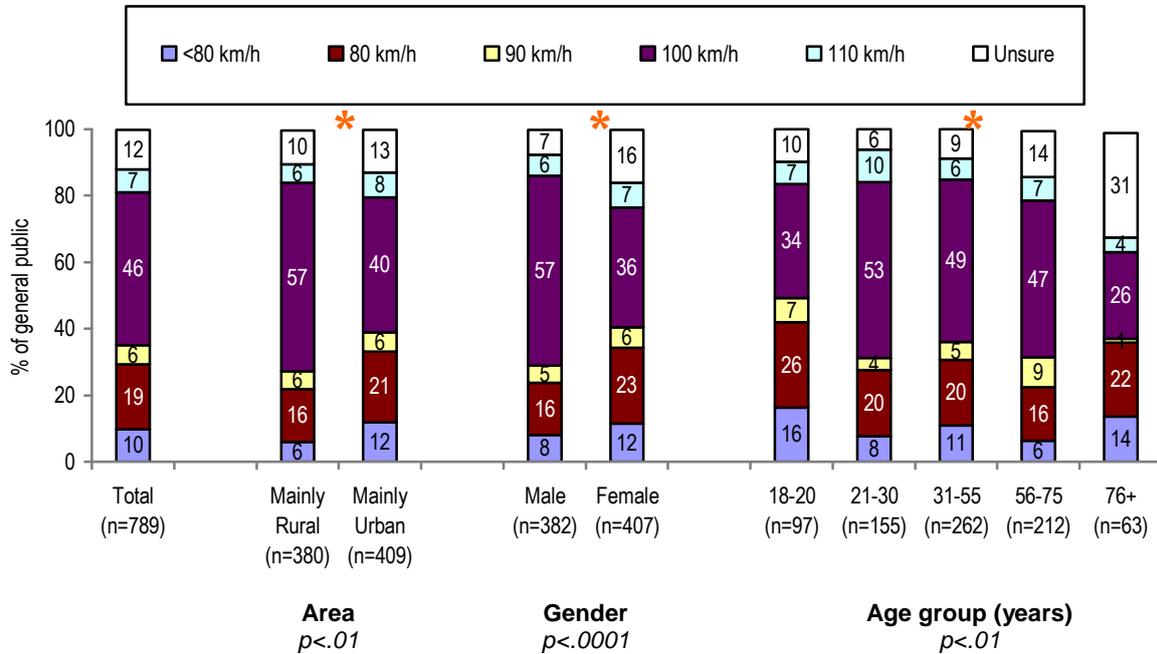
- About half (46%) of people correctly nominated the default speed limit as being 100 km/h (or 90 km/h if in Kingborough).
- The majority of people (62%) reported travelling at speeds of 90 km/h or less on these roads.
- Males were more likely than females to report driving at speeds of 100 km/h or more on these roads.
- 78% of people felt that a speed limit of 90 km/h would be 'about right' or still too high.

Community Attitudes to Speed Limits

An AMR Interactive Report

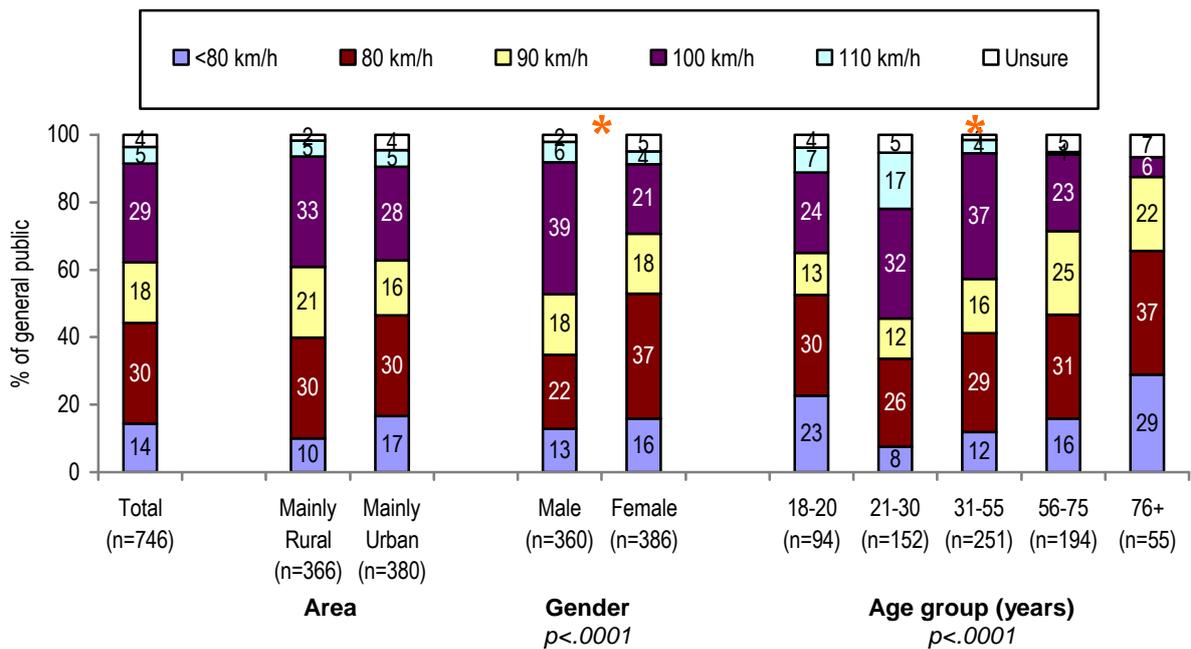


Figure 10. Q14. “Default speed limit on two-lane undivided rural roads.” by area, gender and age (weighted data)
BASE: All respondents



* Statistically significant difference between groups ($p < .01$)

Figure 11. Q15. “What speed do you typically travel at on two-lane undivided rural roads?” by area, gender and age (weighted data)
BASE: Not including those who responded as ‘not applicable’ or ‘depends’ (6%)



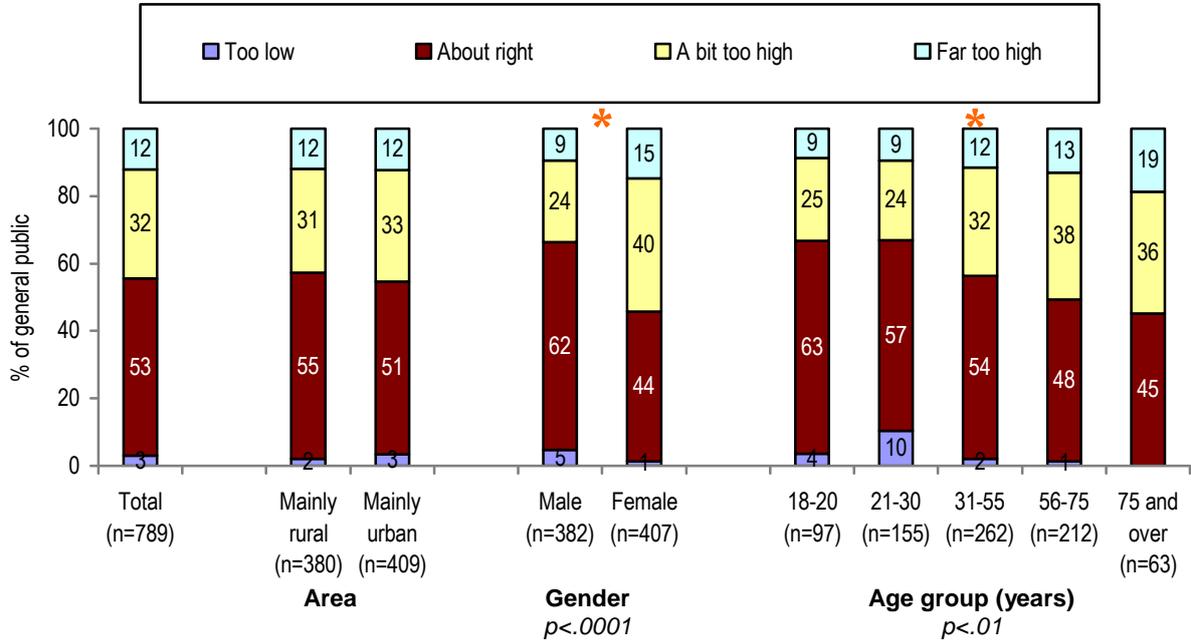
* Statistically significant difference between groups ($p < .01$)

Community Attitudes to Speed Limits

An AMR Interactive Report

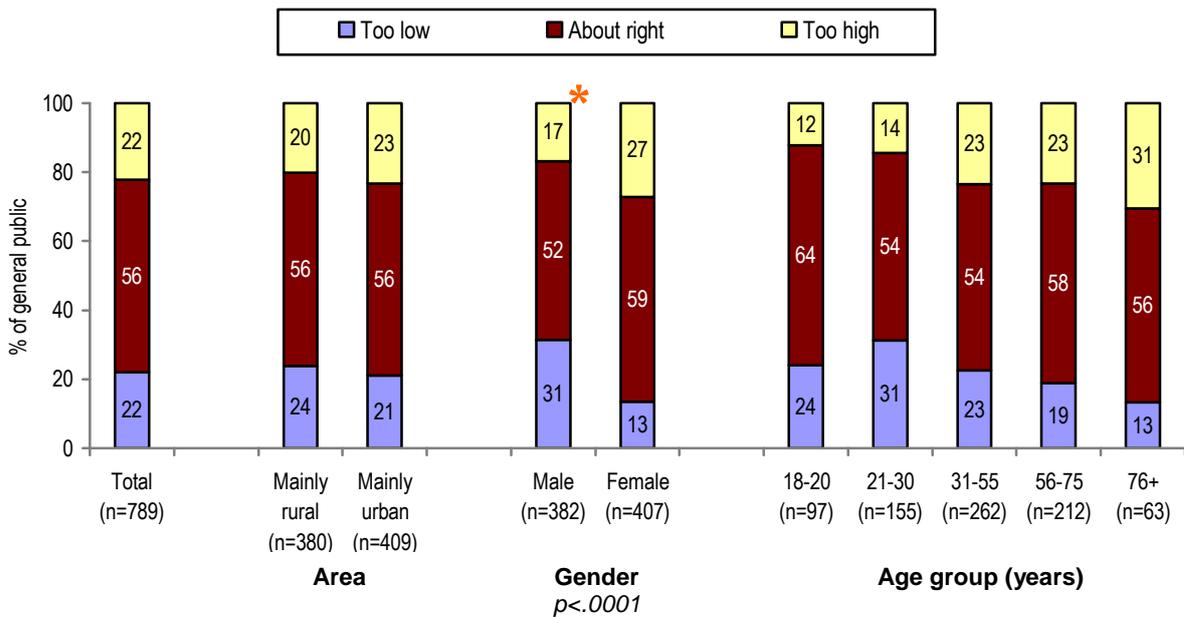


Figure 12. Q16. “Do you consider a speed limit of 100 km/h is appropriate for two-lane undivided rural roads.” by area, gender and age (weighted data)
 BASE: All people Note: Very few answered or ‘far too low’



* Statistically significant difference between groups ($p < .01$)

Figure 13. Q17. “Do you consider a speed limit of 90 km/h is appropriate for two-lane undivided rural roads.” by area, gender and age (weighted data)
 BASE: All people Note: Very few answered ‘far too high’ or ‘far too low’



* Statistically significant difference between groups ($p < .01$)



Unsealed, Gravel Roads in Country Areas

Knowledge of Speed Limit

About a quarter (23%) of people who answered the question were unsure about the default speed limit on an unsealed country road (Figure 14). About a sixth (16%) nominated 100 km/h, with the most common response being 80 km/h (30%). There were a number of differences by demographic groups:

- people in mainly rural areas were more likely than those in urban areas to nominate a higher limit (61% nominating at least 80 km/h vs 48%);
 - males were more likely than females to nominate a higher speed limit (62% nominating at least 80 km/h vs 40%); and
 - people aged over 75 years continued to be the least likely to nominate speeds of 100+ km/h, while those aged 18-20 years and over 75 years were the most likely to nominate slower speed limits, under 80 km/h.
- **Kingborough:** About a third (30%) of people had nominated 80 km/h as the default speed. This incidence was lowest in Hobart (28%) and Launceston (18%). While it was highest in Kingborough (38%), the incidence was not much different in the rest of Tasmania (33%) ($p < .05$).

Typical Travel Speed

One in ten (10%) people reported driving at speeds of 90 km/h or more on an uncongested unsealed road, and over a third (38%) reported typical speeds of no more than 60 km/h (Figure 15). The majority of people drove significantly below the current default speed limit (100 km/h), with around five-sixths (86%) of people reporting that they drove at 80 km/h or less on this type of road.

Higher speeds were reported by males compared with females (55% reporting 80+ km/h vs 28%). Reported speeds also differed by age, showing a U-shaped profile, with speeds of 80+ km/h more likely to be reported by people 21-30 years (44%), 31-55 years (44%) and 56-75 years, than the other groups. A third of people aged over 75 years reported speeds of less than 60 km/h, well above the results for the other groups (8-13%). The fact that the majority (83%) of drivers aged 18-20 years reported driving at speeds of 80 km/h or less is again probably attributable to the fact that learner drivers and provisional drivers during their first year of licensure must adhere to a maximum speed limit of 80 km/h.

Attitudes to Speed Limits

About nine in ten (88%) of people considered that a speed limit of 100 km/h was too high for an unsealed country road, including about three fifths (61%) considering it 'far too high' (Figure 16). While over three quarters (81%) of males considered the limit too high, this result was lower than the 95% of females with this attitude.

Consideration of reducing the speed limit to 80 km/h, however, produced a substantially different perception. The majority of people (63%) felt that a speed limit of 80 km/h on these roads was 'about right.' A quarter (28%) of people considered such a limit as too high, while only about one in ten (9%) considered it too low (Figure 17). Females continued to be more likely than males to consider the limit too high, although it was relatively well accepted by males (only 14% considering it too low).

It appears that the majority of people were supportive of lowering the 100 km/h default speed limit on unsealed rural roads, with 91% of people feeling that a speed limit of 80 km/h would be 'about right' or was still too high.



Summary

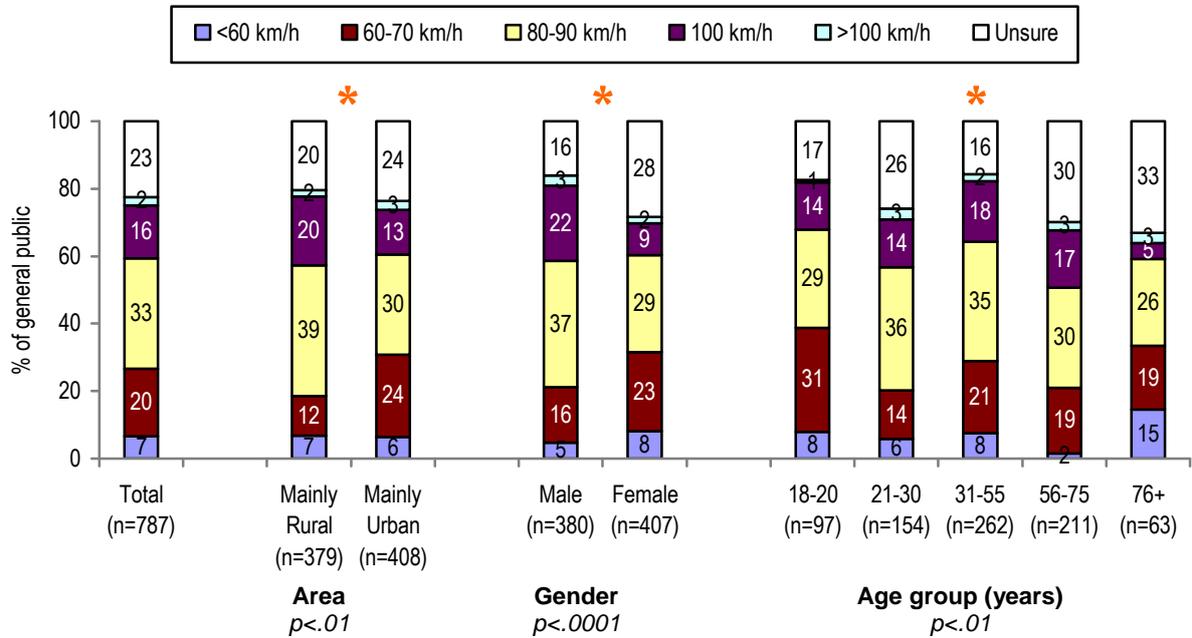
- Only a small minority of respondents (16%) correctly nominated the default speed limit on unsealed rural roads as being 100 km/h, with the majority (30%) reporting that 80 km/h was the default. In Kingborough, where the default limit is 80 km/h, around two-fifths (38%) of people correctly nominated 80 km/h as the default.
- The majority of respondents (86%) reported travelling at speeds of 80 km/h or less on these roads.
- Males were more likely than females (17% vs 3%) to report driving at speeds of 90 km/h or more on these roads.
- 91% of respondents felt that a speed limit of 80 km/h would be about right or still too high.

Community Attitudes to Speed Limits

An AMR Interactive Report

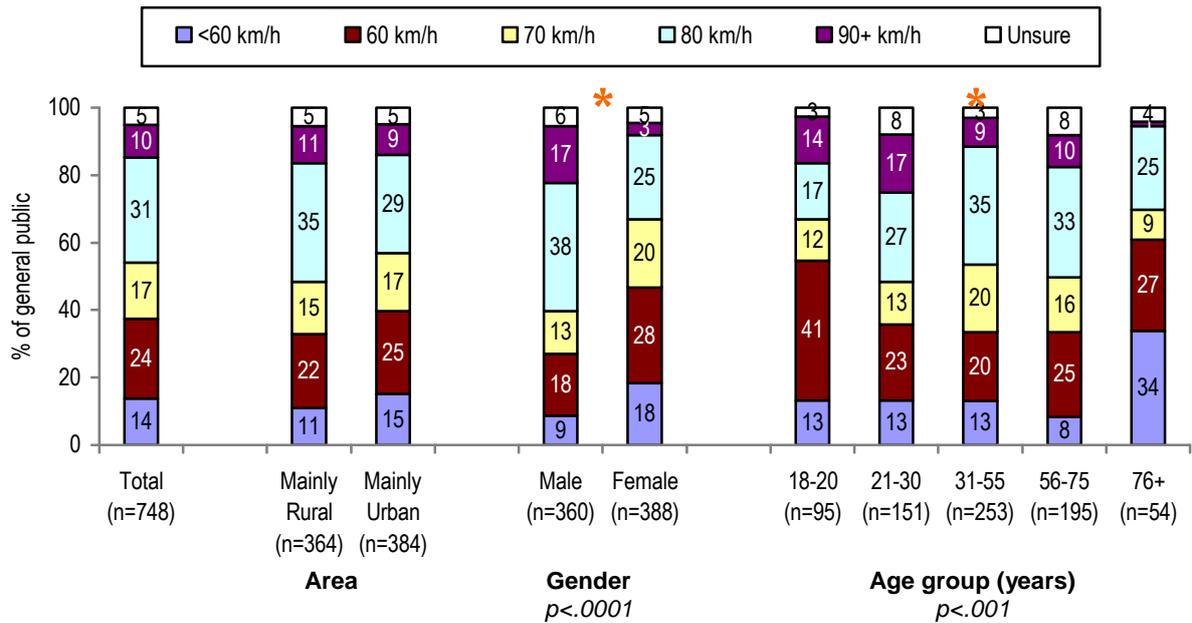


Figure 14. Q18. “Default speed limit on unsealed, gravel roads in country areas.” by area, gender and age (weighted data)
BASE: Not including those who responded ‘not applicable’ or ‘depends’ (<1%)



* Statistically significant difference between groups ($p < .01$)

Figure 15. Q19. “What speed do you typically travel at on unsealed, gravel roads in country areas?” by area, gender and age (weighted data)
BASE: Not including those who responded ‘not applicable’ or ‘depends’ (5%)



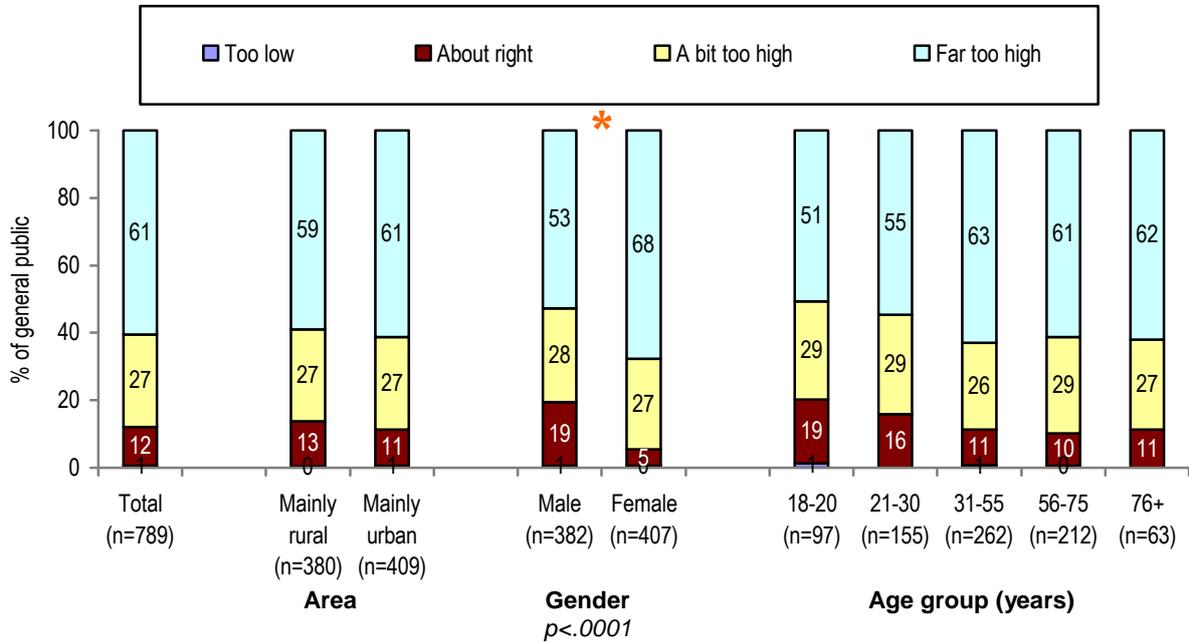
* Statistically significant difference between groups ($p < .01$)

Community Attitudes to Speed Limits

An AMR Interactive Report

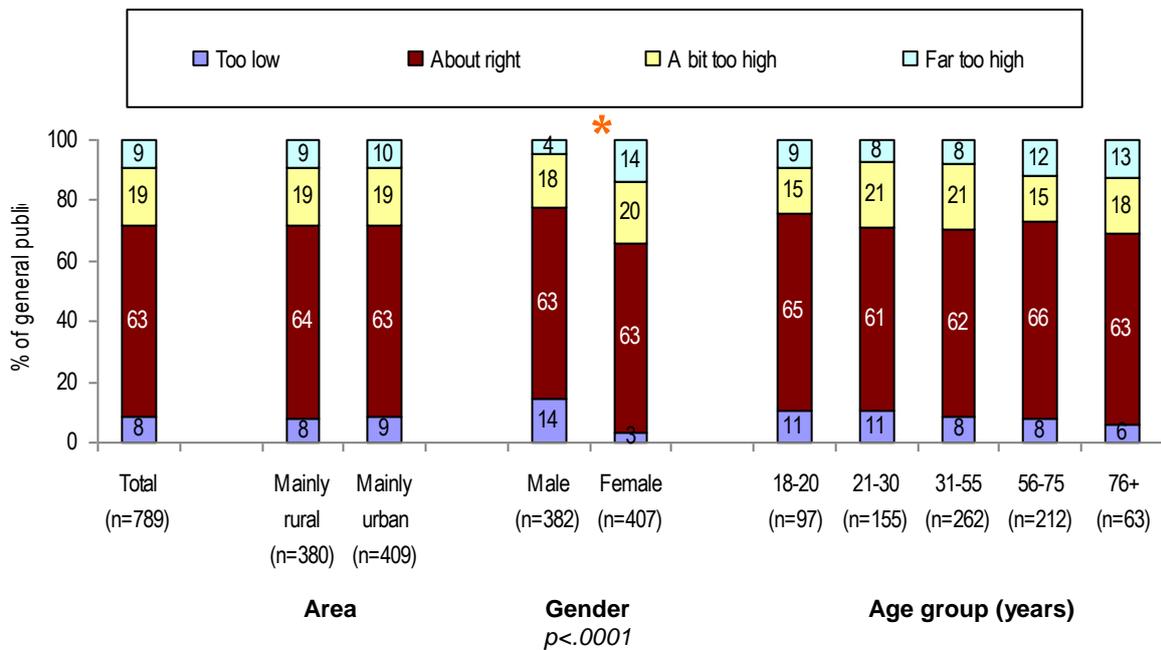


Figure 16. Q20. “Do you consider a speed limit of 100 km/h is appropriate for unsealed, gravel roads in country areas?” by area, gender and age (weighted data)
 BASE: All people Note: <1% answered ‘too low’



* Statistically significant difference between groups (p<.01)

Figure 17. Q21. “Do you consider a speed limit of 80 km/h is appropriate for unsealed, gravel roads in country areas?” by area, gender and age (weighted data)
 BASE: All people Note: 2% answered ‘far too high’



* Statistically significant difference between groups (p<.01)



Major Arterial Roads and Highways

Typical Travel Speed

Over half (58%) of people nominated at least 110 km/h as the typical speed they would travel on major arterial roads and highways, free of congestion (Figure 18). There was a strong age trend, where those aged over 75 years were by far the least likely to report driving at least 110 km/h (13%). The incidence of this speed showed a broadly U-shaped distribution, peaking among people aged 21-30 years (72%) and 31-55 years (65%).

Attitudes to Speed Limits

A fifth (20%) of people considered that a limit of 110 km/h (the current limit) was too high for major arterial roads and highways, with the majority (74%) considering it to be 'about right' (Figure 19). Females were again more likely than males to consider the limit too high (26% vs 15%), although only 10% of males considered it to be too low. There was a trend for perception of the limit being too high to increase with age.

The majority of people (60%), when asked to consider if a speed limit of 100 km/h would be appropriate for major arterial roads and highways, considered this limit to be 'about right.' Females (72%) were more likely than males (47%) to believe 100 km/h would be 'about right'. There was no significant divergence in those who believed that 100 km/h was 'about right' in mainly rural and mainly urban areas (61% and 59% respectively). People aged 18-20 years (67%), 56-75 years (67%), and over 75 years (78%) were more likely to support a lower speed limit than those aged 21-30 years (50%) and 31-55 years (54%).

However, the percentage of people (60%) who believed that a 100 km/h speed limit was appropriate was lower than the percentage of people (74%) who felt 110 km/h was 'about right'. Approximately one-third (36%) of people considered a speed limit of 100 km/h to be 'too low' (31%) or 'far too low' (5%) for major arterial roads and highways. This attitude was expressed by half of males, compared with about a quarter (23%) of females. The relationship with age showed lower acceptance among people aged 21-30 years (49% too low) and 31-55 years (42% too low), with greatest acceptance among people aged over 75 years (13% too low).

Summary

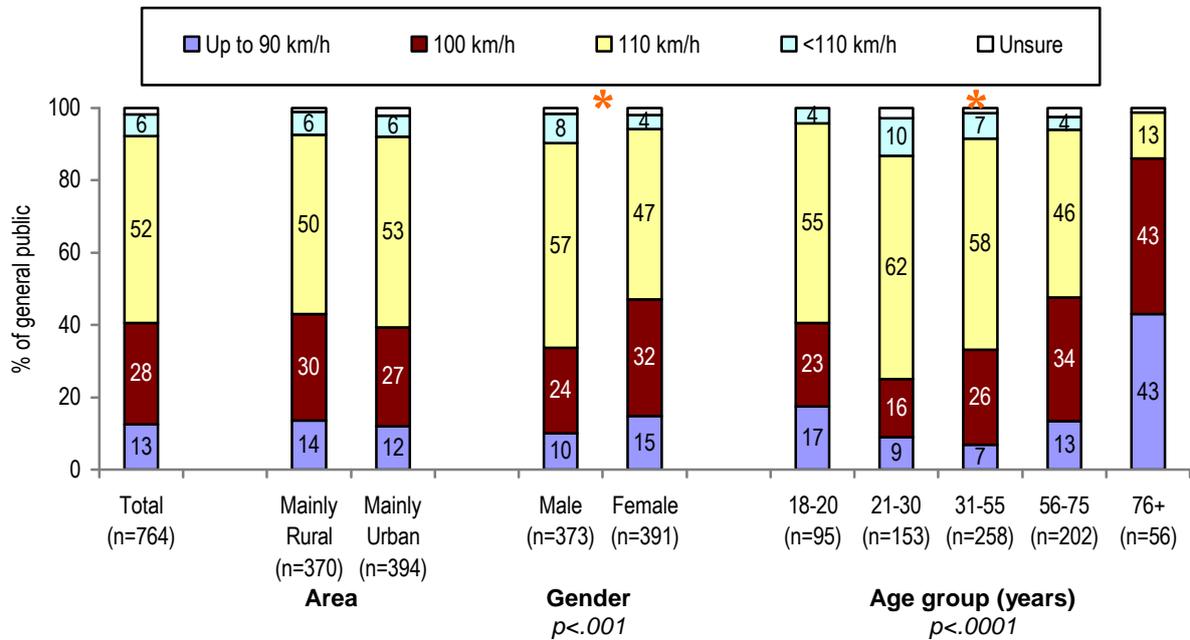
- The majority of drivers (58%) said they tend to drive at 110 km/h on uncongested major arterial roads and highways with a signed 110 km/h speed limit.
- Drivers aged over 75 years were the least likely to drive at 110 km/h or more.
- The majority of people (74%) considered a 110 km/h speed limit (the current limit) is 'about right' for these types of roads.
- When asked whether a speed limit of 100 km/h would be appropriate on these roads 60% of people felt it was 'about right', with females more likely than males to provide this response.
- However, the proportion of people who felt a speed limit of 100 km/h was 'about right' (60%) was lower than the three quarters (74%) considering a limit of 110 km/h was 'about right'. Additionally, around one-third (36%) of respondents felt that a speed limit of 100 km/h was 'too low' or 'far too low'.

Community Attitudes to Speed Limits

An AMR Interactive Report

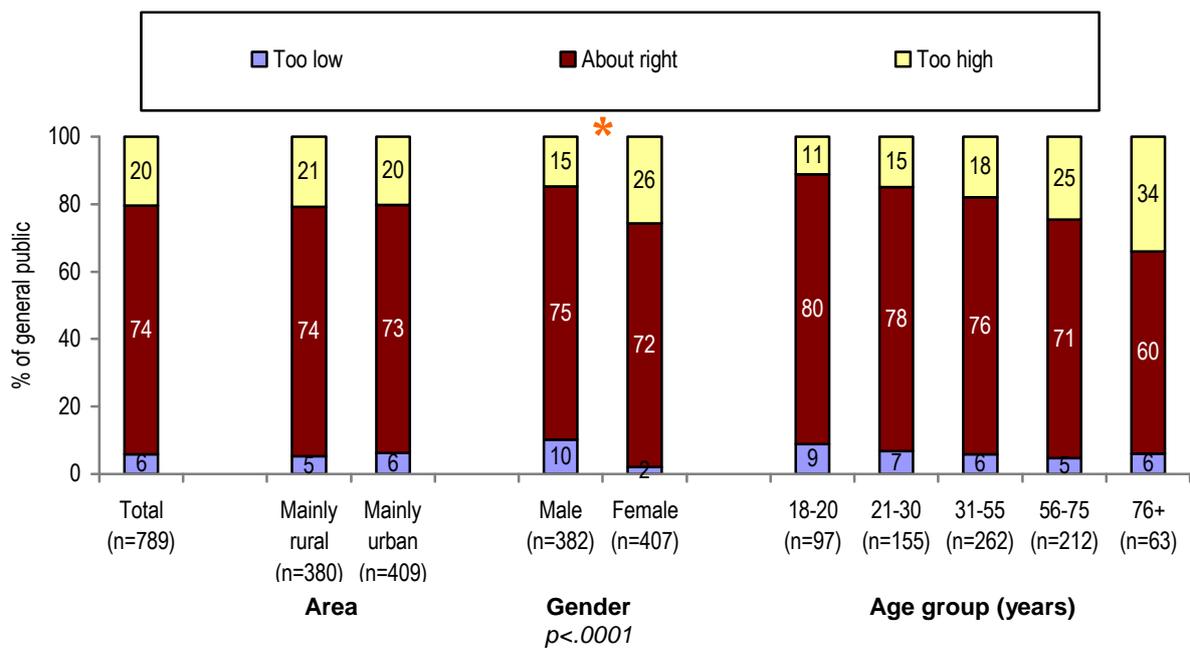


Figure 18. Q22. “What speed do you typically travel at on major arterial roads and highways, generally with a posted limit of 110 km/h?” by area, gender and age (weighted data)
 BASE: BASE: Not including those who responded ‘not applicable’ or ‘depends’ (4%)



* Statistically significant difference between groups ($p < .01$)

Figure 19. Q23. “Do you consider a speed limit of 110 km/h is appropriate for major arterial roads and highways.” by area, gender and age (weighted data)
 BASE: All people Note: 3% answered ‘far too high’



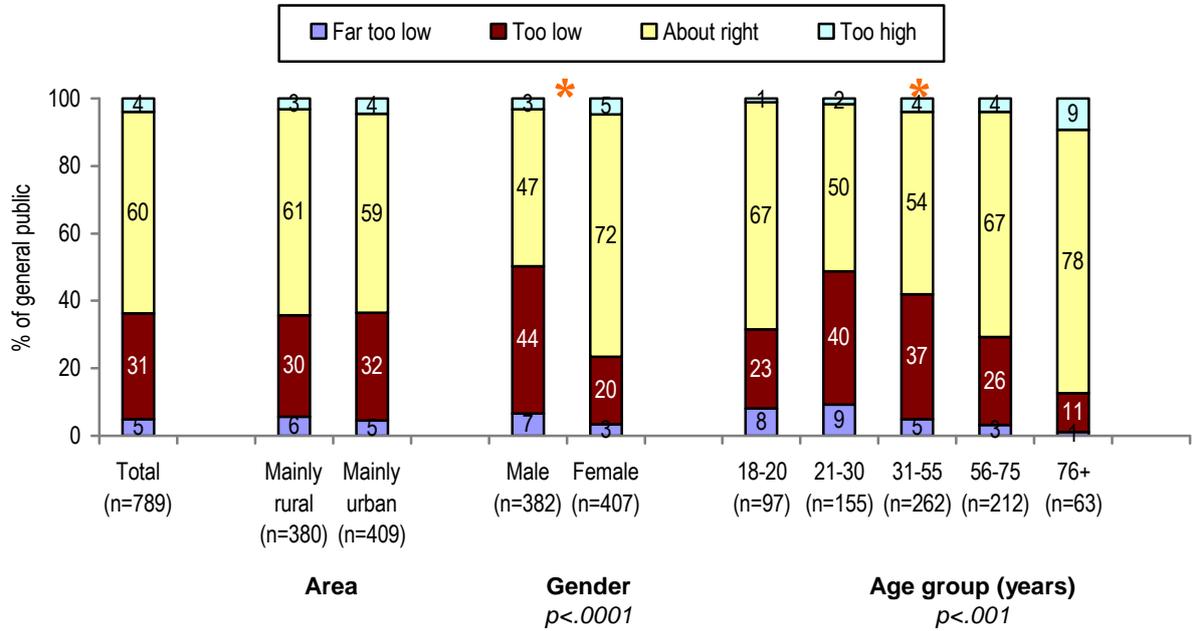
* Statistically significant difference between groups ($p < .01$)

Community Attitudes to Speed Limits

An AMR Interactive Report



Figure 20. Q24. “Do you consider a speed limit of 100 km/h is appropriate for major arterial roads and highways.” by area, gender and age (weighted data)
 BASE: All people Note: <1% answered ‘far too high’



* Statistically significant difference between groups ($p < .01$)



Relationships with Acceptance of Speed Limits

Underlying Dimensions

A first step in the analysis of relationships with attitudes toward lowering speed limits was to identify underlying perceptual and behavioural factors, or dimensions. These dimensions were identified using factor analysis, and developed for *perceptions of the impact* of speed limits; consideration of these relationships as *reasons for reducing* the speed limits; *speeds driven*; and *acceptability of reducing* speed limits.

Table 4. Underlying dimensions relating to acceptance of speed limits

CATEGORY	DIMENSION (calculation) [name]	QUESTIONS
Perceptions of speed limits	Belief in the relationship between speed limits and crash outcomes (standardised average of ratings of the four questions) [PERCEPTIONS]	Q7. Lowering the current speed limits would reduce crashes on the roads
		Q9. A reduction of all current speed limits by 10 km/h would not significantly impact trip travel times
		Q11. Lowering the current speed limits would reduce the severity of injury when a crash occurs
		Q13. Police target speeding motorists to make money for the government
Reasons for reducing speed limits	If relationship would be a reason for reducing speed limits (standardised average of ratings of the three questions) [REASONS]	Q8/Q10/Q12. If this statement were true, would it be a reason for you to support a reduction in speed limits.
Speeding behaviour	Typical speeds driven (factoring of the 3 questions) [SPEEDS DRIVEN]	Q15. Typical speed on sealed undivided country road, when there is no traffic congestion and you are free to choose your own travel speed
		Q19. Typical speed on unsealed gravel country road, when there is no traffic congestion and you are free to choose your own travel speed
		Q22. Typical speed on 110 km/h major highway, when there is no traffic congestion and you are free to choose your own travel speed
Acceptance of speed limits	Acceptance on country roads (standardised average of ratings of the 4 questions) [ACCEPTANCE - COUNTRY]	Q16. Appropriateness of 100 km/h for sealed undivided country roads
		Q17. Appropriateness of 90 km/h for sealed undivided country roads
		Q20. Appropriateness of 100 km/h for sealed undivided country roads?
	Q21. Appropriateness of 80 km/h for sealed undivided country roads	
	Acceptance on major highways (standardised average of ratings of the 2 questions) [ACCEPTANCE - HIGHWAYS]	Q23. Appropriateness of 110 km/h for sealed undivided country roads for major highways
Q24. Appropriateness of 100 km/h for sealed undivided country roads for major highways		



The questions on *perceptions* formed one dimension, and the questions on typical *speeds driven* formed another (Table 4). The dimension of accepting the relationships as *reasons* for reducing speed limits was found to be moderately correlated with *perceptions* ($r=0.57$) The questions around *acceptability of reducing limits* formed two dimensions, one around the sealed and unsealed *country roads*, and one around the *major highways*. Relationships were then assessed between the dimensions around *acceptability of speed limits* and the other dimensions, as well as demographic variables.

The strength of relationships between the two *acceptance* dimensions and each of the *perceptions* and *speeds driven* dimensions are shown in Table 5, based on the results of a multiple regression analysis. This analysis takes into account the impact of the dimensions together in explaining *acceptance* of speed limits.

The overall model in explaining *acceptance* of speed limits was stronger for country roads (sealed and unsealed) than for major arterial roads and highways. *Speeds driven* and *perceptions* had a similar strength of relationship in explaining *acceptance* on major highways, but *speeds driven* was by far the more important contributor in the relationship with *acceptance* on country roads.

Table 5. Strength of association between acceptance of speed limits and: perceptions of speed limits and speeds driven

NOTE: Regression analysis, coefficients shown; a higher coefficient is a stronger association

Dimensions	ACCEPTANCE of speed limits	
	COUNTRY ROADS regression coefficient (p) (model $R^2=45\%$)	MAJOR HIGHWAYS regression coefficient (p) (model $R^2=36\%$)
SPEEDS DRIVEN – higher speeds = lower acceptance of reducing limits	0.55 (p<.0001)	0.35 (p<.0001)
PERCEPTIONS OF SPEED LIMITS believing relationships to be true = higher acceptance of reducing limits	0.12 (p<.001)	0.24 (p<.0001)
REASONS for reducing speed limits major reason for reducing limits- higher acceptance of reducing limits	0.16 (p<.001)	0.21 (p<.0001)

Stronger coefficients highlighted

Relationships with the *acceptance* dimensions were also assessed individually for each of the perceptual questions (Table 6). This analysis showed that belief in the relationship between reduction in speed limits and *reducing crashes* had the strongest relationship with acceptance of reduction in speed limits. The other three perceptions all had weaker relationships with acceptance.

The final analysis looked at how the demographic groups differed on each of the dimension scores (Table 7). An index was created, based on the average for each demographic sub-group on each dimension. The index has been converted to a scale of 0-10 for purposes of making comparisons. The results reinforce a number of trends discussed in the main results section. The most consistent differences were by gender, with females more positively positioned on all dimensions. For age, *acceptance* of the speed limits and positive perceptions increased with age;



and *speeds driven* showed the non-linear shape discussed above, where speeds peaked in the 21-30 years and 31-55 years age groups, and the over 75 years group reported the slowest speeds.

For the location variable, there was an overall trend for people in Launceston to report travelling higher speeds on average, with Hobart and Kingborough averaging lower. There was also a trend for people in Hobart and Kingborough to have a higher acceptance of speed limits on country roads. No differences were confirmed for the rural/urban location variable.

Table 6. Strength of association between perceptions about speed limits and acceptance of speed limits

NOTE: Individual correlations; a higher coefficient is a stronger association

Perceptions of Speed Limits	ACCEPTANCE OF SPEED LIMITS	
	COUNTRY ROADS correlation (p)	MAJOR HIGHWAYS correlation (p)
<i>believing relationships to be true = higher acceptance of reducing limits</i>		
Q7. Lowering the current speed limits would reduce crashes on the roads.	0.33 (p<.0001)	0.43 (p<.0001)
Q9. A reduction of all current speed limits by 10 km/h would not significantly impact trip travel times.	0.18 (p<.0001)	0.23 (p<.0001)
Q11. Lowering the current speed limits would reduce the severity of injury when a crash occurs.	0.25 (p<.0001)	0.20 (p<.0001)
<i>believing relationships to be false = higher acceptance of reducing limits</i>		
Q13. Some people believe that the main reason police target speeding motorists is to make money for the government.	0.14 (p<.001)	0.25 (p<.0001)

Stronger correlations highlighted



Table 7. Strength of association between demographics and dimensions of speeding

NOTE: Index scores are based on average scores on the dimensions, converting the lowest score in each demographic/dimension variable to 0, with a range of 0-10

Demographics	ACCEPTANCE of Speed Limits			
	PERCEPTIONS of speed limits	SPEEDS DRIVEN	Major Highways	Country Roads
	(p) index Believe to be true	(p) index Higher speed	(p) index Greater acceptance	(p) index Greater acceptance
<i>Higher score ⇨</i>				
Gender	<i>(p<.0001)</i>	<i>(p<.0001)</i>	<i>(p<.0001)</i>	<i>(p<.0001)</i>
Male	0.0	4.4	0.0	0.0
Female	4.0	0.0	4.4	4.7
Age group (years)	<i>(p<.05)</i>	<i>(p<.0001)</i>	<i>(p<.001)</i>	<i>(p<.05)</i>
18-20	0.9	5.3	0.8	0.0
21-30	0.0	10.0	0.0	0.0
31-55	0.2	8.4	1.6	2.3
56-75	1.4	6.5	3.5	2.8
Over 75	4.6	0.0	6.2	4.1
Location	<i>ns</i>	<i>(p<.0001)</i>	<i>ns</i>	<i>(p<.01)</i>
Hobart		0.0		4.3
Launceston		5.1		0.0
Kingborough		0.2		4.4
Rest of Tas		2.5		2.3
Rural/Urban	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>

*## Stronger indexes highlighted,
ns Not statistically significant*



Summary

- Acceptance of prevailing or reduced default speed limits on rural roads (sealed and unsealed) was found to be strongly associated with speeds driven.
- The belief that lowering the current speed limits would reduce crashes on the roads was the perception most strongly correlated with support for a reduction in speed limits.
- Demographic comparisons showed that the most consistent differences were by gender. Females were more likely to believe in the relationships between speed limits and crash outcomes; were less likely to drive at higher speeds; and were more accepting of reduced speed limits on rural roads and highways.
- Acceptance of speed limit reductions and positive perceptions of lower speed limits were found to increase with age.
- Drivers aged 21-30 and 31-55 years were more likely to report driving at higher speeds and were less accepting of speed limit changes.
- There was no statistically significant variation in perceptions about the relationship between speed limits and crash outcomes; speeds driven; or acceptance of speed limits, between rural and urban localities.



5. Discussion and Conclusions

Discussion

Overview

The survey has provided useful information about knowledge, attitudes and behaviour of people in Tasmania on the topic of speeding. The analysis of the results can be used to assess the degree of acceptability of reducing speed limits – including acceptability on different road types – and how reductions in limits can be promoted.

Comments on the analysis are provided in Appendix D.

Perceptions of Relationships with Speed Limits

People were most likely to believe that a reduction in speed limits reduces the *severity* of crashes (believed by 86%), and much less likely to believe that it would lead to a *reduction* in crashes (believed by 40%).

Attitudes toward how speed limits are associated with particular outcomes were moderately associated with acceptance of lowering speed limits. However, the association with a *reduction* in crashes had the strongest relationship with acceptance of speed limits. So this is the perception which, if more people are persuaded to accept, has a greater potential to improve acceptance of speed limits. Nevertheless, the substantial credibility of reducing limits leading to a reduction in *severity* of crashes gives it an important role to be used for promoting new changes.

A further issue with the perception of the impact of speed limits on the incidence of crashes was that many people did not consider that reducing speed limits was the best way to address speeding or the causes of crashes. About half of people also believed that police enforcement of speeding was about revenue raising.

Knowledge of Limits and Behaviour

Knowledge about ‘default’ speed limits on unsigned sealed and unsealed country roads was mixed. The level of accuracy was greater for sealed roads. Few knew that a limit of 100 km/h applied on unsealed roads, with the majority nominating much lower limits.

For both sealed and unsealed roads, the reported typical speeds that would be driven when the road was uncongested and the driver was free to choose a speed were lower than the nominated speed limits, indicating a relatively conservative approach by many drivers. Over half of people reported a typical speed on unsealed roads in this situation of no more than 70 km/h.

Acceptance of Lowering Speed Limits

Unsealed Gravel Rural Roads

There was relatively poor knowledge about default speed limits (80 km/h in Kingborough and 100 km/h elsewhere) on unsealed roads. People also reported travelling at relatively low speeds with 86% of people reporting travelling at speeds of 80 km/h or less. These findings suggest that reducing this limit may be relatively easily implemented.

The large majority (88%) considered a speed limit of 100 km/h ‘a bit too high’ or ‘far too high’ for such roads. People were more supportive of a default speed limit of 80 km/h or lower on these roads – 91% of people considered 80 km/h ‘about right, ‘a bit too high’ or ‘far too high.’ In contrast fewer than 10% considered that 80 km/h was too low.



Sealed Two-Lane Undivided Rural Roads

A greater proportion of people (46%) nominated the correct default speed limit (90 km/h in Kingborough and 100 km/h elsewhere); however, this still displays a relatively poor understanding of the default limit. Many people again reported driving at speeds below the current default limit with 62% reporting typical travel speeds of 90 km/h or less. A third, however, reported speeds of 100 km/h (29%) or 110+ km/h (5%). Furthermore, the speeds reported by drivers had a relatively strong impact on acceptance of speed limits: the lower the reported speeds, the higher the acceptance.

Around half of people (53%) felt the current default limit of 100 km/h was 'about right' with 42% feeling it was 'a bit too high' or 'far too high'. However, a greater proportion (78%) of people considered 90 km/h or less to be more appropriate for these types of roads.

The high percentage of drivers already travelling at speeds of 90 km/h or less, and the proportion of people who believe a speed limit of 90 km/h is 'about right' or even still too high, indicates a reduction in the default limit would be relatively well accepted. The substantial overlap in considering both 100 km/h and 90 km/h as 'about right' (by about a third of people) indicates that many people do not consider a 10 km/h hour difference as significant.

Major Arterial Roads and Highways

More than half (58%) of people reported driving at speeds of at least 110 km/h on uncongested major arterial roads and highways. Older drivers (over 75 years) were least likely to report driving at higher speeds and those aged 21-30 (72%) and 31-55 years (65%) were most likely to report speeds of 110 km/h or more. A strong association between speeds driven and acceptance of speed limits was found for these roads – where higher speeds indicate a lower acceptance of reducing speed limits.

The majority of people (74%) believed that a limit of 110 km/h on these roads was 'about right' with a fifth considering it to be too high. People were less supportive of a speed limit of 100 km/h on these roads with 60% of people believing it to be 'about right'.

These results highlight a degree of resistance to a reduction in limits on highways, and the potential need for enforcement of reduced limits to influence behaviour. The substantial overlap in considering both 110 km/h and 100 km/h as 'about right' (by about two fifths of people) indicates that many people do not consider a 10 km/h hour difference as significant.

Demographics

Females reported safer attitudes, safer behaviour, and greater acceptance of lower speed limits compared with males. Drivers aged over 75 years also tended to report the most positive attitudes and behaviours. In contrast, drivers aged 18-20 years had a mixed profile. While they were among the least accepting of reducing speed limits, their perceptions and reported behaviour tended not to be quite as poor as the middle age groups, particularly in the 21-55 years age range. The reported behaviour by the 18-20 years group would have been influenced by the 80 km/h speed limit for first year provisional drivers. The middle age groups in particular reported higher average levels of speed and had on average poorer perceptions about the impact of speed limits on various outcomes.

There were few differences between the different locations that were assessed, and also little difference between people reporting living in rural areas compared with urban areas. People in rural areas were more likely to nominate higher default speed limits on country roads. People in Launceston and rural Tasmania were less accepting of reducing speed limits on country roads, which was related to higher reported speeds driven for these locations, particularly Launceston.



Kingborough Trial

The greater similarity between Kingborough and Hobart on the above measures is an indication of a positive impact of the trial reduction in speed limits in Kingborough.

There was also greater nomination of a 90 km/h speed limit on sealed roads in Kingborough, in line with the trial, and a trend for greater knowledge of an 80 km/h speed limit on unsealed roads. However, people in Kingborough were also the most likely to agree that police were 'revenue raising' through targeting speeding, which is possibly a backlash to the trial.

A more detailed assessment of the results would require pre-trial measures.

Conclusions

- There was relatively strong acceptance of reducing speed limits on the roads described in the survey. The order of acceptance, from higher to lower, was:
 - unsealed country roads (91% of people felt a speed limit of 80 km/h or less was 'about right' or too high);
 - sealed country roads (78% of people felt a speed limit of 90 km/h or less was 'about right' or too high); and
 - major arterial routes and highways (64% of people felt a speed limit of 100 km/h or less was 'about right' or too high).
- In promoting reductions in speed limits, a stronger community understanding of the relationship between speed limit reductions and *reducing* crashes should be encouraged. Attention should also be given to emphasizing the impact that reduced speeds have on the *severity* of crashes, as this relationship has strong credibility.
- Drivers who currently travel at higher speeds were less accepting of change, and this may also require enforcement activity to encourage compliance.
- In regard to demographic sub-groups:
 - males were less accepting than females of reductions in speed limits, less accepting of the impact of reducing limits, and reported higher driving speeds;
 - people aged 76 years and over were the most positive about reducing speed limits, and reported the lowest average speeds;
 - people aged 18-20 years were less accepting of reductions, although their reported speeding behaviour and perceptions of the impact of speed limits was not as poor on average as people aged 21-55 years; and
 - the similarity of Kingborough to Hobart on some measures of driving speeds and acceptance of reducing limits on country roads is an indication of a positive impact of the trial reduction in speed limits in Kingborough.



6. Appendices

Appendix A: Questionnaire

Good afternoon/evening,

This is from the research company EMRS ringing on behalf of the Department of Infrastructure, Energy and Resources. We are conducting a survey to get your ideas and your opinions about the current speed limits in your state. Would you be willing to help?

IF YES:

Your answers are confidential and your personal details will not be passed on to anyone else. Please answer the questions as truthfully as you can as your responses will help in tackling this important issue.

IF THE RESPONDENT IS NOT A DRIVER SAY: We are still interested in your opinions.

Q1. To make sure we get a good representation of the population, may I ask you a few questions about yourself?

[RECORD GENDER]

Male	1
Female	2

Q2. Are you...

18-20	1
21-30	2
31-55	3
56-75	4
75 and over	5

Q3. How would you describe the area in which you are living?

[READ OUT]

Mainly or totally rural	1
Mainly or totally urban	2

Q4. What is your post code?



This section concerns your travel patterns and driving experience. Even if you do not have driver's licence, we are still interested in your options.

Q5. On average, how far would you normally drive a vehicle in a week?

[READ OUT]

Up to 50 km	1
51-100 km	2
101-200 km	3
More than 200 km	4
Does not have a driver's licence (DO NOT READ OUT)	5
Has a driver's licence, but does not drive (DO NOT READ OUT)	6

[IF THE ANSWER IS 5-6, THEN SKIP TO Q7]

Q6. In what type of area are most of your trips as a driver?

[READ OUT]

Towns, built-up or urban areas	1
Country/rural areas	2
Combination of both	3

We are now seeking your opinion on a range of issues related to speed limits and speeding. Please be assured that your answers will be kept fully confidential and will not be seen by anyone other than the research team.

Please think about times when there is no traffic congestion and when you are free to choose your own travel speed.

Q7. "Lowering the current speed limits would reduce crashes on the roads"

Do you believe this is true? Would you say...

I strongly believe it is true	1
I believe it is true	2
I do not know whether it is true	3
I believe it is false	4
I strongly believe it is false	5

Q7a. Please explain why you think this.

[PROBE]

Q8. If this statement were true, would it be a reason for you to support a reduction in speed limits? Would it be...

A major reason	1
A minor reason	2
Not a reason	3



Q9. "A reduction of all current speed limits by 10 km/h would not significantly impact trip travel times."

Do you believe this is true? Would you say...

I strongly believe it is true	1
I believe it is true	2
I do not know whether it is true	3
I believe it is false	4
I strongly believe it is false	5

Q10. If this statement were true, would it be a reason for you to support a reduction in speed limits? Would it be...

A major reason	1
A minor reason	2
Not a reason	3

Q11. "Lowering the current speed limits would reduce the severity of injury when a crash occurs."

Do you believe this is true? Would you say...

I strongly believe it is true	1
I believe it is true	2
I do not know whether it is true	3
I believe it is false	4
I strongly believe it is false	5

Q12. If this statement were true, would it be a reason for you to support a reduction in speed limits? Would it be...

A major reason	1
A minor reason	2
Not a reason	3

Q13. Some people believe that the main reason police target speeding motorists is to make money for the government. Do you believe this is true? Would you say...

I strongly believe it is true	1
I believe it is true	2
I do not know whether it is true	3
I believe it is false	4
I strongly believe it is false	5



We are now seeking your opinion on a range of issues relating to specific speed limit zones. Please remember that we are after your honest opinion and for most questions there are no wrong or right answers.

Q14. Considering two-lane undivided rural roads - the normal sealed country roads, not the big highways or major arterial roads. If there is no speed limit sign on this type of road, a standard or default speed limit applies. Can you please tell me what the default speed limit is?

[DO NOT READ OUT]

Don't know	1	Other (specify)	7
110 km/h	2	70 km/h	8
100 km/h	3	60 km/h	9
90 km/h	4	50 km/h	10
80 km/h	5	40 km/h	11
Unsure	6	20 km/h	12

[IF THE ANSWER IS NOT 7, THEN SKIP TO Q15]

Q14a. Other (Specify)

Q15. What speed do you typically travel at on this type of road when there is no traffic congestion and you are free to choose your own travel speed?

Don't know	1	Other (specify)	7
110 km/h	2	70 km/h	8
100 km/h	3	60 km/h	9
90 km/h	4	50 km/h	10
80 km/h	5	40 km/h	11
Unsure	6	20 km/h	12

[IF THE ANSWER IS NOT 7, THEN SKIP TO Q16]

Q15a. Other (Specify)

Q16. Do you consider a speed limit of 100 km/h appropriate for this type of road?

[READ OUT]

Far too low	1
A bit too low	2
About right	3
A bit too high	4
Far too high	5

Q17. What would you think if the speed limit on roads like this were 90 km/h:

[READ OUT]

Far too low	1
A bit too low	2
About right	3
A bit too high	4
Far too high	5



Q18. Now let's consider unsealed, gravel roads in country areas. If there is no speed limit sign on this type of road, a standard or default speed limit applies. Can you please tell me what the default speed limit is?

[DO NOT READ OUT]

Don't know	1	Other (specify)	7
110 km/h	2	70 km/h	8
100 km/h	3	60 km/h	9
90 km/h	4	50 km/h	10
80 km/h	5	40 km/h	11
Unsure	6	20 km/h	12

[IF THE ANSWER IS NOT 7, THEN SKIP TO Q19]

Q18a. Other (Specify)

Q19. What speed do you typically travel at on this type of road when there is no traffic congestion and you are free to choose your own travel speed?

[DO NOT READ OUT]

Don't know	1	Other (specify)	7
110 km/h	2	70 km/h	8
100 km/h	3	60 km/h	9
90 km/h	4	50 km/h	10
80 km/h	5	40 km/h	11
Unsure	6	20 km/h	12

[IF THE ANSWER IS NOT 7, THEN SKIP TO Q20]

Q19a. Other (Specify)

Q20. Do you consider a speed limit of 100 km/h appropriate for this type of road?

[READ OUT]

Far too low	1
A bit too low	2
About right	3
A bit too high	4
Far too high	5

Q21. What would you think if the speed limit on roads like this were 80 km/h?

[READ OUT]

Far too low	1
A bit too low	2
About right	3
A bit too high	4
Far too high	5



Q22. Now let's consider major arterial roads and highways. Generally, the posted speed limit on these sections of road is 110 km/h. What speed do you typically travel at on this type of road when there is no traffic congestion and you are free to choose your own travel speed?

[DO NOT READ OUT]

Don't know	1	Other (specify)	7
110 km/h	2	70 km/h	8
100 km/h	3	60 km/h	9
90 km/h	4	50 km/h	10
80 km/h	5	40 km/h	11
Unsure	6	20 km/h	12

[IF THE ANSWER IS NOT 7, THEN SKIP TO Q23]

Q22a. Other (Specify)

Q23. Do you consider a speed limit of 110 km/h appropriate for this type of road?

[READ OUT]

Far too low	1
A bit too low	2
About right	3
A bit too high	4
Far too high	5

Q24. Do you consider a speed limit of 100 km/h appropriate for this type of road?

[READ OUT]

Far too low	1
A bit too low	2
About right	3
A bit too high	4
Far too high	5

Thank you very much for your participation in this study.



Q25. It is possible that in the future, we may undertake some further research. If so, is it OK with you if we make further contact with you in the future?

Yes	1
No	2

[IF THE ANSWER IS 2, THEN SKIP TO CLOSING STATEMENT]

Q25a Name:

[RECORD]

Q25b Home phone:

[RECORD]

Q25c Mobile phone:

[RECORD]

Q25d Email:

[RECORD]

Thank you for helping us with the Survey which has been conducted for the Department of Infrastructure, Energy and Resources. Finally may I have your first name for validation purposes only please?

Just to remind you that my name is from the research firm EMRS. EMRS is bound by national privacy legislation that respects the rights of all respondents. If you have any questions about this survey please ring my supervisor on 62 111 222.

RECORD NAME, DATE AND PHONE NUMBER.



Appendix B: Weighting

The survey sample was weighted using 2006 Census data from the ABS for age/gender distribution and population by postcode (Table 7). Four locations were used based on:

- (1) postcode allocations for Hobart and Launceston used previously in survey research for the Road Safety Task Force; and
- (2) postcodes for the Kingborough Locality from the Tasmanian Localities Index on the Local Government Association of Tasmania's website (www.lgat.tas.gov.au/webdata/resources/files/Localities_by_Post_Code.pdf) (Table 8).

Table 7. Profile of population by age and gender, for weighting

Gender	Age group	%
Males	18-20	2.54
	21-30	7.17
	31-55	22.04
	56-75	12.40
	Over 75	3.80
Females	18-20	2.47
	21-30	7.38
	31-55	23.36
	56-75	12.81
	Over 75	6.04
Total		100.00

Table 8. Postcodes for locations

Hobart	Launceston	Kingborough
7000	7248	7050
7004	7249	7052
7005	7250	7053
7007		7054
7008		7055
7009		7150
7010		7154
7011		7155
7015		7162
7016		7163
7018		
7019		



The population distribution by postcode was used to set the distribution for the four locations (Table 9).

Table 9. Profile of population by age and gender, for weighting

Location	%
Hobart	26.3
Launceston	15.2
Kingborough	6.7
Rest of Tasmania	51.7
<i>Total</i>	<i>100.0</i>

The percentage of respondents in each location identified as 'rural' during the first period of the survey, when sampling of households was conducted randomly, was used as an overall estimate of rural/urban distribution for weighting (Table 10). Using this approach it was estimated the overall rural/urban split was 34%/66%.

Table 10. Calculating % of people in rural areas in each location, for weighting

Time	LOCATION			
	Hobart <i>% as rural</i>	Launceston <i>% as rural</i>	Kingborough <i>% as rural</i>	Rest of Tasmania <i>% as rural</i>
Random sampling period	2.4	1.5	36.4	59.1
Targeted period	8.0	21.8	61.8	83.8
Population distribution (%)	26.3	15.2	6.7	51.7
Weighted Rural (%)	0.6	0.2	2.4	30.6



Appendix C: Summary of Results by Location (weighted)

QUESTION	RESPONSE	Total (n=789) %	Hobart (n=173) %	Laun- ceston (n=122) %	King- borough (n=56) %	Rest of Tas (n=438) %
Q3. How would you describe the area in which you are living?	Mainly or totally rural	34	2	2	39	59
	Mainly or totally urban	66	98	98	61	41
Q6. In what type of area are most of your trips as a driver?	Towns, built-up or urban areas	37	71	58	33	18
	Country/rural areas	10	3	2	9	15
	Combination of both	54	26	41	58	67
Q5. On average, how far would you normally drive a vehicle in a week?	Up to 50 km	22	27	21	31	18
	51-100 km	23	23	23	15	23
	101-200 km	20	22	22	23	19
	More than 200 km	30	21	26	29	35
	Not driver	6	7	8	1	5
Q7. Lowering the current speed limits would reduce crashes on the roads.	I strongly believe it is true	19	16	18	23	21
	I believe it is true	21	25	18	19	21
	I do not know whether it is true	7	10	8	1	7
	I believe it is false	27	26	24	22	29
	I strongly believe it is false	25	23	32	34	23
Q8. If this statement were true, would it be a reason for you to support a reduction in speed limits?	A major reason	42	45	36	42	43
	A minor reason	30	29	35	23	29
	Not a reason	28	26	29	35	27
Q9. A reduction of all current speed limits by 10 km/h would not significantly impact trip travel times.	I strongly believe it is true	19	24	17	13	18
	I believe it is true	36	33	39	45	37
	I do not know whether it is true	8	7	11	8	8
	I believe it is false	23	25	20	12	24
	I strongly believe it is false	13	12	13	22	13
Q10. If this statement were true, would it be a reason for you to support a reduction in speed limits?	A major reason	30	28	26	30	31
	A minor reason	34	38	32	23	35
	Not a reason	36	34	42	47	34
Q11. Lowering the current speed limits would reduce the severity of injury when a crash occurs.	I strongly believe it is true	52	53	50	58	52
	I believe it is true	34	38	29	25	35
	I do not know whether it is true	3	2	5	4	4
	I believe it is false	6	4	9	5	7
	I strongly believe it is false	4	4	7	8	2
Q12. If this statement were true, would it be a reason for you to support a reduction in speed limits?	A major reason	57	59	52	57	58
	A minor reason	26	22	32	23	26
	Not a reason	17	19	16	20	16
Q13. Some people believe that the main reason police target speeding motorists is to make money for the government.	I strongly believe it is true	21	21	14	29	22
	I believe it is true	27	30	26	39	24
	I do not know whether it is true	12	10	16	8	12
	I believe it is false	25	21	27	11	28
	I strongly believe it is false	16	19	18	13	14

Community Attitudes to Speed Limits

An AMR Interactive Report



QUESTION	RESPONSE	Total	Hobart	Laun- ceston	King- borough	Rest of Tas
		(n=789) %	(n=173) %	(n=122) %	(n=56) %	(n=438) %
Q14. Considering two-lane undivided rural roads - the normal sealed country roads, not the big highways or major arterial roads. If there is no speed limit sign on this type of road, a standard or default speed limit applies. Can you please tell me	<70	10	19	6	7	7
	80	19	23	13	30	18
	90	6	7	3	20	4
	100	46	33	56	30	52
	110	7	7	8	4	7
Q15. What speed do you typically travel at on this type of road when there is no traffic congestion and you are free to choose your own travel speed?	Unsure	12	12	14	8	12
	50-70	14	23	6	20	12
	80	30	30	20	35	32
	90	18	17	17	19	18
	100	29	22	45	26	29
Q16. Do you consider a speed limit of 100 km/h appropriate for this type of road?	110	5	2	9	0	6
	Unsure	4	6	3		3
	Too low	3	3	2	4	3
	About right	53	43	69	43	54
Q17. What would you think if the speed limit on roads like this were 90 km/h?	A bit too high	32	38	23	33	32
	Far too high	12	15	6	20	12
	Far too low	3	3	2	5	4
	A bit too low	19	14	30	9	19
Q18. Now let's consider unsealed, gravel roads in country areas. If there is no speed limit sign on this type of road, a standard or default speed limit applies. Can you please tell me what the default speed limit is?	About right	56	48	60	64	58
	A bit too high	18	28	8	19	16
	Far too high	4	7	1	3	4
	40-50	7	8	4	9	6
	60-70	20	22	26	18	18
Q19. What speed do you typically travel at on this type of road when there is no traffic congestion and you are free to choose your own travel speed?	80	30	28	18	39	33
	90	3	3	4	6	2
	100+	18	15	19	13	20
	Unsure	23	24	29	15	21
	<60	14	20	10	16	11
Q20. Do you consider a speed limit of 100 km/h appropriate for this type of road?	60	24	21	21	37	24
	70	17	18	21	15	15
	80	31	28	30	20	35
	90	5	3	9	7	5
	100+	4	4	5	1	5
Q20. Do you consider a speed limit of 100 km/h appropriate for this type of road?	Unsure	5	7	3	3	5
	Low	1	1	1		0
	About right	12	9	16	9	12
	A bit too high	27	24	31	24	28
Q20. Do you consider a speed limit of 100 km/h appropriate for this type of road?	Far too high	61	67	52	67	59

Community Attitudes to Speed Limits

An AMR Interactive Report



QUESTION	RESPONSE	Total	Hobart	Laun- ceston	King- borough	Rest of Tas
		(n=789) %	(n=173) %	(n=122) %	(n=56) %	(n=438) %
Q21. What would you think if the speed limit on roads like this were 80 km/h?	Far too low	2	2	3	4	2
	A bit too low	6	6	9	3	6
	About right	63	60	65	48	66
	A bit too high	19	20	16	33	18
	Far too high	9	13	8	12	8
Q22. Now let's consider major arterial roads and highways. Generally, the posted speed limit on these sections of road is 110 km/h. What speed do you typically travel at on this type of road when there is no traffic congestion and you are free to	Up to 90	13	13	8	12	14
	100	28	32	21	21	29
	110	52	50	58	60	50
	>110	6	2	12	7	6
	Unsure	2	3	1		1
Q23. Do you consider a speed limit of 110 km/h appropriate for this type of road?	Too low	6	5	7	14	5
	About right	74	72	69	66	77
	A bit too high	17	19	22	19	15
	Far too high	3	4	2	1	3
Q24. Do you consider a speed limit of 100 km/h appropriate for this type of road?	Far too low	5	3	7		6
	A bit too low	31	29	39	27	31
	About right	60	62	51	69	60
	Far too high	4	6	3	3	3



Appendix D: Comments on Analysis

Assessment of Validity and Reliability

Validity

The survey was of a sample of people in Tasmania. Weighting was conducted on standard demographic variables (age, gender and rural/urban location). Other variables could have been included to improve representativeness: for example, a socio-economic variable. However, given the level of weighting already required, additional variables would have resulted in too many excessive weights, further reducing the precision of the results.

Tests of statistical significance were conducted to assess which results between groups should be considered 'real' differences, and to compare the relative positioning of different attitudes and behaviours. The sample size was adjusted to take into account the impact of weighting (which introduces a potential reduction in precision), for conducting statistical tests on the weighted data. The level of significance can be further adjusted for conducting multiple tests (in this case across different questions). Such adjustments can, however, be excessively conservative, and results on different questions in a survey are actually not fully independent of each other. The conventional approach is to take $p < .05$ as the statistical significance level. This was reduced to $p < .01$ for assessing differences between groups in the survey, as a nominal reduction. A more conservative approach in the context of the survey would be to use $p < .001$ as the significance level.

The sample sizes in the survey provided a good level of precision overall, and ability to measure differences between demographic sub-groups (area, gender and age), as shown by the incidence of differences particularly by age group, which had the smaller group sample sizes. As an illustration of the level of the validity, or precision, of individual results, an overall sample on the order of 600 gives 95% confidence that the true population result is within $\pm 4\%$ of the measured result⁵ (which applies to results for the total sample). This interval increases with lower sample sizes. The interval is $\pm 6\%$ for a sample of 300 (which applies to each area and gender group); and $\pm 10\%$ for a sample of 100.

A further issue with validity was the lack of visual material, in particularly to describe the roads being referred to in the survey. While this is traditionally accepted as a compromise in conducting telephone surveys, there is the risk that respondents will misidentify descriptions.

Reliability

There are several types of reliability relevant to survey research, as measures of reproducibility. These include test-retest reliability and internal consistency.

The survey was not very long, which would have helped reduce the potential of respondent fatigue. The survey dealt with community issues (driving, speed limits and road safety) that would be of relative interest to the general public, also helping with motivation of responding. The questions also generally did not appear to be of the type that would put excessive cognitive demands on a respondent in a telephone survey, and the set of questions about speed limits allowed for 'don't know' and 'other' responses. An exception was the set of questions asking about speeds that would be driven on different types of roads in a specific set of conditions, where some respondents (no more than 5%) answered that it 'depends' on other conditions. These respondents, at a minimum, clearly had difficulty answering the

⁵ A 95% confidence interval is a conventional approach. The maximum interval size is shown, which occurs for a survey result of 50%.



questions, although they were allowed the option of giving a ‘don’t know’ or ‘other’ response.

As is typical in survey research, questions were designed to measure discrete issues, rather than having multiple questions on the same characteristic. The intention of multiple questions this is to establish reliable measures of that characteristic, but this can be time intensive. With the more discrete approach, however, too many strong correlations between questions can limit differentiation in the assessment of relationships.

In the current survey, there was relatively high consistency between some sets of questions (e.g. acceptance of speed limits and speeds driven), indicating underlying dimensions and which were used to assess broader relationships in the survey. While high internal consistency was measured for these sets questions, the internal consistency was found to be lower for other sets, including the questions on beliefs in the relationships between speed limits and crash outcomes. This lower consistency, compared with higher consistency elsewhere in the survey, suggests that these questions did each address some unique aspect of the speed topic.

Constraints on the Analysis

The survey was conducted broadly across Tasmania. Using this method, it was not possible to conduct a detailed analysis of the Kingborough or Tasman localities, in which trial speed reduction programs were in place. Only 3 people were surveyed in Tasman. The results for Kingborough, based on a sample of 56 respondents, provided some measure of differences. It was, however, difficult to assess the extent to which the results for Kingborough have changed as a result of the trial reduction in speed limits. Some interpretations of the results depend on whether Kingborough is seen as a locality more similar to Hobart, or to the broader rural area of Tasmania.

There were a number of substantial non-linear age trends in the results. With finer age groupings it would have been possible to assess in more detail the relationship of the results with age. Most of the age trends, however, showed relatively smooth relationships, allowing for a reasonable interpretation of the results.