Review of International Road Safety Good Practice

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PPR248

PUBLISHED PROJECT REPORT
Review of International Road Safety Good Practice

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Prepared for: Audit Commission
Client: Geoffrey Rendel
Policy Research & Studies Directorate

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Executive Summary

In May 2006 the Audit Commission requested TRL to undertake a review of evidence-based road safety good practice in overseas countries that could provide guidance to English Local Authorities. The key areas identified for investigation were:-

- Multi-agency approach
- Work with high risk groups or communities
- Gaining acceptance of controversial proposals
- Setting effective targets
- Road users beliefs about risk taking
- Relationships between national targets and local action.

To investigate these areas TRL concentrated on reviewing existing information of the practice in three countries i.e. the Netherlands, New Zealand and Sweden.

This paper provides an insight into road safety good practices in overseas countries that could provide guidance to English Local Authorities (LAs). The main objectives of this study were to identify documented examples from outside England where roads have been made safer, and to investigate multi-agency approaches to road safety, working with high risk groups or communities, understanding road user beliefs about risk taking, understanding relationships between national targets and local action, gaining acceptance for controversial proposals and setting effective targets. It is therefore hoped that the document will be valuable in providing policy makers in LAs with clear information on approaches aimed at improving road safety.
1 Introduction
In May 2006 the Audit Commission requested TRL to undertake an international review of Road Safety in relation to the work of Local Authorities. Initially four key areas were identified for investigation:-

- Multi-agency approach
- Work with high risk groups or communities
- Gaining acceptance of controversial proposals
- Setting effective targets

In addition to these points following a meeting on the 7th June 2006 the Audit Commission also expressed an interest in the following areas:-

- Road users beliefs about risk taking
- Relationships between national targets and local action.

To investigate these areas TRL concentrated on the practice in three countries the Netherlands, New Zealand and Sweden.

The format of this research is a review of existing information.

2 Initial comparison

2.1 Major Strengths of Road Safety Strategies
This paper provides an insight into road safety good practices in overseas countries that could provide guidance to English Local Authorities (LAs). The main objectives of this study were to identify documented examples from outside England where roads have been made safer, and to investigate multi-agency approaches to road safety, working with high risk groups or communities, gaining acceptance for controversial proposals and setting effective targets. It is therefore hoped that the document will be valuable in providing insights into the improvement of current road safety practices and also provide policy makers in LAs with clear directions on approaches aimed at improving road safety. In order to identify examples overseas which have been successful in making roads safer, it is important to have an evaluation process. This can best be done through analysis of the road safety strategies. Effective road safety strategies place an emphasis on collaboration among traffic police, health, law and transportation authorities (Bener et al., 2003 cited in Loo et al., 2005). Following a review of various road safety strategies, Loo et al. (2005) suggested that there was a need to focus on the objective and rational formulation of a road safety strategy in order to minimise the huge cost
associated with road accidents rather than the humanitarian aspects of eradicating road deaths and injuries. A crucial component of an effective road safety strategy is to have a quantitative target. However, a road safety strategy should include policy objectives, a special budget, new design safety features, integrated community programmes and new technologies. The major factors for the success or failure of road safety initiatives are political will, proper organisation, and knowledge (Wegman et al., 1991 cited in Loo et al., 2005). Good planning and a clear national framework, and support at all levels are emphasized for the successful implementation of an effective road safety programme (Halden & Harland, 1997 cited in Loo et al., 2005). Through a detailed analysis of various road safety strategies in different countries, Loo et al. (2005) developed a comparative framework, with nine main components, of a road safety strategy: vision, objectives, targets, action plan, evaluation and monitoring, research and development, quantitative modelling, institutional framework and funding. Whilst the first four components are essential for the formulation of a road safety strategy, the other components are relevant to its successful implementation. Based on the good practices in the formulation and implementation of road safety strategies, Loo et al., 2005 suggested five main criteria to follow when selecting administrations for comparative studies i.e. reasonably good accident records; the amount of effort already devoted to road safety work; the level of economic development; geographical coverage; and information availability (especially on the policy formulation process). It was on this criterion therefore, that Sweden, Australia, New Zealand and Netherlands were identified as worthy overseas administrations for this review as they are all said to be in advanced stages of road safety development, the same classification as England. In order to identify examples of good road safety practices, it is important that the various road safety strategies, England inclusive, are analysed using the comparative framework proposed by Loo et al., 2005. A study by Loo et al., 2005 has already analysed and assessed the examples of good practice of four of the countries i.e. Australia, England (Great Britain), Sweden and New Zealand. The Netherlands road safety strategy was therefore analysed using the same criteria as that followed by Loo et al., 2005.

2.1.1 England

The administration is good at setting targets, action plans, evaluation and monitoring, research and development, developing an institutional framework, and funding. The specific areas are:

- England is realistic in its target setting. Its objectives can be easily understood from the title of its road safety strategy paper (Tomorrow’s Roads: Safer for Everyone)
- The action plan carries ten main themes: safety; for children, drivers, infrastructure, speeds, vehicles, motorcycles, pedestrians, cyclists and horse riders; better enforcement; and promoting safer road use
- The evaluation is conducted in a timely manner and the review is made accessible to the general public. The DfT published the first 3 year review in 2004 that reports and evaluates
the progress towards the targets and the effectiveness of measures undertaken under the major ten themes (DfT, 2004b cited in Loo et al., 2005).

- The action plan is well supported by research and development programmes. Research has been commissioned in the three major areas of analysing and understanding accident causation, developing and evaluating road safety measures, and monitoring the effects of road safety policy
- There is a clear line of responsibility running from local to central road safety bodies. Whilst the DfT is responsible for developing and coordinating the implementation of the national road safety strategy, partnership amongst the Central Government and its agencies, LAs, police forces, voluntary groups and road user associations, motor manufacturers and individual road users is stressed
- Funding comes from all sectors including public and private sources.

2.1.2 Australia

Australia is good at setting objectives, evaluation and monitoring, and developing an institutional framework. The specific areas are:

- The administration is good at formulating comprehensive and clear strategic objectives; the eight major areas covered are road user behaviour, the safety of roads, vehicles, human error, equity among road users, medical and retrieval services, alternatives to motor vehicle use, and research about policy and programmes
- The objectives and targets of the road safety strategy are assessed; each action plan is then developed
- There is a well established institutional framework for coordinating the road safety initiatives of the Commonwealth, State, Territory and Local Governments, as well as other organisations that may influence road safety outcomes. The Australian Transport Council comprises Federal, State and Territory ministers with transport responsibilities and includes an observer from Local Government. The National Road Safety Strategy Panel guides the implementation of the national road safety strategy and acts as a forum for sharing information on road safety initiatives. Sectors in Local Governments with responsibilities for road safety development design and implement the local road safety strategies under the national strategy (Northern Territory Road Safety Council, 2001; & Australian Transport Council, 2002 cited in Loo et al., 2005).

2.1.3 New Zealand

The administration is good at conducting evaluation, quantitative modelling, institutional framework and funding. The specific areas are:
• Progress towards achieving targets is tackled through a series of quarterly reports, which record the current performance of interventions and suggest remedial actions if necessary. The National Road Safety Committee also conducts an annual progress review as part of its planning season (National Road Safety Committee, 2000 cited in Loo et al., 2005). The proposed strategy is reviewed every 3 years. Each review re-examines the entire strategy including the assumptions on which targets are based and the reasoning underlying the estimation of targets.

• Predictive road safety models are used during the quantitative modelling. Computerised simulation models are built to help identify the proposed strategy’s targets and predict the cost of achieving them.

• There are many dedicated organisations, ranging from the implementation to policy setting level, that are responsible for road safety initiatives. The National Road Safety Committee acts as the forum for communicating, agreeing to, and coordinating top level strategy. It consists of the chief executives of the Land Transport Safety Authority, New Zealand Police, Ministry of Transport, Transit New Zealand, Transfund New Zealand, the Accident Compensation Corporation (ACC) and representatives of Local Governments. Formal relations are in place with the National Road Safety Advisory Group (NRSAG) and Industry Consultative Group (ICG).

• The funding sources and apportioning of each programme in the road safety strategy are clear and consistent.

2.1.4 Sweden
The Swedish administration is strategically successful in formulating and implementing the vision, and establishing the necessary institutional framework. Its road safety vision is to eventually have no one killed or seriously injured within the road transport system. The Swedish National Road Administration, as the central administrative agency, was commissioned with the overall responsibility for road safety within the road transport system, and also monitors as well as actively promotes developments within this area. It is also responsible for road safety on the state road network. The Director General is ultimately responsible to the Board of Directors for ensuring that road safety is taken into consideration within all areas of operation at the Swedish National Road Administration. Every head of division ensures that road safety is taken into account within their area of responsibility. The Traffic Safety department monitors the work conducted in road safety within the entire organisation and throughout the road transport system as a whole (National Road Administration, 1998, 2002; & Ministry of Industry, Employment and Communication, 1999 cited in Loo et al., 2005).
2.1.5 **Netherlands**

The administration is good at formulating and implementing the vision, evaluation and monitoring, research and development, and developing an institutional framework as well as funding. The road safety vision of “sustainable safety” is to drastically reduce the probability of accidents in advance, by means of infrastructural design and where accidents still occur, the process that determines the severity of these accidents should be influenced in such a way that serious injury is virtually excluded.

The key to satisfying the vision lies in the systematic and consistent use of the road network by preventing unintended use of roads; preventing large differences in vehicle, mass and direction; and preventing uncertainties amongst road users, by enhancing the predictability of the course of the road and the behaviour of other road users. Evaluation and monitoring is done through the various stages of the sustainable safety programme. The Central Government provides one half of the total financial means required with the other partners providing the other half. The Ministry of Transport, Public Works and Water Management (MoT) has a central responsibility for road safety policy. All key actors (including private sector) are represented on a consultation body on road safety known as ‘Overlegorgaan Verkeersveiligheid’ (OVV). The OVV has its own independent chairman and secretariat which produces a ‘Report of Findings’ on subjects discussed. Governmental representatives include: the Netherlands Police Institute, the Public Prosecutor’s Office, the Inter-provincial Co-municipalities, the Dutch Waterboards and the Union of Dutch Municipalities. Private sector and social organisations are also represented such as: Royal Dutch Tourist Club, the Central Driving Test Organisation, Driver Education Organisation, Vehicle Industry, the Truckers Industry, the Dutch Cyclists’ Union, Motorcyclists Association, Dutch Traffic Safety Organisation, Dutch association of Insurers, and the SWOV Institute for Road Safety Research. In order to conduct a coherent road safety policy, a horizontal co-ordination (between sectors) and a vertical co-ordination (between levels) is ensured. SWOV Institute for Road Safety Research is the central research institute for road safety and addresses the traffic safety problem in general. Research is also carried out by Universities and some research institutes of the Netherlands Organisation for Applied Scientific Research (TNO). Some private consultant and engineering firms, and information and technology centres are also active in the field.

2.1.6 **Relative ranking**

Loo et al., 2005 applied the ranking technique to pin point areas of excellence and therefore the study concluded that the administrations with good practice in road safety are as listed in Table 1 below against the road safety strategy component. In general, implementation of efficient and effective safety policies needs not only strong Governmental support but clear guidelines set and budgets provided for the LAs which will deliver many of these policies. In addition, policies need to be seen as fair and balanced and this is best achieved through public participation in preparation of the
policies. A communication strategy to encourage constructive debate is important so that policies can stand criticism from the public.

Table 1: Road Safety Good Practice

<table>
<thead>
<tr>
<th>Road Safety Component</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>Sweden/ The Netherlands</td>
</tr>
<tr>
<td>Objectives</td>
<td>Australia</td>
</tr>
<tr>
<td>Targets</td>
<td>England</td>
</tr>
<tr>
<td>Action Plan</td>
<td>England</td>
</tr>
<tr>
<td>Evaluation and Monitoring</td>
<td>Australia, England, New Zealand, The Netherlands</td>
</tr>
<tr>
<td>Research and Development</td>
<td>England, The Netherlands</td>
</tr>
<tr>
<td>Quantitative Modelling</td>
<td>New Zealand</td>
</tr>
<tr>
<td>Institutional Framework</td>
<td>Australia, The Netherlands, England, New Zealand, Sweden</td>
</tr>
<tr>
<td>Funding</td>
<td>England, New Zealand</td>
</tr>
</tbody>
</table>

In comparison to other administrations, England has a well balanced road safety strategy though there is scope for improvement as can be deduced from Table 1 above.

3 Multi-agency approach

All the identified administrations have good institutional frameworks but the New Zealand framework is considered simply because it is widely viewed as world best practice due to the approach taken to the allocation of funding for engineering, enforcement and education.

In the past, road safety funding for education and Police hours in NZ were implemented through a Safety Administration Programme (SAP). In addition local Council’s are required to develop Long-term Council Community Plans (LTCCP), these plans must take into account the concerns and preferences of local residents and are required to take into account the SAP. The legislation supporting the SAP process was developed and controlled by The Ministry of Transport (MoT) and its implementation and funding was overseen by a central government organisation Land Transport New Zealand (LTNZ). The SAP process has evolved over a number of years and as part of this process it has been replaced from the 2006/07 financial year by the New Zealand Land Transport Programme (NLTP), detailed below.

In its original form the SAP was input driven and funding was based on the number of hours delivered by the Police on various road safety activities. In theory the SAP settlement for a given council areas formed part of the funding provided by central government to the Council, however in practice the Councils had little or no control over the road safety activities of the Police. To address this situation the SAP became output driven and rather than specifying the number of hours the Police should deliver it focused on road safety outcomes such as reductions in the number of crashes and the productivity and speed at which speed enforcement was carried out. To oversee this process the Road Safety Action Plan was developed, this process is described in detail in section 7.1. The SAP process
has proved to be very popular with the Police and they are now looking to take advantage of the LTCCP to develop similar processes in other wider public safety issues around general crime prevention.

In addition to the SAP the network coordination project brings a strategic overview to the coordination and collaboration efforts that are being made in District and Regional Councils. The project ensures that road safety partners (see figure 1) apply the most appropriate intervention or mix of interventions from enforcement, education and engineering efforts to the high risk stretches of road in each district. The application of a simple road hierarchy i.e. urban roads, state highways and rural local roads helps align the delivery of road policing resources to the risks presented by the different road types, and better reflects the focus of road controlling authorities when managing the safety of their networks.

**Figure 1: Road Safety Partnerships – National Road Safety Committee**

![Figure 1: Road Safety Partnerships – National Road Safety Committee](http://www.landtransport.govt.nz/regions/partnerships/2004/hamilton-2004.pdf)

Partnership group members (see figure 1) agree collaboratively on the road safety risks, objectives and targets, while monitoring and reviewing road safety progress through road safety planning processes including:

- Education – community-focussed road safety planning by road controlling authorities, regional councils and ACC and the delivery of road safety programmes and community development activities;
- Engineering - road environment planning by road controlling authorities targeting areas of risk identified through safety management systems;
- Enforcement – road policing planning reviewed by NZ Police quarterly which forms the basis for Risk Targeted Patrol Plans for frontline staff.

The legislative framework for the SAP and the New Zealand Land Transport Programme (NLTP) has been recently integrated so as to provide for the development of a Land Transport Programme for LTNZ alongside the other local, regional and state highway land transport programmes to help inform the NLTP. This creates an opportunity to better integrate land transport decision making in line with the vision of the NZ transport strategy (see figure 2).

**Figure 2: Process for Land Transport NZ’s Land Transport Programme (LTP)**

This new development implies that the requirements for the SAP to be prepared on behalf of the Secretary for Transport are being replaced by a new requirement for the Land Transport NZ to prepare a Land Transport Programme which will inform the preparation of the NLTP (see figure 2) as from 2006/07. Hence LTNZ must take into account how each activity or activity class assists safety and personal security when preparing its LTP, which will explicitly identify any newly funded initiatives that contribute to delivering on the Government’s Road Safety to 2010 strategy.

The strength in the multi-agency approach in New Zealand in the sharing of information and the co-ordination of activities between local councils and the police to ensure that education, enforcement and engineering are carried out in a linked manner. It is suggested that this would form a very good framework for integrating the work in English local authorities where such a system does not already exist. The forming of discussion or co-ordination groups in a similar style to the RSAP would be particularly relevant following the termination of the Safety Camera Partnerships in 2007.

4 Work with high risk groups or communities

New Zealand is in a unique position with regard to its indigenous peoples due to the Treaty of Waitangi. The Treaty requires the Government to take into account the needs of Maori in all of its actions. The consideration of the needs of Maori has also ensured that the needs of other minority groups are given a high priority. In order to reach these high risk groups with road safety initiatives, the LTNZ introduced the Community Road Safety Programme (CRSP) which ensures community involvement in road safety so that positive and sustainable changes in attitudes and behaviours occur hence contribute to making New Zealand’s roads safer. This implies that communities are assisted in identifying their own local road safety issues and are supported in developing their own informed solutions to address these risks. In so doing, local partnerships are developed and motivated, and road safety activities are integrated at the local level. The community development for road safety and CRSPs are part of an integrated approach to road safety that also includes a range of education, engineering and enforcement initiatives designed to enhance the safety of the road environment, the vehicle and the road user. The advantages of a CRSP include:

- Encouraging community ownership of both issue and solution, and thereby builds confidence, capability and a positive, sustainable change in road safety attitudes and behaviour at the community level;
- The ability to involve particular communities that may be difficult to reach by more conventional approaches;
- Generating insight on local road safety issues and new ideas for road safety that can feed back into the wider road safety environment; and
- Encouraging the whole community to support willing compliance with safety standards and rules.
LTNZ’s Community Road Safety Strategy (CRSS) provides for the development and implementation of the CRSP in accordance with the Road Safety to 2010 Strategy. Its goals, principles and commitments for community road safety are to: provide leadership and facilitate effective partnerships; encourage community ownership; support the development of community road safety professionals; encourage innovation; target community road safety funding effectively; and manage community funding wisely. LTNZ partnership managers negotiate the amount of funding available within their regions according to the road safety needs of the area and the priorities established in regional and local road safety strategies and plans. Funding for advertising in support of community road safety initiatives is available and is provided in accordance with LTNZ’s community advertising guidelines. General funding for community development for road safety and community road safety programmes is provided through LTNZ regional offices to local authorities and other providers, usually as part of their local road safety plans. A dedicated fund for community development for road safety and community road safety programmes for Maori, and for Pacific peoples is provided through LTNZ regional offices, to community providers working with these groups. This recognises the important leadership role that these community organisations can play in supporting road safety for Maori, and for Pacific peoples and other ethnic minority peoples. In addition, LTNZ’s funding through local authorities may also assist these groups.

5 Gaining acceptance of controversial proposals

5.1 General Situation

Gaining acceptance for controversial road safety initiatives is one area that has not been given emphasis by any administration. Loo et al., (2005) suggested that this area was to be part of the Vision component of a road safety strategy. A vision ensures that road safety gains a prominent position in transport policy and decision making processes, raises public interest and creates public support for road safety improvements (Loo et al., 2005). From Table 1, Sweden and the Netherlands could be regarded as the administrations with best practice in this component of a road safety strategy. Information from the Netherlands was not sufficient to show emphasis in dealing with controversial proposals. The Swedish Vision Zero is an attempt to reduce the number of fatalities and injuries by primarily changing the behaviour of the road user and altering responsibility to transport system designers. This has been done by legislation, information and education in order to force the road user to adapt to the general principles of the system. It also encourages adaptation of self explaining roads. Vision Zero is investigated in greater detail in the following section of this report.

The principles behind Vision Zero are easily acceptable by politicians as well as transport professionals. In practice, actual road safety interventions will have to be put in place and these are the ones that will be controversial. There is no mention of emphasis in dealing with controversial
proposals. This is an area that therefore requires attention which could easily be achieved by making public consultation a component of a road safety strategy.

5.2 Vision Zero

In the years since Vision Zero was first introduced in 1995, Sweden has seen major changes in regard to views on road safety as well as in the working approach adopted i.e. a whole new way of viewing the problems concerning safety in road traffic including how those problems should be solved. An important milestone was the parliamentary resolution that was adopted in 1997 when Vision Zero became the foundation for road safety operations in Sweden. Road safety in the spirit of Vision Zero means that roads, streets and vehicles must be much more adapted to human capacity and tolerance i.e. a driver should be able to make a mistake on the road without suffering serious injury as a result. Vision Zero alters the view on responsibility in that those who design the road transport system i.e. road managers, vehicle manufacturers, road transport carriers, politicians, public employees, legislative authorities and the police bear the ultimate responsibility for safety and it is the responsibility of the individual person to abide by laws and regulations. Prior to this, practically all the responsibility had been put on the individual road user.

The foundation goals for the Vision zero are safer roads, safer vehicles and better enforcement or compliance with road traffic regulations. The Government emphasised that the measures proposed must be based on co-operation i.e. built on mutual trust and a sense of solidarity between those responsible for the road traffic system and road users. Road users have a duty to comply with prevailing regulations and exercise consideration for other road users, judgement and responsibility. The Government stated that it was important to bear in mind that speed is not the problem but what kills is coming to a sudden stop. Hence to achieve high safety levels, the authority must overhaul and improve the road network and the vehicles with road users becoming better at observing existing regulations. The Government also stated that if this approach does not achieve the desired effect, then a reduction in general speed limits will be implemented even though this would lead to a detrimental effect on accessibility, increase transportation costs for business and reduce competitiveness.

The road safety policy adopted by the SRA places emphasis on the fact that road safety work is based on protecting human life and well-being i.e. the road transport system is to be gradually designed so that no one is killed or seriously injured in traffic thereby reflecting human ability and the level of external violence that the human body can withstand. The SRA sets out various policy initiatives to achieve its ambition that include setting an example in its own operations through the quality assurance (from a road safety perspective) of travel and transports in all areas of activity, both in-house and those publicly procured; stimulating all players within the road transport system to work resolutely towards achieving mutually targeted objectives; and to take advantage of and further develop the commitment of the general public to safer traffic, among other policy initiatives. Leading from the front, the SRA states that all of its employees, in a supervisory position, are responsible for
the effect their area of responsibility has on road safety and that road safety endeavours shall be conducted as an integral part of other operations. They are also obliged to set a good example and through their leadership strive to increase road safety awareness which also includes compliance with the road safety policy. Every employee at the SRA is required to be familiar with the road safety policy and work according to its intentions and in addition all employees are expected to set a good example through respecting traffic rules and through otherwise exhibiting good conduct in traffic, both during and outside working hours.

In terms of gaining acceptance for controversial proposals the lesson to be taken from Vision Zero is to maintain a high moral standing and to lead by example.

6 Setting effective targets

England (Great Britain) is said to have best practice in relation to setting effective targets (see table 1). However, in order to identify an administration that the English administration can learn from, evaluation and monitoring as well as quantitative modelling (see table 1) have to be considered. For identifying effectiveness of targets, one has to have a good system for evaluating and monitoring the impact of the initiatives that have been implemented. In general targets are set at a political level with an idealistic basis. The difference with British targets is that they have been set following a close analysis of existing accident trends and can be proven to be achievable.

The effects of setting targets on a political or ideological basis can be examined by investigating Vision Zero. At the start of Vision Zero the Swedish Government set a first-phase maximum target for the year 2000 of 400 deaths and 3,700 serious casualties. By 2007, the number of people killed on the roads should have fallen to 270, or 50% of the total for 1996, when 537 people were killed (SRA, 2006). In 1998, in its capacity as the central administrative agency responsible for the entire road transport system, the Swedish Road Administration (SRA) was commissioned by the Government to draw up a special plan of road safety measures for the road network and propose other institutional (sector-based) measures designed to enable road safety objectives to be met efficiently and effectively. On completion of the initial study, the SRA concluded that the interim target set for 2000 could not be met and this was evidenced through a study by Loo et al. (2005) which found that the road safety strategy didn’t achieve the target set for 2000 i.e. the actual number of fatalities (591) was much higher than the target of 400. The SRA proposed that efforts should instead be concentrated on the target for 2007 i.e. a maximum of 270 fatalities (SRA, 2006). Thus the Road Traffic Inspectorate was established in 2003 whose main task was to monitor and analyse safety developments in the road transport system. The foundation goals for the Vision zero are safer roads, safer vehicles and better enforcement compliance with road traffic regulations. The Government emphasised that the measures proposed must be based on co-operation i.e. built on mutual trust and a sense of solidarity between those responsible for the road traffic system and road users. Road users have a duty to comply with
prevailing regulations and exercise consideration for other road users, judgement and responsibility. The Government stated that it was important to bear in mind that speed is not the problem but what kills is coming to a sudden stop. Hence to achieve high safety levels, the authority must overhaul and improve the road network and the vehicles with road users becoming better at observing existing regulations. The Government also stated that if this approach does not achieve the desired effect, then a reduction in general speed limits will be implemented even though this would lead to a detrimental effect on accessibility, increase transportation costs for business and reduce competitiveness. Whether the Vision Zero target for 2007 will be achieved remains to be seen. However, the problems associated with meeting the targets in Vision Zero highlight the need to ensure that targets are evidence-based and realistic, rather than set to a political agenda.

7 Relationships between national targets and local action

7.1 New Zealand

The effectiveness of national targets is dependant on the success of the initiatives at local level. Hence, New Zealand and Australia are the countries to look at when considering best practice (see table 1). However, the New Zealand information is more readily available as compared to information from Australia.

Prior to 2000, in New Zealand, road safety performance at the local level focussed primarily on enforcement delivery, driven by quantitative measurement of inputs such as Police hours. Enforcement activity was not always targeted to risk and the various engineering, education and enforcement safety interventions were often uncoordinated. The problem identified was that there was no process to link the national, regional and local road safety outcomes, the efforts of the various agencies/organisations were uncoordinated, the impact of the various interventions was not being measured at a local level against the road safety objectives and there was minimal attention on targeting scarce resources to identified road safety risks (hotspots). In addition, adjacent road controlling authorities (Local Authorities) did not work together. This failed to acknowledge the mobility of drivers and other road users across local authority boundaries hampering the ability to address similar risks and apply resources in a larger geographical area.

The Road Safety Action Plans (RSAPs) were introduced in 2002 and from then onwards the process has been strongly intelligence based, outcome focussed and resources are targeted to risk. They encouraged adjoining local authorities to join forces and focus on local and national road safety issues, encouraged more partnership collaboration and responsibility to improve safety on the roads. Performance monitoring against objectives has also improved. Driven by Police and the LTNZ, formerly Land Transport Safety Authority, the RSAPs have continued to be an evolving process taking into account the National Land Transport Strategy and other relevant processes. They involve key road safety partners i.e. Police, Local Authorities (Territorial Local Authorities), Transit NZ
(State Highway Authority), LTNZ (previously Land Transport Safety Authority) and Accident Compensation Corporation (Personal Injury Accident Insurer) and the Regional Councils. There was immediate acceptance of the RSAP concept from every key road safety partner. The greatest resistance during the initial stages was from a number of local authorities who did not wish to work jointly with their neighbouring local authorities or from the small local authorities which feared that they would lose resources to the higher risk areas in larger local authority areas. This fear was due to the focus on inputs rather than road safety outcomes. The RSAP process encouraged local authorities to view success on the basis of the achievement of the safety objectives. There was some lesser resistance from NZ Police who feared sharing detailed information about how they carried out their road enforcement. At that time a partnership concept to crime and crash reduction was in its infancy in Police. It has now become an integral part of the way Police work especially in road safety. All these concerns were overcome and all parties became enthusiastic about, and participated in the process.

RSAPs link the national, regional and local road safety outcomes and have resulted in a more collaborative and targeted effort in road safety, encouraged adjoining LAs to work together for a common outcome. Each year LTNZ produce a ‘data report’ that is an analysis of the data held on the national road crash database (CAS). The data report compares crash rates of various types within a given Council or Regional area to both national rates and rates in other comparable areas. From the ‘data report’ an ‘issues report’ is prepared that highlights the particular concerns in a given area and suggests types of traffic behaviour that can be addressed to improve road safety and contribute to national targets.

The RSAP has developed a partnership approach to road safety making the partners more accountable and responsible for addressing local road safety issues in a proactive and coordinated way. Before the RSAPs were introduced, planning was mostly based on historical crash data. The RSAP process by contrast, encouraged a proactive approach to mitigate, reduce or eliminate the risk by directing resources to emerging trends as well as known high risk areas. Local knowledge and information that was not recorded in official databases was valuable and essential to this process.

In 2005, the State Highway Network Safety project that is a partnership approach (utilising the 3 Es) addressing high risk locations on the State highway network was incorporated into the RSAP process. This meant that the RSAP partnership approach was now fully integrated covering both the local and state highway network. The RSAP process has brought together adjacent authorities and increased the ability of the Police and other partners to direct more resources to address high risk crash locations. Road Safety campaigns are able to be better coordinated as well. Crash reduction studies, consideration of appropriate speed limits, application of minor safety works, and addressing community level concerns allow for a more informed and coordinated approach to crash reduction. By taking a coordinated approach, setting specific targets for crash reduction (or behavioural change) for each LA, targeting the risks, and better monitoring and deploying of the inputs, the partners were able...
to evaluate the effectiveness of various interventions and measure the crash reduction at regional and local level. Quantitative assessment is based on an annual review against the objectives set for each strategic aspect of enforceable risk i.e. speed, alcohol, restraints. RSAP meetings are held a quarterly basis where the number of crashes (fatal, serious and minor injury), the compliance and catch rates for alcohol, restraint, speeding and various high risk driver behaviour offending (e.g. red light running, failing to give way/stop) are monitored. Police share information about the number of tickets issued for various strategic category offences i.e. speed, alcohol, restraints and visible road safety. LAs share information on crash reduction studies, local speed and cycle helmet wearing and restraint surveys, engineering works and community level education planned and completed.

The commitment to the RSAP process is strong. It is acknowledged as a good framework for planning, monitoring, providing more timely responses to emerging road safety problems and ensures better communication between the key players. The community is represented by the LA and the Road Safety Coordinators who work within the community groups to raise awareness of the local road safety issues and engage them in finding local solutions to their own road safety issues. The RSAP framework is being adopted throughout the country, with some variation, to take into account local differences or preferences. The RSAP requires the key players who have a responsibility for or contribute directly to achieving crash reduction to be part of the process. The RSAP is an equal partnership arrangement and everyone who participates is held accountable for their contribution/intervention. The RSAP process impacts on operational delivery i.e. those who attend the meetings must be in a position to undertake the interventions agreed upon and be held accountable for contributing to the crash reduction. The RSAP process must be free of local political inference but remain knowledgeable of local priorities. The partners must report annually to the regional and national organisations on their activities and progress. The RSAP must have a champion who is from an organisation that has responsibility for achieving the national road safety targets and has links between relevant national, regional and local agencies.

7.2 Netherlands

In 1998, road safety was included in the National Traffic and Transport Plan (NTTP) when the Traffic and Transport Plan Act came into operation. This Act covered all types of traffic and transport, and goals concerning accessibility, liveability, and safety. The Act also ensured that the lower government levels (provincial, regional, and municipal) made their own traffic and transport plans for their own areas, taking essential parts of the national goals into account. The plans can contain measures for the layout of roads and influencing behaviour via public information, education, and police surveillance. In the National Traffic and Transport Deliberation (NTTD) in 2003, supplementary national agreements between the state and regions were made with regard to lower level policy. These agreements were about permanent traffic education, long-term road safety campaigns, enforcement,
infrastructure, vehicles, knowledge infrastructure, and monitoring. Since then, the joint governments
have made further agreements about essential road design features for varying road types, mainly
concerning road marking.

From 2005, contributions towards lower governments’ road safety initiatives were to be made
available via a method known as the Bundled Goal payment (BGP). There is a plan to extend the BGP
to a payment for regional and local traffic and transport policy implying that there will no longer be
money that is specially earmarked for road safety. Thus the region itself can determine the destination
of the budget. The provinces and regional framework act areas have to distribute this money among
all parties involved in the region. Regional measure packages most suited to their area are drawn up,
after consulting the municipalities and water boards. SWOV states that the “Sustainable Safety”
vision remains an important starting point in this.

Experience in both New Zealand and the Netherlands has shown that there can be good correlation
between national targets and local action. However for this to occur responsibility must be
disseminated down to a local level and there needs to be clear and informed local targets to support
the national targets.

8 Road user beliefs about risk taking

The subject of Road user beliefs and risk taking has gained much interest in recent years. Such is the
extent of general reporting that the current report will focus on the intervention work that Local
Authorities can do in regards this issue.

The main approach taken to improve road safety by addressing risk taking is to undertake driver
rectification/improvement schemes. Driver rectification schemes of various types have been
employed by a number of countries for some time, most notably in Germany and the US. Evaluation
studies to test the effectiveness of these schemes have revealed mixed results however. For instance
some studies concluded that such measures are ineffective in reducing subsequent violation frequency
and crash involvement (e.g.: Koppa and Banning, 1981; Lynn, 1982), whilst others found that such
schemes were effective in their aims (e.g.: Finigan, 1995; Wark, Raub and Reischl, 1998). Still other
studies revealed improvements in the criterion measures, but only amongst particular age and gender
groups (e.g.: Payne, Brownlea and Hall, 1984). McKnight and Tippets (1997) differentiate between
'accident-prevention' programs, which primarily seek to foster safe driving practices, and 'recidivism-
prevention' programs, which attempt to encourage lawful driving behaviour. Results revealed that
offenders participating in the recidivism prevention program were involved in significantly fewer
collisions and committed fewer violations in the following year than those whose intervention
focussed upon accident prevention. It should be noted that despite the apparent success of the
recidivism prevention programme, Struckman-Johnson et al (1989) reviewed some sixty-five 'driver
rectification' courses, and found wide variation in course content and delivery, which included
warning letters and interview procedures as well as traditional classroom and practical driving sessions. Considering such evidence, it can be suggested that driver rectification courses must be evaluated on their own individual merits thus broad generalisation regarding the effects of this type of intervention may prove to be rather more difficult.

When considering road user risk taking behaviour, two determinants that can cause significant differences in the effects of risk taking amongst drivers, are Gender and Age. A New South Wales (NSW) study by Williamson (1999) states that there are higher death and hospitalisation rates for the 15-24 year olds as compared to other age groups and that though the interventions have resulted into a reduction of casualties, the numbers are yet to be brought in line with those of other age groups. In NSW, 1994 statistics show that young drivers accounted for 31 percent of all road injury deaths in males and 19 percent in females (NSW Health, 1997). Similarly, 1995/96 figures show that the rate of hospitalisations for road injury were around twice as high for 15 to 24 year olds as for all ages (NSW Health, 1997). Overall these figures indicate that young drivers are clearly at high risk of injury and death due to crashes on the road. One difficulty, however, lies in deciding what the likely intervention for the younger age groups should be. One suggestion would be to target road user beliefs and risk taking at an early stage of the education process, before drivers are eligible to drive. Increased awareness of the risks of inappropriate road user beliefs and risky driving behaviour could be discouraged through the education process at schools, while the road users are still pedestrians and not eligible to drive. Media advertising could be utilized such as the effective ‘Think’ campaigns that question “what kind of drivers are you going to be” for classroom instructions.

To conclude it would appear that Driver Improvement Courses are an effective measure that Local Authorities can introduce to help to reduce crash rates. , To ensure long-term benefits and implementation such programmes would need to be designed carefully. Variables worth considering would be:

- the target audience (age of drivers, gender and whether are re-offenders for instance),
- course content (practical and classroom based instruction or just classroom based for instance),
- length of the course (from a single hour to a day course),
- and delivery (for instance who would be responsible to administer the course, experienced driving instructor or Transport Psychologist?).

9 Summary

It is hoped that the good practice identified in this document will be valuable in providing insights into the improvement of current road safety practices and also provide policy makers in Local Authorities with clear directions on approaches aimed at improving road safety.
Acknowledgements

The work described in this report was carried out in the Safety Statistics and Engineering Group of TRL Limited. The authors are grateful to Janet Kennedy who carried out the quality review and auditing of this report.

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Abstract

This paper provides an insight into road safety good practices in overseas countries that could provide guidance to English Local Authorities (LAs). The main objectives of this study were to identify documented examples from outside England where roads have been made safer, and to investigate multi-agency approaches to road safety, working with high risk groups or communities, understanding road user beliefs about risk taking, understanding relationships between national targets and local action, gaining acceptance for controversial proposals and setting effective targets. It is therefore hoped that the document will be valuable in providing policy makers in LAs with clear information on approaches aimed at improving road safety.