

Land Transport New Zealand

**National safety
management systems
workshop**

Proceedings

Miramar Golf Club, Wellington

19 June 2007

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Land Transport NZ
Ikiiki Whenua Aotearoa

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Summary – key points

Workshop purpose

The workshop was for staff from road controlling authorities (RCAs), Land Transport New Zealand, the Ministry of Transport and consultants who had been actively involved in developing and implementing safety management systems (SMS). All groups are at different stages of development, with some RCAs implementing SMS and others only just completing development of SMS, while some are well advanced with implementation.

The workshop's purpose was to:

- celebrate what has been achieved
- provide information on new SMS-related developments
- obtain feedback on what differences SMS are making
- identify how we can review, monitor and evaluate SMS
- identify future Land Transport NZ support and what can we do better.

Actions arising from 2007 workshop

- Land Transport NZ to provide training sessions for deficiency databases.
- RCAs to advise Land Transport NZ when and where they want training sessions.
- Land Transport NZ to assist financially with some innovative implementation projects but the budget is smaller than in past years.
- Land Transport NZ to continue to develop Road Infrastructure Safety Assessment (RISA) as a tool for RCAs to use before their technical audits.
- Land Transport NZ to continue with external audits and include other RCAs' staff in the audit team for experience, where practicable.
- Land Transport NZ to encourage the last territorial local authorities (TLAs) to develop their SMS this year, along with other RCAs (eg port companies).
- Land Transport NZ to continue developing guidelines on defining road hierarchies.
- Land Transport NZ to continue to review and consult on updating the *Manual of traffic signs and markings* (MOTSAM).

Appendices – Discussion material from the workshop

Appendix A – Agenda

When: 19 June 2007 (9.00 am to 4.00 pm)

Where: Miramar Golf Club, Wellington

Facilitator: Bill Greenwood

Presenters: Bill Greenwood, Land Transport NZ

George JasonSmith, Consultant

Ian Duncan, Land Transport NZ

Mark Yaxley, Land Transport NZ

Andrew Macbeth, Consultant

Mike Jackett, Consultant

Lyndon Hammond, Land Transport NZ

Secretary: Antoni Facey, Consultant

8.30	Catch up over coffee	
9.00–9.20	Welcome , ground rules, safety briefing, introduction and SMS project update	Bill Greenwood
9.20–9.30	Matters arising from last workshop	Bill Greenwood
9.30–10.00	Deficiency database prioritisation (DDP)	George JasonSmith
10.00–10.30	Break into peer groups for discussion on DDP What DDP are currently operated by RCAs? What has worked and why?	All
10.30–10.45	Feedback from groups and discussion on preferred DDP regimes	Ian Duncan
10.45–11.00	Coffee break	
11.00–11.30	Land use planning and road safety issues	Mark Yaxley
11.30–12.00	National road classification system	Andrew Macbeth
12.00–1.00	Lunch	All

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1.00–1.20	SMS external audits update	Bill Greenwood
1.20–1.50	SMS theme audit feedback	Mike Jackett
1.50–2.20	Break into peer groups for discussion on ongoing improvement of SMS What improvement processes are currently operated by RCAs? If not, why? What has worked and why?	All
2.20–2.50	Feedback from groups and discussion on ongoing improvement of SMS	Bill Greenwood
2.50–3.05	Coffee break	
3.05–3.35	Land Transport NZ – where we want to go and how this impacts on SMS and RCAs	Lyndon Hammond
3.35–3.55	Roundup and the future of national SMS workshop	Bill Greenwood
4.00	Homeward bound	

Appendix B – List of attendees

Sarah Stephen	Auckland City
Tony Robertson	Buller District
Jag Pannu	Central Hawkes Bay District
Barry Cook	Christchurch City
Chris Bopp	Clutha District
Mike Davies	Department of Conservation
Allan Shadbolt	Far North District Council
Dawn Inglis	Franklin District
Murray Hasler	Gore District
Alan Parsons	Hastings District
Gene Thomsen	Hauraki District
Mike Pond	Horowhenua District
Ross Nicholson	Horowhenua District
Frank Ledingham	Hurunui District
Wayne King	Hutt City
Eddie Cook	Invercargill City
Russell Pearson	Invercargill City
Phil Cook	Kaikoura District
Geoff Strand	Kapiti Coast District
Colin Giles	Manawatu District
Steve Murrin	Marlborough Roads
Susanne Frischknecht	Matamata-Piako District
Tim Mills	Meridian Energy
Andrew James	Nelson City
Mike Russell	North Shore City
Ian Smith	Otorohanga District
Glenn Connelly	Palmerston North City
Robert McSpadden	Papakura District
Abdul Zaytoun	Porirua City
Neville Bishop	Rangitikei District
Gareth Hughes	Rodney District
Kevin Thompson	Rotorua District
Lee Wright	Selwyn District
Trevor Mein	South Waikato District
Ravi Mangar	South Wairarapa District
Russell Hawkes	Southland District
Brian Barnes	Tararua District
Steve Elkington	Tasman District
Dennis Lewis	Taupo District
Mark Crowe	Timaru District
Stanley Chesterfield	Transit NZ
Patrick Hanaray	Upper Hutt City
Joan Whittaker	Waikato District
Ken Stephenson	Waimakariri District
Rob Moffatt	Waimate District
JP Snyman	Waipa District
Bill Lewis	Wairoa District
Canute Chandrakumaran	Waitakere City
Gary Woock	Waitaki District
Rui Leitao	Wanganui District
Jim Paterson	Western Bay of Plenty
Wayne Davison	Whangarei District

Consultants	
Mike Smith	MWH
John Gottler	Connell Wagner
Ann Fosberry	GHD
Robert Swears	Opus
George JasonSmith	Maunsell
Harriet Fraser	TDG
Antoni Facey	Facey Consultants
Andrew MacBeth	Viastrada
Mike Jackett	Jackett Consulting
Bill Greenwood	Land Transport NZ
John Janssen	Land Transport NZ
Rob Bullick	Land Transport NZ
Eddie Anand	Land Transport NZ
Marianne McMillan	Land Transport NZ
Michael Doole	Land Transport NZ
David Scarlet	Land Transport NZ
Ian Duncan	Land Transport NZ
Mark Yaxley	Land Transport NZ
Colin Goble	Land Transport NZ
Sol Hessell	Land Transport NZ
Alan Dixon	Ministry of Transport

Appendix C – Summary of proceedings/presentations

The following is a summary of each presentation and the feedback from the peer group discussion sessions.

Copies of the presentations or the items referred to in the presentations are available from either the appropriate consultant or Land Transport NZ. The presentations are also included on the attached CD.

C1 Bill Greenwood, Land Transport NZ – Introduction and SMS project update (Presentation 01 Bill Greenwood)

Land Transport NZ is involved in SMS to ensure that decisions when constructing, maintaining, operating and managing the road networks lead to the achievement of clear safety targets.

SMS is also contributing to:

- local and national safety targets
- effective, consistent procedures within the RCA
- risk management protection
- increased knowledge and expertise with sharing of information, training of existing staff and new staff to the RCA, and succession planning
- systematic audit practices
- 'self-explaining roads' for all users.

All but one TLA has SMS at some stage of development. Two non-TLA RCAs (Meridian and the Department of Conservation) have also developed SMS. Other RCAs, such as port companies, will be encouraged to develop SMS.

What implementations are happening in SMS?

- Deficiency database prioritisation process. Land Transport NZ is providing courses to demonstrate a recently developed pro forma database.
- National road classification system (NRCS) is being developed.
- Monitoring (external audit by Land Transport NZ) trials. Six trials completed so far. Possible merge with procedural/technical audits to reduce number of audits required.
- SMS theme audit. This produced a gap analysis for Land Transport NZ to work on.

What is not happening in SMS?

- Road side hazard management strategy and guidelines. Awaiting NRCS to provide input into the guidelines. Above Ground Structures in Road Reserve will also produce guidelines that need to be included.
- Road safety engineering expertise report. Deferred for wider transportation engineering industry study.

C2 Bill Greenwood – Matters arising from last workshop (Presentation 02 Bill Greenwood)

New standards and guidelines

Action: Land Transport NZ to develop new standards and guidelines as requested by RCAs.

Progress:

- Land Transport NZ and Transit reviewing MOTSAM. Rail crossings and parking issues will be the first chapters released for consultation. Land Transport NZ will own the guideline.
- *Cycle network and route planning guide* released three years ago.
- About to release pedestrian guidelines and neighbourhood accessibility guidelines.
- Supporting development of the utilities working in road reserve guidelines.
- Looking to integrate RISA into *Network assessment guidelines*. May be used in conjunction with NRCS to define suitable standards for a road of given status.

Deficiency database

Action: Complete recommendations from deficiency database and prioritisation process (DDPP) report.

Progress: Land Transport NZ to run DDPP workshops and possibly include deficiency database within the Road Assessment and Maintenance Management (RAMM) programme.

Monitoring and audit

Action: Land Transport NZ to assist with internal monitoring and review of SMS. This has been done.

Progress: Undertake external audit of SMS after around three years of operation. So far, six 'trials' plus a theme audit.

Key findings:

- Project safety audit not being undertaken
 - Land Transport NZ requires that project safety audits are undertaken for all NLTP-funded projects or exceptions reports are completed with valid reasons why an audit is not required.
 - Policy is stated in Transfund NZ November 2004 guideline.
 - In your National Land Transport Programme (NLTP) application, RCAs state they are complying with this policy.
- Document control not happening
 - Examples in the SMS development guidelines.
 - Different methods being used by different RCAs.
 - Most effective when a 'safety team' managing the SMS.
- SMS delivery support is available but not used
 - SMS activities may be funded as administration or professional services.

- Projects may be funded as minor works.
- Land Transport NZ is keen to 'assist and advise'.
- Full internal uptake of SMS has yet to occur
 - Getting buy-in from all units in an RCA an issue.
 - Small RCAs need to identify the reasons for their SMS and promote these to management and other departments.
 - The safety team should revisit buy-in (see delivery plan) if poor uptake is an issue.

Development of RISA

- Land Transport NZ to integrate RISA into network assessment guidelines.
- Undertake RISA prior to technical audits.

Roading hierarchies

- RCAs need consistent hierarchy definitions. Land Transport NZ presenting a draft national road classification system at the workshop (see C6 below).

C3 George JasonSmith – Deficiency database prioritisation (Presentation 03 George JasonSmith)

Road safety to 2010 set the government's objectives.

- <300 fatalities
- <4500 hospital admissions.

Sect 353 of the Local Government Act 1974:

- The council shall take **all sufficient precautions for the general safety of the public** and traffic and workmen employed on or near any road.

The deficiency database seeks to achieve these goals by demonstrating a proactive approach to identifying issues that need to be addressed. This deficiency database has been developed as one way to investigate, prioritise and control the known deficiencies. The database is based on assessed risk, rather than calculated risk.

The database will be demonstrated to RCAs who are interested in using the database. RCAs can request a training session in their area. If numbers of people to attend are suitable, Land Transport NZ will arrange a training session and invite all RCAs in the area to attend.

Action: RCAs to advise Land Transport NZ if they want a training session on the database.

C4 Feedback from peer group discussions on deficiency database prioritisation (Presentation 04)

Deficiency databases are generally considered to be a good idea but must be kept simple or are unlikely to be used (cf risk manager).

Database is good to deal with customers and politicians.

Good to be able to rank projects objectively.

What DDP methods are currently operated by RCAs?

- Input customer requests from the public, police or maintenance contractor.
- Crash reports and Land Transport NZ safety reports show problems.
- Strategy studies identify deficiencies.
- Excel spreadsheet that is updated annually.
- Some have no risk assessment.
- Word document with high/medium/low as risk.
- Lots of handwritten lists for several 'silos', eg footpaths, streetlights, reseals, intersections.
- Determine the level of service for a road, then measure variations from desired level of service.
- Prioritisation methods vary. Some use local knowledge or team meetings to assess and prioritise. Some are ad hoc. Some use number of crashes to prioritise.
- Graduates assess issues with support of senior engineers.

How should DDP be promoted?

- Include it as part of the maintenance contract.
- Internal team meetings
- Regular maintenance contract meetings.
- Send information and complaints with rates demands.
- Need political buy-in.
- Run seminars in university/NZ Institute of Highway Technology (IHT) courses and RAMM training once linked.
- Include in professional services and maintenance contracts.

Issues that need addressing

- Sufficient internal staff resources are not always available.
- Need objective measures of risk.
- Funding for larger SMS projects can be an issue.
- Few RCAs go looking for deficiencies. Most rely on external contacts advising them. Depends on the culture of the organisation.
- If too many deficiencies are identified, it could impact on existing maintenance work.
- Field work is time consuming.

C5 Mark Yaxley – Land use and transportation planning integration – what are the gains for transport safety (Presentation 05 Mark Yaxley)

In 2002, the government signalled increased funding for the National Land Transport Account and established priorities for funding to:

- reduce severe congestion
- improve public transport
- promote walking and cycling
- assist regional development
- improve road safety.

The significance of the announcement was the increase in funding levels, the recognition of congestion as an issue and the government's determination to address its priorities by dedicating fixed levels of funding for:

- promoting walking and cycling
- regional economic development
- alternatives to roading, such as rail freight.

'Next Steps', as announced by the Minister, is aimed at improving strategic investment planning and streamlining processes for funding approval.

Land use planning is recognised as being a regional/local issue. Land Transport NZ anticipates that in the future it will play a more active role in Resource Management Act 1991 (RMA) processes to achieve integrated and sustainable outcomes for the community.

Regional land transport strategies, developed under the Land Transport Act 1998, together with the regional policy statement and district plans developed under the RMA, should integrate land use and transport planning, with the aim of achieving sustainable development and a sustainable land transport system.

Land Transport NZ is seeking to achieve better integration of different transport systems and modes in planning of local road, state highway and other networks. This includes provision for developing passenger transport services, walking and cycling facilities, and opportunities to transfer freight from road to rail and barge. There is a new emphasis on managing the existing transport networks before adding new infrastructure and encouraging different travel choices as a key means of reducing pressure on the system.

Sustainability will be achieved by reducing the need for people to travel and designing networks and operating rules to provide a safe and convenient environment for walking, cycling and other personal travel options.

SMS lists the standards and guidelines that should be applied. The challenges are:

- to ensure the RMA processes give strong recognition of these
- to maximise the connectivity of new developments while improving safety and personal security outcomes.

A document worth reading is the Auckland Regional Transport Authority's *Integrated transport assessment guidelines 2006*. Also *Participation in land use and transport planning processes*, available from Land Transport NZ's website.

C6 Andrew Macbeth – National road classification system (NRCS) (Presentation 06 Andrew Macbeth)

The NRCS project started in 2003 as a tool to promote road safety. It defines a series of functional road classifications for use in New Zealand. Roads are classified into categories and this then ensures transport planning, traffic engineering, road safety and asset management are managed accordingly for all roads of that category.

When all roads in a certain category are similar, drivers will have a more consistent road environment and the roads will be self-explaining. Roads of similar category will be more consistent between districts and driver expectations can be met more consistently. It will help to identify and encourage best practice.

C7 Bill Greenwood – SMS external audits (Presentation 07 Bill Greenwood)

Six external audits carried out so far.

External review at stage 3 of the development uses part 3F of the guidelines.

Issues from internal reviews include document control not being robust with several versions in use, gaps, opportunities for improvement (OFIs) and action lists not being worked on and the delivery plan not being actively pursued.

Internal continuous improvement monitoring has been the focus of the initial external audit trials.

Key issues identified are:

- A safety team has better success than a safety champion on their own.
- Deficiency databases are not well used yet. Land Transport NZ is attempting to address this with the new spreadsheet and courses to support it.
- Project safety audits and road safety action plans are not being done.

Evaluation of the SMS by determining how successfully it is delivered on the road can be carried out using RISA. Not many people capable of these assessments yet but the pool of people is being increased over time. Land Transport NZ technical reviews will identify issues. Existing road safety audits should be carried out by RCAs to ensure that they are achieving consistency on their network.

Recording, prioritising and rectifying deficiencies is critical to manage the capital works programme, and a deficiency database is considered the best way to do this. Data collection, data entry, treatment identification and project prioritisation need to be considered in any deficiency database the RCA develops. Progress to rectifying the deficiencies then needs to be monitored.

C8 Mike Jackett – SMS theme audit feedback (Presentation 08 Mike Jackett)

Twenty RCAs with SMS for at least three years were interviewed to assess their attitudes to SMS and whether or not they find it useful.

Most RCAs consider the SMS to be useful and the process to prepare it was valuable to them. By being involved in preparation of the SMS, they had to consider what their processes were and whether they were robust.

SMS are considered to:

- improve focus on safety
- give better quality of information
- result in better prioritisation and decision making
- reduce risk associated with staff departures.

However, most large RCAs considered the SMS useful and used it regularly but smaller RCAs were less enthusiastic. They did not find the same benefits as the larger RCAs. Some could not see any benefit from having an SMS and could not find a way to implement it since they did not believe in it.

Smaller RCAs may require their SMS to be reconsidered.

Land Transport NZ may be able to help by:

- helping develop a deficiency database
- keeping SMS on the agenda in discussions with council
- leading information-sharing exercises (eg SMS workshop)
- assisting with sharing expertise between councils (eg safety audit teams)
- improving/maintaining access to Land Transport NZ regional staff for technical advice and information
- providing appropriate funding – especially minor works
- appreciating the staffing problems faced by RCAs.

C9 Feedback from peer group discussions on ongoing improvement of SMS (Presentation 09)

How to promote SMS to a wider audience?

- Need regional meetings of SMS users to discuss local issues.
- Need more buy-in from current staff. When staff leave, may not have anyone left to operate SMS.
- Road safety action plan meetings.
- Promote through management (also ensures their buy-in).
- Use performance measures.
- Put SMS on intranet/internet for all staff to use.
- Include in staff induction pack for new staff.
- Refer to SMS in long-term council community plan (LTCCP), asset management plan (AMP), contract documents, etc.
- Need other departments within RCA to communicate better with roading department.

Is SMS relevant in its current form?

- Activity sheets are useful.
- Lots of policies yet to be developed.
- SMS is implementation plan for some RCAs.

How can SMS better meet your needs?

- Resourcing problems to operate the SMS.
- Land Transport NZ to provide a chat room to generate discussion of problems amongst SMS users.
- Colour coding of activity sheets as done in Marlborough Roads would be useful.
- Needs to be risk based.
- More contractor feedback into SMS.
- Do a few things well rather than lots of things not so well.
- Size of document too large.
- Integrate with AMP and internal quality systems.
- Audits of SMS.
- Active 'safety team' gives better ownership.
- Better document control.
- Involve RCA staff at an earlier stage when developing SMS.
- Make worksheets broader in scope.
- Mentoring from another RCA with similar issues.
- Keep it simple.
- Reduce administration.
- Make the SMS more visual with flowcharts and pictures.
- Provide district plan link.
- Link the SMS to budgets.
- Need national policies to be developed, ie rural road delineation.

C10 Lyndon Hammond, Land Transport NZ – Where we want to go and how this impacts on SMS and RCAs (Presentation 10 Lyndon Hammond)

The priorities for Land Transport NZ are to:

- update MOTSAM using steering groups from the industry – there will be 15 chapters; the first chapter (parking) is out for consultation now and rail will follow soon
- develop guideline on roadside hazards
- release guidelines on pedestrian and cyclist facilities
- review AUSTROADS.

This will take place as the merge with Transit continues. The merge is intended to provide certainty of funding to all RCAs with a three-year budget. Political arm's length decisions on project funding will be maintained. Fuel excise duty, road user charges and motor vehicle registration funds will be ring fenced for use in roading.

Treasury will be the lead agency for all commercial negotiations with rail operators.

The Government Policy Statement (GPS) will be how the government directs roading priorities. All regional and local transport strategies will be aligned with this. The Ministry of Transport will prepare the GPS but is underskilled for these new roles and will need to buy in capability.

The merge is intended to be complete and operational on 1 July 2008.

C11 Bill Greenwood – Roundup and the future of the national SMS workshop (Presentation 11 Bill Greenwood)

Land Transport NZ will:

- continue to support remaining RCAs to develop SMS
- assist and advise in the delivery of the SMS – this includes road safety action plans and deficiency database prioritisation
- determine why Peer Group E is having difficulty with SMS and make presentations to staff, officials and the community to help
- also develop new standards and guidelines
- support new implementation projects – they must not be normal operational activity, must be innovative and must be shared with others
- develop skills within the industry to assist with implementation
- continue to carry out and assist with audits of SMS
- review the document control procedures and the stage 3 review procedures in the guidelines
- assist and advise with delivery planning and SMS monitoring when requested to ensure continuous improvement
- encourage existing road audits
- develop RISA as a tool to support technical audits
- undertake external audits of SMS
- provide DDPP workshops as needed
- continue to support RCAs to implement their SMS.