



Southland District Council



Southland District Council

**Contractors
Safety Intervention Plan**



This Contractor's Safety Intervention Plan is endorsed and adopted by the following organisations, who are partners to the Southland District Council Contractor's Safety Intervention Plan.

Fulton Hogan Ltd	Russell Hawkes	_____
Hawkins Building Contractors	Tanea Hawkins	_____
MWH New Zealand Ltd	John Laskewitz	_____
Southland District Council	Dave Adamson	_____
Southland Road Safety Co-ordinator	Jane Ballantyne	_____
SouthRoads	Greg Erskine	_____
Works Infrastructure Ltd	Ray Hamilton	_____



Southland District Council

Contractors Safety Intervention Plan

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Preface

Southland District Council has recently adopted a Safety Management Plan for its road network. The aim of the Safety Management Plan is to:

“Use Appropriate Best Practice to Provide a Safe Road Network”.

The Safety Management Plan is a three part document. Part 1 is the Safety Management Strategy, Part 2 is the Safety Management System and Part 3 is the Safety Management Operations.

Part 1: Safety Management Strategy

The Safety Management Strategy outlines:

- the philosophy
- scope
- stakeholders and partners to the strategy.

This is followed by:

- the aim of the strategy
- identification of key safety issues for the District
- setting of targets
- the goals for the strategy.

Part 2: Safety Management System

For each of the goals in Part 1: Safety Management Strategy

- objectives
- methods
- performance measures
- outcomes and
- deliverables

are developed.

Appendix 1 of the Safety Management System contains a list of Standards, Policies, Guidelines and Specifications which are relevant for maintenance, new work, and assessing applications that may impact on safety.

Part 3: Safety Management Operations

Part 3 is a reference list to a number of standalone Policies, Plans, Databases, Schedules, Reports and Programmes that together provide the tools to implement the Safety Management Strategy.

The Contractors Safety Intervention Plan is a Part 3 Safety Management Operations document.

Other documents will be prepared that are aimed at other stakeholders such as Police, community groups and the public.

1. Introduction

This Contractors Safety Intervention Plan (SIP) is a component of Part 3: Safety Management Operations of the Southland District Council Safety Management Plan. The SIP was developed through an initial workshop involving representatives from all of the road maintenance Contractors, Southland District staff, the Road Safety Southland Co-ordinator and Consultants from MWH. A working group involving representatives from the above organisations then followed it up and developed this document. The working group comprised of:

- Russell Hawkes, Fulton Hogan Ltd
- Tanea Hawkins, Hawkins Building Contractors
- Greg Erskine, SouthRoads
- Charlie Wilson, SouthRoads
- Ray Hamilton, Works Infrastructure Ltd
- Neville Bishop, Southland District Council
- Jane Ballantyne, Southland Road Safety Coordinator
- Denise Anderson, MWH
- John Laskewitz, MWH

This document is the output from the working group.

2. Purpose of the Contractors Safety Intervention Plan

The purpose of the SIP is to optimise Maintenance and Construction Contractors' contributions to the provision of a consistent, safe road environment, with no surprises, over the entire Southland road network.

The adoption of the Safety Management Plan formalises an increased focus on safety in the management of the road network. While Contractors have a Contract which includes standards, specifications and performance standards to be met, and road maintenance and construction does make a significant contribution to road safety, the philosophy and reasons for the Contract requirements are not always obvious and can be lost in the details of the work. This can mean that the Contractors' contribution to road safety is not optimised.

The SIP:

- outlines the Safety Culture which is to be developed,
- provides information on what contributes to a safe road environment
- the factors that contribute to crashes, and
- outlines the actions required by Contractors

3. Use and Distribution

The way that the information in this document is distributed to staff will vary depending on how each organisation works. The information in this document should be readily available to all staff,

especially those in the field. The concept and reasons should be promoted to staff and involvement encouraged.

4. Review

The SIP is a living document and the contents will be updated over time to take account of changes in policies and standards or if any gaps or inconsistencies are identified.

The document will be reviewed every six months from the adoption date. The review will consist of a meeting of representatives from the current contractors, consultants and the Council, including the Road Safety Co-ordinator. Gaps and inconsistencies are to be identified as well as changes in policies and standards. The updated document is to be endorsed by the partners to the document.

5. Format

There are three parts to the SIP:

- General
- Actions Required
- Components of a Safe Road.

6. General

6.1 Safety Culture

SDC Maintenance Contractors will work to develop and maintain a safety culture that will enable each person in their organisations to optimise their own contribution to a road environment that is:

- consistent
- safe
- with no surprises

over the entire Southland road network.

Achievement of this will require partnership and co-operation between Contractors, Consultants, SDC and other Stakeholders. The aim is to develop a cooperative no blame culture where all stakeholders work together to develop a safer road network.

6.2 Safe Road Environment

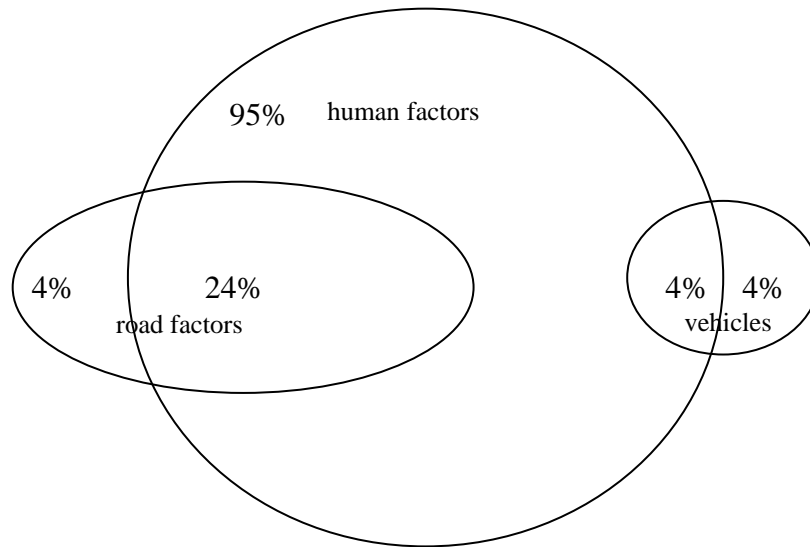
To achieve a safe road environment drivers will be:

- **Warned** of substandard or unusual features.
- **Informed** of conditions to be encountered.
- **Guided** through unusual sections.
- **Controlled** through conflict points or sections.
- **Forgiven** for errant or inappropriate behaviour.

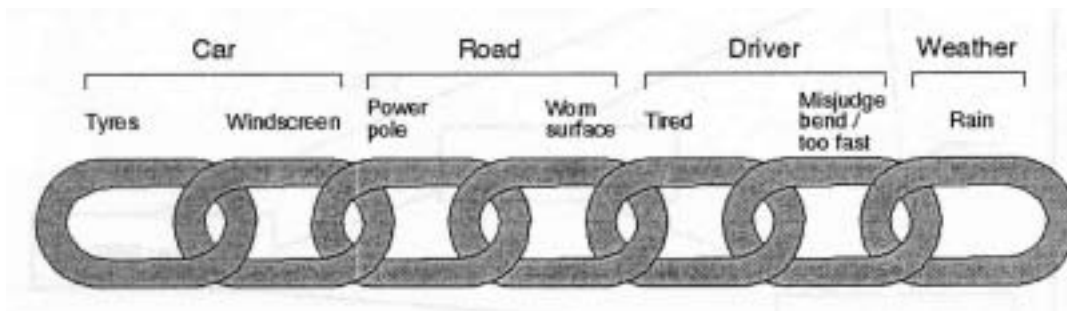
6.3 Factors in Crashes

There are 3 major factors in crashes:

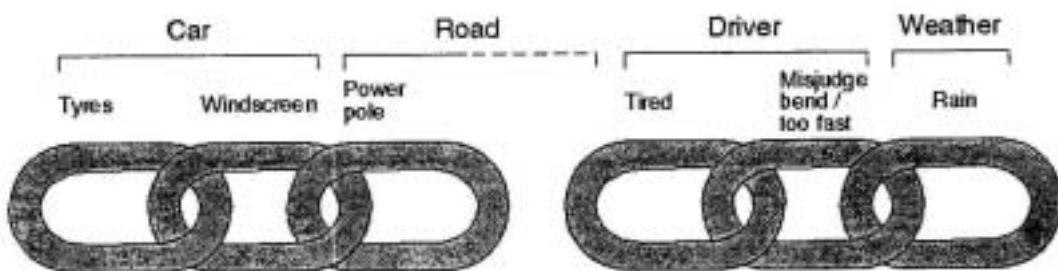
- Human
- Road Environment
- Vehicle.



Crashes occur because of a chain of events.



Help break the chain of events.



Road maintenance can influence the road factors and reduce the number and severity of crashes.

6.4 Definition of Road Environment

Road environment is anything that affects or influences drivers when they are driving. Road environment includes:

- the road
- roadside development
- road user factors
- external factors eg weather, time of day, smoke etc
- vehicles.

Road maintenance has:

- a direct effect on the road
- some effect on roadside development, and
- only indirect effect on the other factors that make up the road environment.

7. Actions Required

7.1 Contractors: The Eyes and Ears of the Council

Contractors:

- are on the road every day, and
- can act as road safety eyes and ears of the Council.

You will see, hear things and notice changes that others may miss:

- surprises
- signs of crashes ie skid marks, holes in fences, damage to signs, crash debris
- crashes that you hear about
- near misses
- reoccurring hazards, and
- faults.

What to do about faults or damage outside your own Contract:

- Be proactive
- Assist other Contractors
- Operate a no blame culture

Improved road safety is the aim.

Early repair of faults will result in a safer road network.

You don't need to work out what the problem is, just record:

- **Who:** saw it
- **What:** you saw, heard or think happened
- **When:** you saw it or think it happened
- **Where:** you saw it.

The names of people in crashes are not necessary. If you think that the Police attended a crash, still record as much as you know. If the Police report doesn't show up in the LTSA crash records, the Consultant will follow through with the Police.

Why should you report an issue:

- the next driver may not have the skills to avoid a crash
- everyone may not walk away from the next crash
- the report will be added to the database and investigated.

What's in it for you:

- job creation: safety projects identified and funded because of your reporting
- you can avoid crashes, and
- issues are fixed early.

7.2 How to Report Issues

7.2.1 Contractor Action

Contractors should report any issues they see to the Consultant. The issue report form in Appendix 1 can be used.

If the issue is a fault under another Contract, you may also wish to informally contact other Contractors to advise them of the fault as soon as possible, particularly where it gave you a "surprise". This can speed up the repair process. Contact details are in Appendix 2.

Report ongoing issues at a site. Repeat crashes at a site mean that there is an ongoing issue that needs investigation and action. It is good practice to implement proven low cost remedial action before resorting to more expensive remedies.

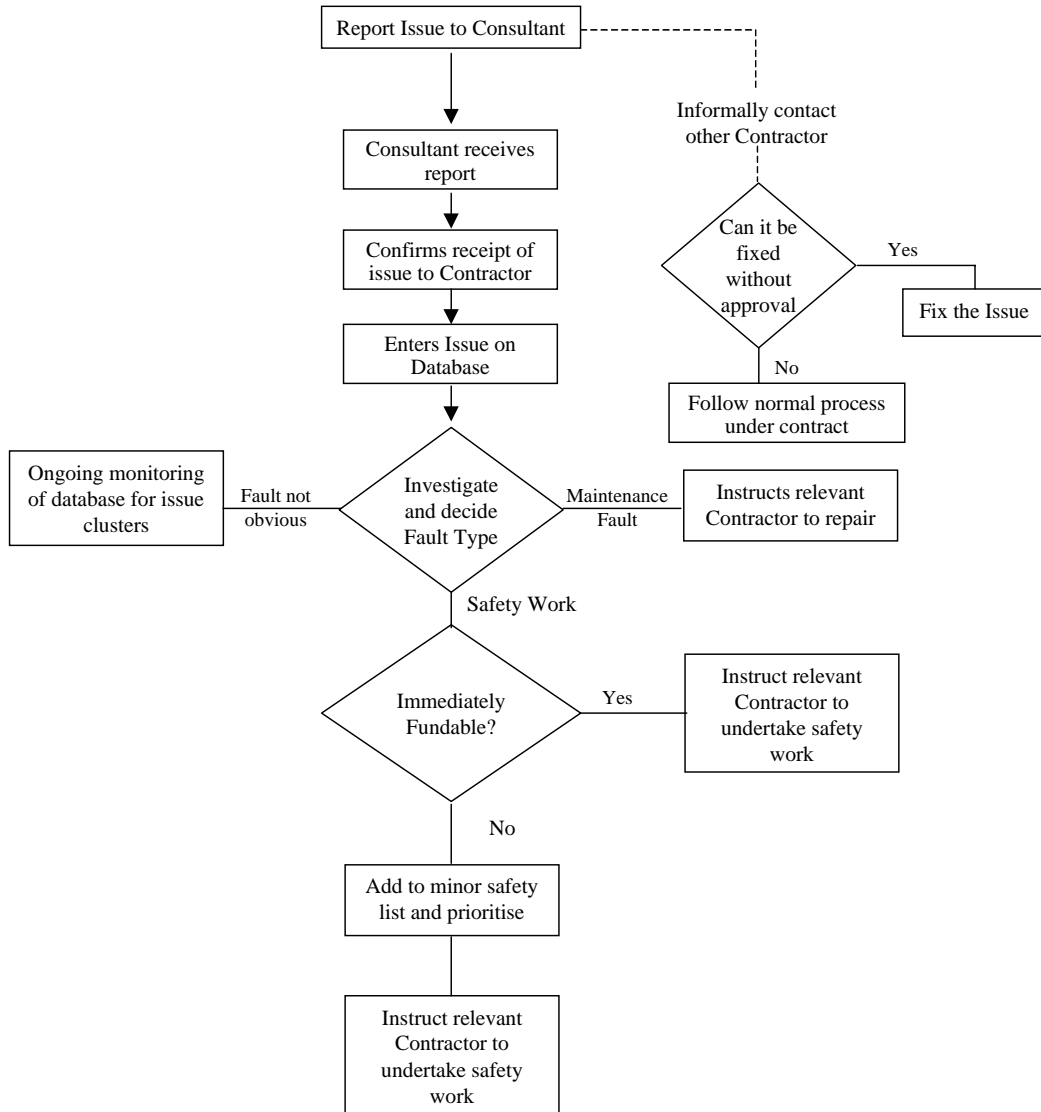
7.2.2 Consultant Action

The Consultant will:

- confirm that the issue has been received
- enter the issue on the database
- Instruct the contractor/s to repair any maintenance faults and / or
- Investigate the issue and instruct a contractor/s to undertake safety work and / or
- Add the fault to the minor safety works list and prioritise it.

It may take a couple of years before minor safety works are able to be funded. Any future issues at the same site will help to raise the priority of work.

Reporting Cycle



7.3 Hazard Register

Action

Develop and update the hazard register of known recurring hazards, ie. slips, ice etc. The hazard register is for each road within the network and is not limited to a particular contract.

Reason

Hazard registers can only be developed from experience on the job. New employees can learn more quickly with a register.

Hazard Register

Contact Area	Ward	Road Name	RP	Description
North West	Tuatapere Te Anau Five Rivers Waikaia			
Central	Wallace Riverton Winton Wallacetown			
South East	Te Tipua Waihopai ToeToes			

8. Components of a Safe Road

The components of a safe road are listed in the following sections so that Contractors can see how the work that they undertake contributes to a safe road environment.

8.1 Surface

A good safe well maintained road has the following:

Carriageway and Lanes:

- wide enough for the number and vehicle types using the road.

Sealed Road Surface:

- smooth
- no potholes
- no rutting and shoving
- no flushing and polishing
- no differential skid resistance (between a vehicle's wheel tracks)

- no debris
- even crossfall.

Unsealed Road Surface:

- relatively smooth
- running course
- no rutting, shoving, soft patches
- no debris
- even crossfall.

This will avoid sudden stops, swerves, loss of control, crashes and confusion by motorists.

8.2 Alignment

To avoid surprises, alignment is:

- consistent with terrain and road group
- no hidden or sudden changes in alignment
- hidden or sudden changes in alignment signed and delineated.

8.3 Delineation

To guide and confirm road alignment, delineation should:

- be consistent for road group
- hidden or sudden changes in alignment are signed and delineated
- perform day, night and in adverse weather conditions
- be clean and in good condition.

8.4 Shoulders

To help vehicles wandering out of the traffic lane to stay in control:

- no drop offs
- well compacted
- recoverable slopes.

8.5 Drainage Facilities

Drainage facilities are to be:

- adequate to drain road
- free of standing water
- traversable including water tables and side drains
- flush and drainage inlets, outlets, and structures are not to cause obstructions.

8.6 Clear Zones

Clear zones are the area beyond the road shoulder and they reduce crash severity. A policy is to be developed but the idea is that a clear zone should be:

- level and as clear as possible
- as free of unprotected obstacles as possible
- clear zone width is likely to vary with the road group.

8.7 Intersections and Accesses

Intersections and accesses are conflict points that will operate more safely if there is:

- adequate visibility
- adequate swept path for the vehicles using the intersection and access
- adequate profile for vehicles using it
- no gravel migration onto sealed roads
- rural mail boxes are out of swept path, frangible and not obstructing visibility
- infrequent junctions
- no accesses within intersections.

8.8 Landscaping and Vegetation

Can be:

- amenity
- guidance or a view block
- threshold
- national Parks or reserves
- controlling erosion.

It can also:

- block sight distance at intersections, accesses, signs, pedestrians
- ice roads
- grow to become obstacles to hit ie wilding trees.

8.9 Roadside Development

To avoid adverse effects on road safety, roadside development should have:

- simple, direct and relevant advertising
- no misleading advertising
- no distractions or confusion.

Access issues should be identified and remedied early.

8.10 Temporary Traffic Management

Work on the road requires temporary traffic management. Well designed and maintained temporary traffic management will:

- provide a consistent, no surprises safe road environment for motorists day and night
- result in increased compliance over the District
- achieve increased worker safety.

Appendix 1: Issue Report Form

SDC: Issue Reporting Form

Road Name: _____

Side of Road: _____

RP: _____

Description: _____

Your Name: _____

Company: _____

Contact Details: _____

Phone: _____

Fax: _____

Email: _____

Appendix 2: Contractor Contact Details

Contractor Contact Details

	Area	Name	Phone	Cell	Fax	Email
North West Maintenance SouthRoads Markings Fulton Hogan Signs Hawkins						
Central Maintenance Works Infrastructure Markings Fulton Hogan Signs Hawkins						
South East Maintenance SouthRoads Markings Roadmarkers Signs Hawkins						

Appendix 3: Safety Culture Programme

- Communication Plan Brief
- Report to Community Board

Southland District Council

SMP: Communication Plan Brief

1 Introduction

The purpose of the Communication Plan is to inform and educate the main stakeholders of the existence of the SMP and ensure that it becomes a living and useful document which is used, consulted and implemented. The desired outcome is an increased focus on road safety.

A presentation has already been made to the Councillors and they have adopted the SMP. It is now appropriate that Community Board Members, CDA's, SDC Staff, MWH Staff, and Contractors are brought into the loop.

2 Community Board Members and CDA's

Given that there are a total of 25 Community Boards and CDA's within Southland and they have separate local meetings, it is not viable to make separate presentations to these groups. It is proposed to write a report to be tabled at their meetings. It will be similar in content to the presentation made to the Council, but in report format.

To give the report the appropriate weight, a covering letter signed by the Chief Executive or the appropriate elected representative is recommended. The report can be followed up by the Urban Engineers to reinforce the issues over a period of time.

2.1 SDC Staff, MWH Staff and Contractors

A presentation is to be made to SDC staff, MWH staff and Contractors. Most of the audience will be new to the SMP. It will therefore need to cover the strategy with additional detail and focus on the system and operations. These people will have a strong influence on the policy implementation aspects of the SMP. Invitations should go to SDC Urban Engineers and Roading related staff. Building Inspectors and Planning staff should also be invited to provide an introduction to the SMP. At MWH, invitations should be extended to roading related staff. The Maintenance, Signs and Markings Contractors should also be invited. While in the interests of partnering it would be good to have the Contractors down to Foreman level, numbers would be unwieldy. The separate SIP presentation, the following day, detailed in the SIP proposal is an opportunity to brief these people.

As the level of detail is different for the different audiences it is agreed that:

- A detailed workshop for SDC and MWH staff (particularly Urban Engineers and Roading Managers) will be held on the morning of 11 June 2003.
- On the same afternoon the SMP will be outlined to contractors at a general meeting of SDC's contractors where it will be a 20 minute PowerPoint presentation on the agenda. It will provide an overview/introduction to the SMP.
- A cut down version of this PowerPoint presentation will be provided to Ian Marshall to enable a 10 minute presentation to be made to Road Safety Southland.

Ideally SDC will arrange to video the SDC/MWH presentation to enable those that can not make it, to view the presentation at a later date.

2.2 Programme of Services

Providing this brief is approved by 28 April 2003, presentation by 11 June 2003.

REPORT TO COMMUNITY BOARD

Meeting Date:

Group: ASSET MANAGEMENT

Subject: SAFETY MANAGEMENT PLAN

File No.:

Report by Denise Anderson of MWH dated 16 July 2003.

1. **SUMMARY OF REPORT**

The attached report from MWH outlines the Southland Safety Management Plan that has recently been adopted by the Council.

The Safety Management Plan is a comprehensive systematic approach to improving road safety that will involve the whole community. It will utilise safety engineering, safety culture and education as tools to improve safety on our roads.

The Plan is comprised of three parts, Safety Management Strategy, Safety Management Plan, and an Operations section which provide the Aim and goals, objectives of those goals and the implementation of the Plan.

The stakeholders are currently being informed about, and encouraged to promote the Safety Management Plan to the community, promoting a safety culture, and helping to establish a crash reporters network.

2. **RECOMMENDATION**

THAT THE REPORT IS RECEIVED.

Signature

Executive Staff

or

Chief Executive

To: Southland District Council Community Board

Re: Safety Management Plan

Safety Management Plan Update

1. Introduction

The Council is responsible for the operation, maintenance, standards and remedial works on its roads. In response to a desire to improve safety on its roads, Council has developed and adopted, in conjunction with MWH, the Safety Management Plan. The Safety Management Plan is a comprehensive systematic approach to improve road safety that will involve the whole community. The idea behind the plan is to reduce the number and severity of traffic crashes by making road safety an integral part of the day to day operations of all those who work on the road. The development of a safety culture amongst Council staff, Consultants, Contractors and the general public is an important proactive approach. It will utilise safety engineering, safety culture, enforcement and education as tools to improve safety on Southland's roads. One of the main outcomes is the provision of a consistent road environment on roads of equal status for road users

2. Structure of the Safety Management Plan

The Safety Management Plan is a three part document:

- Safety Management Strategy
- Safety Management System and
- Operations



2.1 Part 1: Safety Management Strategy

The Safety Management Strategy outlines the philosophy, scope, stakeholders and partners to the strategy. This is followed by the aim of the strategy, identification of key safety issues for the District, setting of targets and the goals for the strategy.

2.2 Part 2: Safety Management System

Each of the goals in Part 1: Safety Management Strategy is discussed and objectives, methods performance measures, outcomes and deliverables are developed. Appendix 1 of the Safety Management System contains a list of Standards, Policies, Guidelines and Specifications which are relevant for maintenance, new work, and assessing applications that may impact on safety.

2.3 Part 3: Safety Management Operations

The operations part of this document comprises of a reference list to a number of standalone Policies, Plans, Databases, Schedules, Reports and Programmes that together provide the tools to implement the Safety Management Strategy.

3. Safety Management Strategy

3.1 Aim of the Safety Management Strategy

The aim of the Safety Management Strategy is:

“To utilise the appropriate best practice to provide a safe road network”.

This aim fits well with Southland’s guiding principle of “People First Serving Communities Together”.

3.2 Road Safety Issues

The Safety Management Strategy identifies the current road safety issues in Southland. The LTSA Southland Road Safety Report 1997-2001 and the LTSA Southland District Road Safety Issues, August 2001 analyse the crash database and identifies road safety issues. In summary the crash statistics for SDC local roads are:

- Injury crashes are reducing at about the same rate as the whole of New Zealand for both urban and rural roads.
- Urban local roads have 61 crashes per 100 million vehicle – kilometres travelled compared with the average of 32 for districts with similar traffic and roading characteristics, and 31 for all New Zealand.
- Rural local roads have 22 crashes per 100 million vehicle – kilometres travelled compared with 24 for districts with similar traffic and roading characteristics, and 24 for all New Zealand.

- Crash reduction studies have resulted in a 74% reduction in crash numbers. This compares well with the 35% average reduction from crash studies on all New Zealand roads.
- Injury crashes in 2001 occurred 77% on rural roads and 23% on urban roads (On a per km basis, 96% are rural and 4% urban).
- The majority of rural road crash types are lost control or head-on on a straight or a bend.
- On urban local roads in SDC, just under half of the crashes are lost control or head-on on a straight or a bend.
- On both urban and rural roads, crashes on unsealed roads and wet roads are a problem.
- Crashes in the dark on urban roads in particular are an issue.
- Collisions with roadside objects also feature.

3.3 Target Setting

A target for crash reduction has been set in the Strategy. There are a number of factors that must be considered before setting any targets for crash reduction. While SDC provides, maintains and improves the road for road users, the Council can only indirectly influence road user behaviour, the ability of drivers, and the standard of vehicles used on the road network.

Numerous international studies have indicated that only 28% of crashes involve road factors, and 95% involve human factors. Of the 28% involving road factors, only 4% of crashes are solely related to road factors and 24% are a combination of human and road factors.

Given the above, a zero crash target is not reasonable, however a reduction in the overall number of crashes is reasonable.

The initial target set in the Strategy is to achieve a trending down of crash numbers, better than the national trend, within 5 years.

3.4 Goals

The strategy establishes six broad goals which relate to:

1. Road environment
2. Road projects
3. Deficiencies
4. Special User Groups
5. Safety Culture
6. Information Management System

4. Safety Management System

Within the Safety Management System, each goal is discussed and one or more objective, method with a corresponding deliverable and outcome is developed.

Goal 1: To ensure road users have a consistent road environment

This can be described in layman's terms as the provision of a "no surprises" road environment for all road users. The components of a consistent road environment are complex and are a combination of:

- geometry
- carriageway widths
- clear zones
- vegetation
- surface conditions
- intersections
- delineation devices
- hazard marking
- speed limits
- adjacent development.

Goal 2: To consider safety at all stages of roading projects

Consideration of safety at all stages of roading projects includes:

- road maintenance operations,
- the development and construction of safety projects
- when people are working on the road investigating and constructing projects
- Safety Audits at all stages of project development.

Goal 3: To identify and investigate deficiencies

There are deficiencies in the existing road network and it is important that these are identified and investigated. This includes using the following tools and information:

- undertaking detailed systematic safety inspections of the road network on a 5 year cycle
- LTSA crash database and Road Safety Report
- develop a Crash Reporters Network
- manage a recurring hazard sites database
- operate a Safety Deficiency database
- undertake Crash Reduction Studies
- identify grey spots
- undertake mass actions.

Goal 4: To ensure that the safety requirements of special user groups are considered in all projects

There are a number of different modes of transport, and different user groups with different needs that all use the road network. The Safety Management System aims to ensure that the safety requirements of all road users are considered in all projects. In particular, consideration and provision is required for:

- different modes of transport
- all disabled road users
- young and elderly road users

Goal 5: Develop a safety culture among all road users

Development of a safety culture by all stakeholders is likely to be an effective means of reducing the number and severity of crashes. This will be achieved by utilising education initiatives and targeted enforcement.

Goal 6: Maintain an effective information management system

There is a need to develop, maintain, update and interrogate the databases that are an integral part of the Safety Management Plan.

5. Operations

The operations section of the Safety Management Plan is a list of the components of the Safety Management Plan. These components are a mix of standards, policies, guidelines, databases, and ongoing tasks. While a number of the components are operational, there are others that have either yet to be developed or are in draft form at present and there are others which are ongoing cyclic tasks.

Following adoption of the Safety Management Plan, work on the Operations is underway.

A communication plan has been developed to inform stakeholders about the Safety Management Plan. This report is part of the Communication Plan.

The Crash Reporter Network is being established.

Trial Safety Inspections have been undertaken and the methodology is being refined for future safety inspections of the entire network. The specific problems identified during the trial inspections are being tasked to Contractors through the Maintenance Contracts or programmed for future action. The trial also identified the need to further develop and refine some policies and standards related to safety and we are in the process of getting this work under way.

Development of a Contractors Safety Intervention Plan for the Signs, Markings and Maintenance Contracts is under way. A working group of representatives of the Contractors, MWH and Council staff has been formed and are working together to develop one Contractors Safety Intervention Plan for Southland.

The Safety Management Plan will improve safety however development of the remainder of the Operations section of the Safety Management Plan will take time and money.

6. How Can You Help to Implement the SMP and Improve Road Safety

Community buy-in is important for the success of the Safety Management Plan. Without buy-in, we won't have reporting of crashes or current deficiencies. You can help to achieve Community buy-in.

1. Promotion of the Safety Management Plan to the community is important if community buy-in is to be achieved. The community are all stakeholders and they will all benefit when the Safety Management Plan is effective and reduces crash numbers and severity.
2. You can promote a safety culture by your own lifestyle choices and networking. A community with a safety culture will reduce the number and severity of crashes.
3. There are crashes which occur and which are not reported to LTSA. Reporting the location of any crash sites will help identify deficiencies on the road network. It is not important to have all the details of what happened and who was involved. All that is necessary is the name of the road, a description of where it was, and date that the signs of the crash were noticed. The patterns and locations of the crash reports will be analysed. A number of crashes in the same location will trigger an investigation. Often the problem will be able to be resolved with the implementation of low cost measures. If more major work is required, the reporting of the crashes will help to obtain a funding subsidy for the work earlier.
4. You have your own networks. Use your networks to help establish the crash reporters network. Provide us with the names and contact details of people that you think may be willing to be crash reporters. A copy of the crash reporters card is attached and additional copies are available from the Council.

Yours faithfully
MWH NEW ZEALAND LTD

Denise Anderson

Approval Recommended
SOUTHLAND DISTRICT COUNCIL

Ian Marshall
Asset Manager Rooding

Appendix 4: Safety Inspections Methodology

Southland District Council

Safety Management Plan

Ongoing Safety Inspections

Methodology – 14 August 2003

1 Project Objective

To undertake safety inspections of the network in accordance with the SMP and using a refined methodology following the 2003 Initial Safety Inspections.

2 Project Team

2.1 Client Project Manager

- Neville Bishop

2.2 MW Team

- Denise Anderson (Project Manager)
- Mike Smith
- Ross McCammon
- Irwin Harvey

3 Methodology

3.1 Develop Five Year Safety Inspection Cycle

We have gained experience during the initial safety inspections and as a result of that experience we propose some changes to the cycle of inspections from that proposed in the Safety Management Plan at Part 3: Safety Management Operations. The revised cycle is as follows:

Day time and Night Time

Group 1 & 2 Roads	Arterials	50% 6 monthly in year 1 thereafter 50% annually
Group 3 Roads	Collectors	50% 6 monthly in year 1 thereafter 50% annually
Group 4 & 5 Roads	Local Roads Sealed	25% 6 monthly in year 1 thereafter 25% annually
Group 7, 8 & 9 Roads	Local roads unsealed	12.5% 6 monthly in year 1 thereafter 10% annually

We also propose some changes to the methodology. We now propose that the route will be inspected in one direction during the day and the reverse direction at night. Group 8 and 9 roads with no delineation will not be inspected at night. In the car there will be a “stranger” driver, an observer /

recorder and an observer / navigator / information provider plus one or two observers. It is our intention that the safety inspections will be undertaken outside daylight saving time with the day and night inspections separated by a week or two.

3.2 Reasons for Methodology

We have considered whether or not to reduce the number of observers in the car. We have decided not to make this recommendation because of safety issues, more eyes to observe deficiencies, a 50% less chance in missing something, and delivery of a better product.

We estimate that there is a 20% loss in the items identified when comparing one way travel day and night with travelling two directions day and night however the cost is almost halved if only one direction is traveled. There seemed to be little point in travelling on roads with no delineation at night: there was nothing to see. This was the method adopted in the initial safety inspections.

It is desirable that the safety inspections are undertaken outside daylight saving time because the long daylight hours during summer means that the hours available for night time inspections in summer is very limited. For safety reasons, the day and night inspections are separated by a week or two.

The focus of the inspections will be on one half of the district. While this will not cover all of the group 1 and 2 roads in each round of inspections as envisaged in the SMP, the group 1 and 2 roads extend to the 4 corners of the district. Inspections each round would require a lot more dead running with a consequential increase in the cost.

It is for the reasons of economy that we are making these recommended changes to the cycle and methodology. We do not consider that there will be a significant reduction in the potential safety improvements in the district

3.3 Route Planning

A common method for establishing the cycle is a map with one colour for the roads to be surveyed every safety inspection. The additional roads for the initial inspection and each subsequent inspection would be coloured in different colours. We will undertake 1100km of road inspections during the trials (1 way day and the reverse direction at night for each section of the road inspected, excluding undelineated group 8 and 9 roads at night).

3.4 Prompt Sheets

Prompt sheets will be used for each group in the network. These will be based on the SDC SMS List of Standards, Policies, Guidelines and species and will summarise the standards or policy levels for each group.

RAMM records will be extracted for each section of road to be inspected giving data such as the pavement width and whether the road is sealed or unsealed.

The 7 level priority system used in the initial inspections will be used for each type of deficiency.

3.5 Database Refinement

The database needs refinement for tasking of problems identified during the inspections to Contractors.

3.6 Safety Inspection

The team for the First Round of Safety Inspections is to be Denise Anderson, Mike Smith, and Irwin Harvey plus selected SDC staff members and maintenance, signs and pavement marking Contractors. The number of people that can fit in one vehicle limits the number of people present on the inspections.

SDC Personnel, Councillors, and Roding Managers may attend from time to time.

The Safety Inspections are recorded by dictaphone.

3.7 Data Entry

The data will be down loaded from the tape directly into the Safety Inspections database.

3.8 Reporting

- The report will be prepared in a similar format to the initial safety inspections report.
- The draft report will be peer reviewed prior to release to Client.

Appendix 5: Crash Recorder Network Methodology

Southland District Council

Network of Crash Reporters: Setup

Methodology – April 2003

1 Project Objective

The Network of Crash Reporters: Setup objective is to setup a network of crash reporters to optimise the available crash information.

By way of background, there may be sites where crashes are starting to occur on the road network that are not being included on the LTSA crash database. Identification of these sites can lead to early intervention and remedial action.

2 Project Team

2.1 Client Project Manager

- Ian Marshall

2.2 MW Team

- Denise Anderson (Project Manager)
- Irwin Harvey
- Ross McCammon
- John Laskewitz

3 Methodology

3.1 General

This is a three part methodology:

- Setup of Crash Reporter Network
- Update Crash Database
- Maintenance of Crash Reporter Network

3.2 Setup of Crash Reporter Network

The setup of the crash reporter network will occur progressively over time using methods such as:

- Item in Council newsletter publicising the development and adoption of the Safety Management Plan by Council, establishment of the crash reporter network and asking people to participate.
- Letter to Community Boards inviting them to become / suggest likely crash reporters (along with report on SMP).
- Letter to appropriate Stakeholder Groups advising them of the SMP and the Crash Reporter Network. Inviting people to send in crash reports. Supply crash report forms.

- Identification of any people that have reported crashes to Council in the past, sending out information about the SMP and inviting them to continue to send in crash information.(up to 150 letters)
- Identification of likely sources of crash information such as contractors, Police, ambulance crew, Fire Brigade, tow truck operators, and garage owners, trucking companies, etc. An initial call on them to try to get buy in as crash reporters.
- In all of the above, raise the profile of Irwin Harvey as the main public contact

Appendix 6: Crash Report Form

TRAFFIC CRASH NOTIFICATION

Southland District Council

The purpose of this form is to identify crash locations, to identify roading problems, and hence potential improvements. It will NOT be used for enforcement purposes. Please enter details as accurately as possible by circling or commenting as appropriate. This is particularly important in regard to location.

Date of Crash Time am / pm Name of Road

Place? At m / km N / S / E / W of side road / feature:

Was it? Bend / Intersection / Straight (circle one) Advisory Speed / NA Worst injuries? Serious / Minor / None / Unknown (circle one)

Parties Involved	Vehicle Type	Direction of travel	On which road
Party No. 1:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Party No. 2:	<input type="text"/>	<input type="text"/>	<input type="text"/>

What happened and possible causes:

Weather conditions: Fine / Mist / Light Rain / Heavy Rain / Snow / Frost / Strong Wind (circle one) Light? Bright Sun / Overcast / Twilight / Dark (circle one)

Description of property damage (e.g. fences, power poles):

Do you want us to send you more Traffic Crash Notification cards? Y / N (circle one)

Your name: (optional) Phone Number: (optional) Address: (optional)

SYNCRASH 25913

Appendix 7: SDC Delineation Standards

Southland District Council Road Delineation Standards

Overview

Council require road delineation including pavement markings, edge marker posts and reflective raised pavement markers to be maintained at a level appropriate to the roads position within the Council's Road Group classification system.

This will provide road users with a reasonably safe, comfortable and consistent level of service on all district roads.

Purpose

This standard is to ensure that the road markings and delineation devices used on all district roads are the most appropriate for a safe and efficient road network.

The level of service provided is based on the roads position within the current road group classification system in conjunction with the existing average seal width on the road.

The pavement marking and road delineation is maintained at a sufficient standard to give road users a safe and consistent level of service year round.

Technical References

Manual of Traffic Signs and Markings (MOTSAM)

Road and Traffic Standards – RTS 5

Standards

The road delineation methods including centre lines, edge lines, no passing lines, edge marker posts and reflective raised pavement markers will be installed and maintained to the standard shown in MOTSAM, RTS-5 or as directed by the current pavement marking contract, based on the road grouping and seal width criteria listed below.

The road groups are based on the annual average daily traffic volumes (AADT) of each road adjusted for the type of traffic using the roads.

	Road Group	Modified AADT
Sealed Roads	1	800+
	2	400-799
	3	200-399
	4	50-199
	5	0-49
Unsealed Roads	7	80+
	8	20-79
	9	0-19

Centre Lines

Required full route, on all Group 1 to Group 5 roads, with a seal width greater than 5.0m. Isolated Centre lines shall be provided on any section of sealed road with a width of 5.0m or less which provides inadequate visibility of on coming traffic. Inadequate visibility shall be defined as visibility less than the safe passing sight distance for the speed limit of the road.

Edgelines on Straights

Required full route, on all Group 1 to Group 3 roads, with a seal width greater than or equal to 6.2m. Should one section of a road be narrower and thus not have an edgeline, motorists shall be warned of this by the use of road narrows signs.

Edgelines on Isolated Curves

Required on Group 1 to Group 5 roads, regardless of seal width, if;
They are needed to prevent road users cutting corners where a hazard exists within 3m of the seal edge
Needed to prevent migration of gravel and / or edgebreak.

No Overtaking Lines

Required on all Group 1 to Group 5 roads where;
Meets the requirements for no overtaking lanes as set out in MOTSAM
And has an existing centre line
And has a seal width greater than or equal to 5.5m.

Where this standard indicates that existing no overtaking lines do not comply, these will be reviewed on a case by case basis by the Southland District Council.

RRPM's

Required on all Group 1 roads with a seal width greater than or equal to 6.0m.

Required on all Group 2 roads, only when joined at both ends by Group 1 roads and / or State Highways, and with a width greater than or equal to 6.0m.

Roads which fall outside this criteria but would benefit greatly from RRPM's may be considered on a case by case basis.

E.M.P's on Straights

Required on all Group 1 to Group 3 roads. "A" spacing type.

E.M.P's on Curves

Required on all Group 1 roads, "B" spacing type.
Required on all Group 2 to Group 4 roads, "A" spacing type
Required on all Group 7 unsealed roads, "A" spacing type.