

Link	Length (km)	Serious Injury Crashes 2002 to 2006	Fatal Crashes 2002 to 2006	Collective Risk Annual average fatal and serious injury crashes per km	Collective Risk Band	Personal Risk Annual average fatal and serious injury crashes per 100 million vehicle-km	Personal Risk Band
SH 1 from Dunedin to Mosgiel (SH 87)	19.6	16	4	0.2	High	4.3	Low-medium
SH 1 from Gore to Invercargill	63.3	20	8	0.1	Medium	6.3	Medium
SH 1 from Invercargill to Bluff	27.1	9	4	0.11	Medium-high	11.9	High
SH 1 from Milton to Gore	92.7	28	3	0.07	Medium	7.2	Medium-high
SH 1 from Mosgiel to Milton	44.7	31	5	0.17	Medium-high	7.1	Medium-high
SH 1 from Oamaru to Dunedin	108.9	73	7	0.16	Medium-high	9.3	High
SH 1 from Timaru to Oamaru*	93.2	27	6	0.09	Medium	4.9	Low-medium
SH 6 SH 8B and SH 8 from Wanaka to Alexandra	85.7	21	2	0.06	Low-medium	5.5	Medium
SH 6 from Cromwell to Queenstown	52.8	29	2	0.12	Medium-high	7.7	Medium-high
SH 6 from Haast to Wanaka*	137.8	17	3	0.03	Low	10	High
SH 6 from Lumsden to Invercargill	74.6	18	3	0.06	Low-medium	6.1	Medium
SH 6 from Queenstown to Lumsden	98.9	20	3	0.04	Low-medium	5.9	Medium
SH 8 from Alexandra to Milton	131	56	6	0.1	Medium	13.9	High
SH 8 from Alexandra to Palmerston	164.9	18	1	0.02	Low	10	High
SH 8 from Fairlie to Oamaru*	129.7	16	4	0.03	Low	5.6	Medium
SH 8 from Oamaru to Cromwell and SH 8A	128	30	1	0.05	Low-medium	11	High
SH 83 from Oamaru to SH 1*	109.2	5	3	0.02	Low	4.2	Low-medium
SH 87 from Kyebrum to Mosgiel	114.1	9	1	0.02	Low	7	Medium-high
SH 90 from Rays Junction to Gore	59.3	8	2	0.03	Low	8.7	Medium-high
SH 93 from Clinton to Mataura	43.1	9	0	0.04	Low-medium	9.7	High
SH 94 from Gore to Lumsden	61.4	3	0	0.01	Low	2.8	Low
SH 94 from Te Anau to Milford	118.9	25	0	0.04	Low-medium	18.3	High
SH 94, 95, 97 from Lumsden to Manapouri	113.9	21	1	0.04	Low-medium	9.7	High
SH 96 from Mataura to Ohai	89.6	20	2	0.05	Low-medium	13.4	High
SH 98 and SH 99 from Dacre (SH 1) to Clifden	114	18	3	0.04	Low-medium	8.4	Medium-high

\* These links cross map boundaries, so will appear in more than one regional list



## WHAT IS KIWIRAP?

The New Zealand Road Assessment Programme, KiwiRAP, falls under the umbrella of the International Road Assessment Programme, iRAP. Similar programmes have been implemented in Europe (EuroRAP), Australia (AusRAP) and the United States of America (usRAP) and developments are underway for a programme in Africa.

KiwiRAP has been initiated in New Zealand as a partnership between the government transport agencies (Ministry of Transport, Transit New Zealand, Land Transport New Zealand, Accident Compensation Corporation, New Zealand Police) and The New Zealand Automobile Association.

The objectives of KiwiRAP are:  
 > To reduce deaths and injuries on New Zealand roads by systematically

assessing risk and identifying safety shortcomings that can be addressed with practical road improvement measures.

> To have risk assessment as a key factor in strategic decisions on road improvements, crash protection and standards of road management.

> To provide meaningful information on where the greatest levels of risk are faced and in turn to influence behaviour.

## HOW DOES A ROAD ASSESSMENT PROGRAMME WORK?

Road Assessment Programmes internationally consist of three 'protocols':

> **RISK MAPPING**  
 Uses historical traffic and crash data to produce colour-coded maps which illustrate the relative level of risk on sections of the road network.

> **PERFORMANCE TRACKING**  
 Involves a comparison of crash rates over time to establish whether fewer - or more - people are being killed or injured and determine if countermeasures have been effective.

> **STAR RATING**  
 Road inspections assess the engineering features of a road (such as lane and shoulder width or presence of safety barriers). Between 1 and 5 stars are awarded to road links depending on the level of safety which is 'built-in' to the road.

## RISK MAPS

Risk Mapping currently focuses on the state highway network. In the future this may extend to tourist routes or key regional non state highway routes.

The state highway network is broken up into road sections (known as 'links'), for the purpose of comparing the level of risk of crashes between different parts of the network. The Risk Maps focus on state highway links that are typically outside the urban area - that is, state highway links that have speed limits of 80km/h or more.

For the purposes of displaying the safety

risk of the state highway network, KiwiRAP looks at two different measures of risk - Collective Risk (or Crash Density) and Personal Risk. The focus of both is on crashes where people have been killed or seriously injured. The crash statistics used for the calculations are for the five-year period 2002-2006.

**Collective Risk (or Crash Density)**  
 Collective Risk is a measure of the total number of fatal and serious injury crashes per kilometre over a section of road. Collective Risk can also be described as the Crash Density. Because Collective

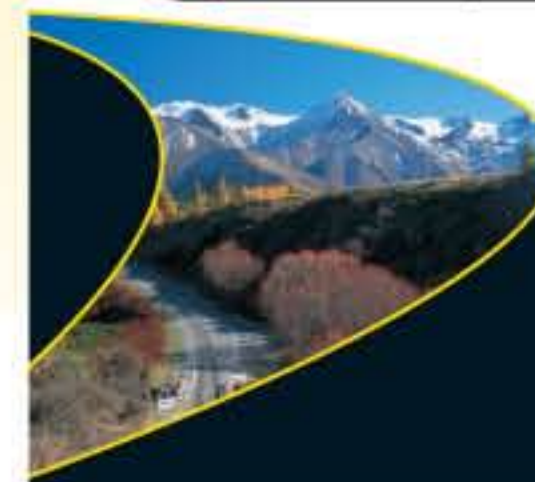
Risk is measured in terms of the number of crashes per kilometre of state highway, links with higher traffic volumes tend to have a higher Collective Risk.

**Personal Risk**  
 Personal Risk is a measure of the danger to each individual using the state highway being assessed. Unlike Collective Risk, Personal Risk takes into account the traffic volumes on each section of state highway.

This brochure contains the Otago and Southland regional Risk Map data.

RISK RATING	COLLECTIVE RISK Average annual fatal and serious injury crashes per km	PERSONAL RISK Average annual fatal and serious injury crashes per 100 million vehicle-km	COLOUR
Low	≤0.039	<4	
Low-medium	0.04 ≤ 0.069	4 ≤ 4.9	
Medium	0.07 ≤ 0.10	5 ≤ 6.9	
Medium-high	0.11 ≤ 0.189	7 ≤ 8.9	
High	0.19+	9+	

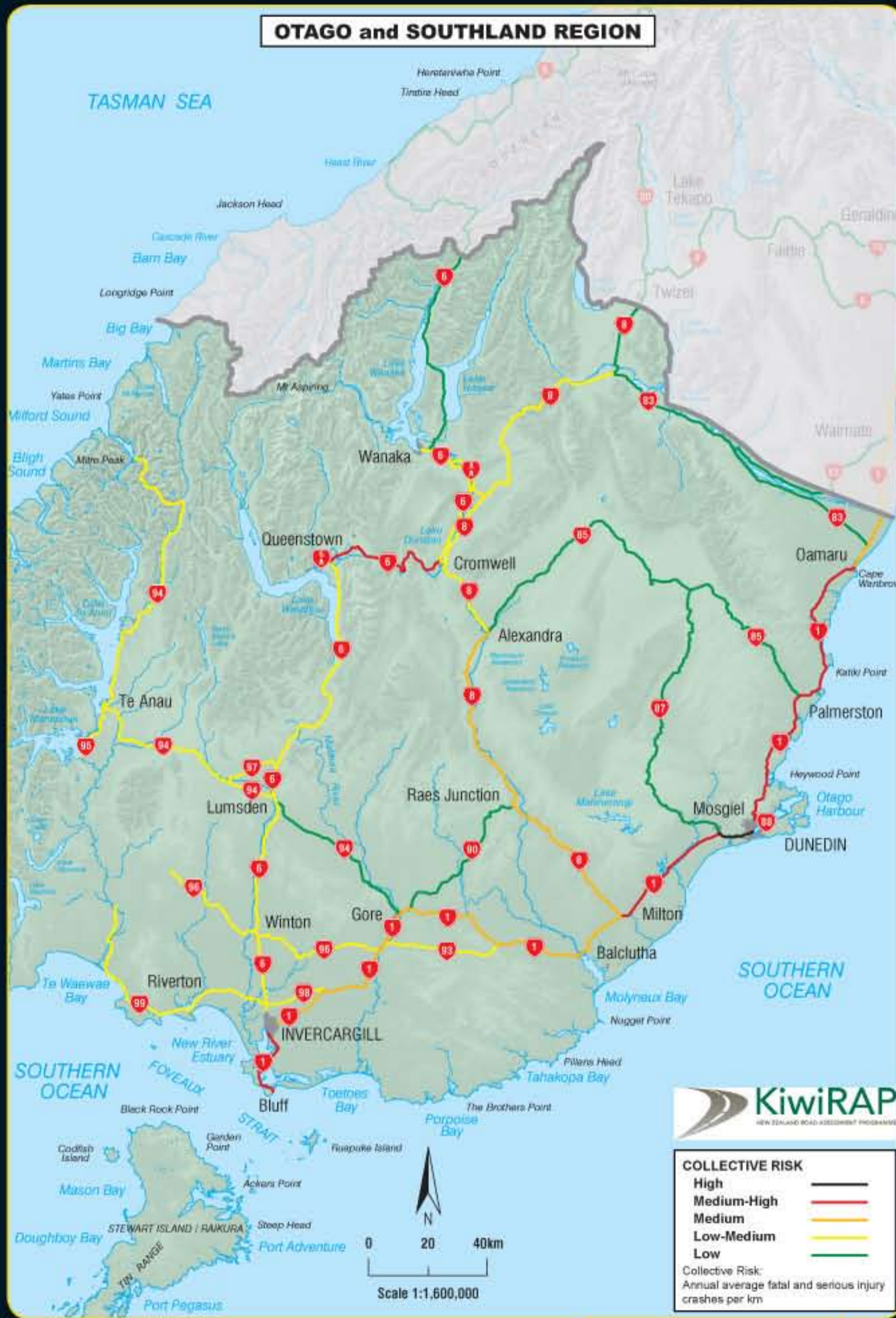
KiwiRAP is a road safety partnership between the Automobile Association and New Zealand's main transport agencies: Transit New Zealand, Ministry of Transport, ACC, Land Transport New Zealand, and New Zealand Police.



# HOW SAFE ARE OUR ROADS?

## Rating New Zealand's State Highways for Risk

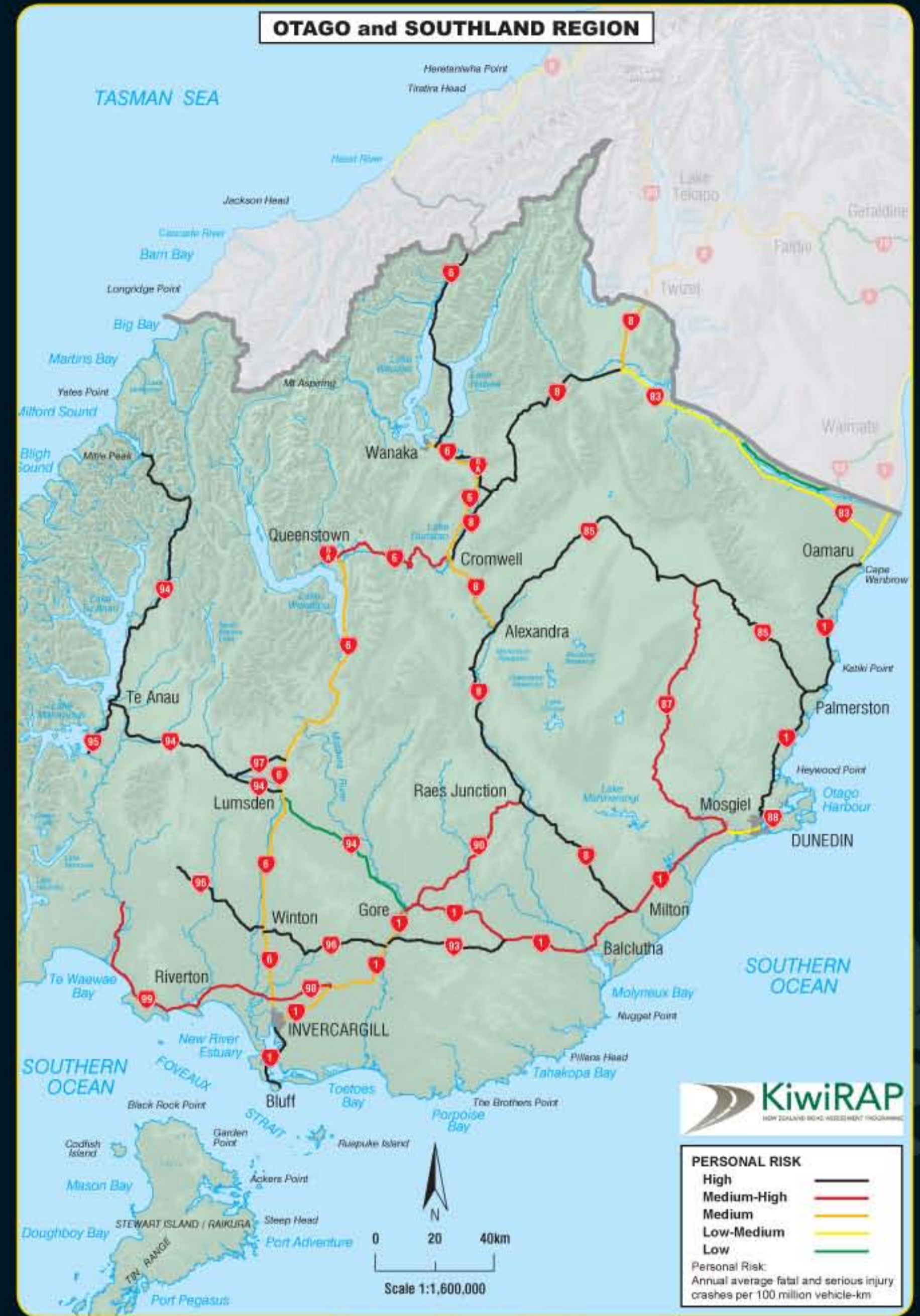




**COLLECTIVE RISK MAP**

Collective Risk	High	Medium-high	Medium	Low-medium	Low
Otago and Southland	1% 20 km	12% 234 km	16% 310 km	44% 834 km	26% 499 km

Percentages may not add to 100% due to rounding



**PERSONAL RISK MAP**

Personal Risk	High	Medium-high	Medium	Low-medium	Low
Otago and Southland	51% 971 km	25% 478 km	17% 322 km	3% 64 km	3% 61 km

Percentages may not add to 100% due to rounding