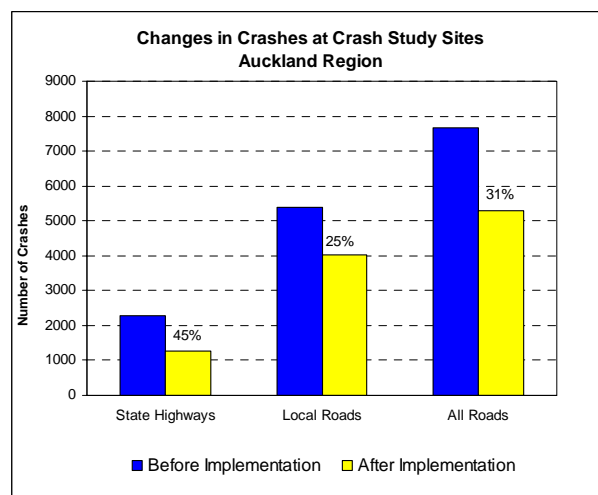
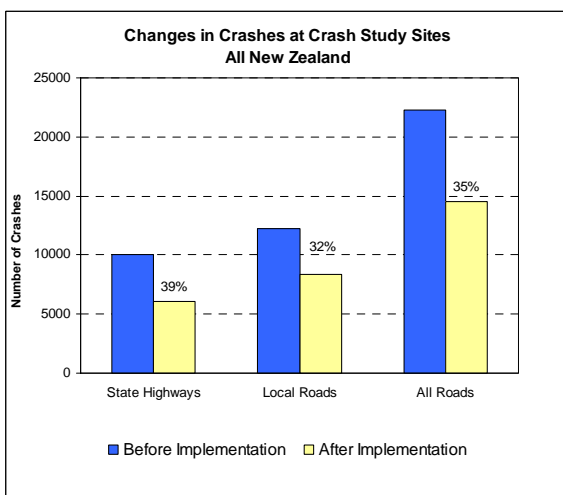
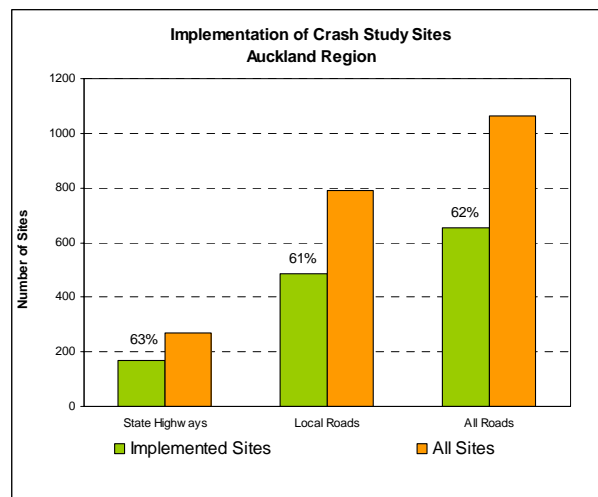
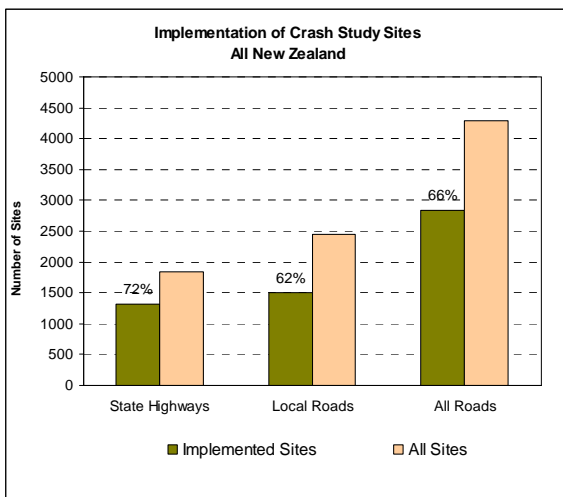


# Appendix D Examples of monitoring output

## Output 1: Road safety reports

The annual road safety reports produced by Land Transport NZ can include information from the monitoring system. This usually comprises information on the implementation status and crash reductions of studies completed in the road controlling authority area. Information on national statistics is also included for comparison purposes.



The above are graphical presentations of the data that is output from the crash analysis system, monitoring summary report shown in output 2 following.

## Output 2: Crash analysis system

The crash analysis system can produce monitoring data. Attached are two examples. Refer to the crash analysis system online help for a full description of these reports.

The first example is a monitoring summary report which summarises the crash reductions achieved at crash reduction study locations that have had all the recommended improvements implemented. It shows the achievements for state highway and local road locations separately. The report summarises locations within each local authority, and also shows the overall effect for the combined authorities.

Local Body	State Highway				Local Road			
	SH Sites	SH Expected After	SH After	SH Reduction	LR Sites	LR Expected After	LR After	LR Reduction
All SITES	1197	10000	6098	39	1310	12272	8394	31.6
Far North District	44	175.9	89	49.4	14	105.1	57	45.7
Whangarei District	56	328.5	149	54.6	42	370.2	198	46.5
Kaipara District	24	99.8	25	74.9	9	54.4	36	33.8
Rodney District	68	1021.2	464	54.6	40	267.8	214	20.1
North Shore City	17	289.5	107	63	49	403.8	233	42.3
Waitakere City	18	191.3	122	36.2	79	1638	1213	25.9
Auckland City	33	494.4	344	30.4	138	1437.3	1221	15.1
Manukau City	24	160.5	138	14	94	1085.7	810	25.4
Papakura District	6	25	24	4.1	12	289	193	33.2
Franklin District	5	86.9	56	35.5	39	266.1	139	47.8
Thames Coromandel District	16	182	125	31.3	4	10.6	8	24.9
Hauraki District	12	156.3	93	40.5	1	3.8	6	-55.9
Waikato District	49	486.4	300	38.3	29	330.7	194	41.3
Matamata-Piako District	9	65	41	37	3	25.6	25	2.5
Hamilton City	10	179.2	125	30.2	42	484	297	38.6
Waipa District	22	219.1	127	42	8	55.8	25	55.2
Otorohanga District	4	19.7	11	44.2	10	16.6	8	51.9
South Waikato District	26	155	66	57.4	16	76.8	30	60.9
Waitomo District	16	55.2	24	56.5	0	0	0	0
Taupo District	27	134.3	48	64.3	22	123.6	71	42.6
Western Bay Plenty District	38	228.9	89	61.1	16	95.3	57	40.2
Tauranga District	14	165.8	99	40.3	33	420.7	274	34.9
Rotorua District	34	434.5	226	48	16	184.1	95	48.4
Whakatane District	16	112.6	79	29.8	12	52.5	22	58.1
Kawerau District	2	8.9	5	43.7	4	16.1	10	37.9
Opotiki District	8	31.3	39	-24.6	0	0	0	0
Gisborne District	18	188.3	117	37.9	16	113.6	89	21.6
Wairoa District	9	119.3	134	-12.4	0	0	0	0
Hastings District	32	320.3	226	29.4	33	452.5	288	40.8
Napier City	12	176	166	5.7	32	309	227	26.5
Central Hawkes Bay District	6	29.8	27	9.5	0	0	0	0
New Plymouth District	43	355.2	231	35	15	94.6	36	61.9
Stratford District	5	46.5	37	20.4	0	0	0	0
South Taranaki District	10	55.7	46	17.5	2	4.6	4	12.6
Ruapehu District	14	82.4	46	44.2	2	10.7	4	62.6
Wanganui District	8	56.7	33	41.8	16	160.1	110	31.3
Rangitikei District	17	112.5	59	47.6	3	49.7	20	59.8
Manawatu District	14	105	39	62.9	4	17	9	46.9
Palmerston North City	8	95.8	88	8.2	0	0	0	0
Tararua District	29	203.6	128	37.1	4	31.1	13	58.1
Horowhenua District	35	354.8	190	46.4	19	134	100	25.4
Kapiti Coast District	25	317.5	201	36.7	35	169.1	94	44.4
Porirua City	17	150.4	95	36.9	53	424.6	242	43
Upper Hutt City	17	238.8	168	29.7	9	62.3	10	84
Lower Hutt City	9	153	185	-20.9	95	1079.6	913	15.4
Wellington City	6	82	80	2.5	26	386.1	204	47.2
Masterton District	9	57	23	59.7	15	51.9	25	51.8
Carterton District	9	85.2	67	21.4	0	0	0	0
South Wairarapa District	7	82.2	80	2.7	0	0	0	0
Tasman District	14	149.7	84	43.9	0	0	0	0
Nelson City	14	250.9	209	16.7	10	157.2	138	12.2
Marlborough District	25	186.1	82	55.9	33	140.8	91	35.4
Kaikoura District	1	3.3	0	100	0	0	0	0
Buller District	3	16.8	7	58.3	0	0	0	0
Grey District	3	14.1	11	22.1	3	11.3	1	91.2
Westland District	4	13.5	9	33.5	2	9.6	3	68.7
Hurunui District	11	48.4	18	62.8	1	4.2	1	76.1
Waimakariri District	8	46.7	23	50.8	14	88.3	27	69.4
Christchurch City	38	259.5	241	7.1	49	211.2	128	39.4
Banks Peninsula District	5	65.5	52	20.6	0	0	0	0
Selwyn District	15	57.8	43	25.6	5	17.3	1	94.2
Ashburton District	12	39.6	29	26.7	12	73.1	70	4.3
Timaru District	16	60.9	34	44.2	15	47.7	21	55.9
Waimate District	4	14.8	2	86.5	1	1.7	2	-17.2
Waitaki District	18	93.6	71	24.2	2	1.8	4	-119.5
Central Otago District	4	14.7	0	100	0	0	0	0
Queenstown-Lakes District	3	8.3	0	100	2	8.9	15	-68.4
Dunedin City	35	247.8	172	30.6	5	21.7	15	31
Clutha District	11	43.5	13	70.1	2	2.6	3	-15.4

The information in the monitoring summary report is exported in a spread sheet format.

The second example is the monitoring site reduction report. This shows the crashes occurring at each crash location in the specified study, separated into the before (study period), during (pre implementation) and after (post implementation) time frames. If the crash location is fully implemented, a before and after crash rate are shown, and the crash reduction calculated from those rates, separately for injury and non injury crashes.

If numbers occur in the same column year, it means the final implementation date occurred part way through a year. The crashes are separated by month as well as year so that they apply to the correct time period. A negative reduction is an increase in crashes.

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The following tables show:

- € crashes in each year since the start of the study
- € the crash total and crash rate for the study period
- € the crash total and crash rate for the fully implemented sites
- € the overall crash reduction rate for the study

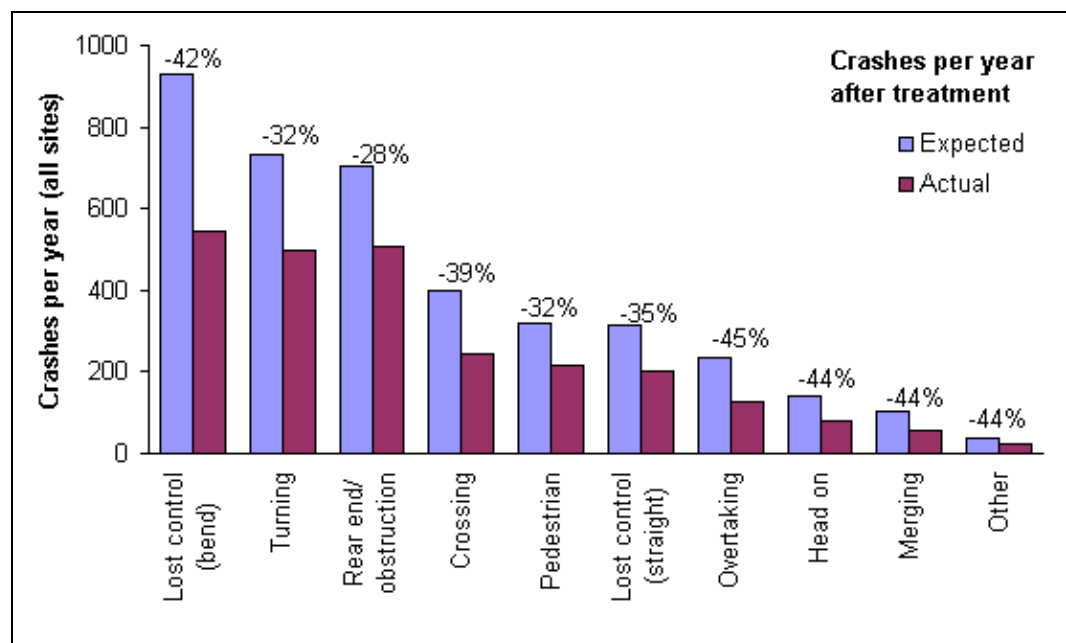
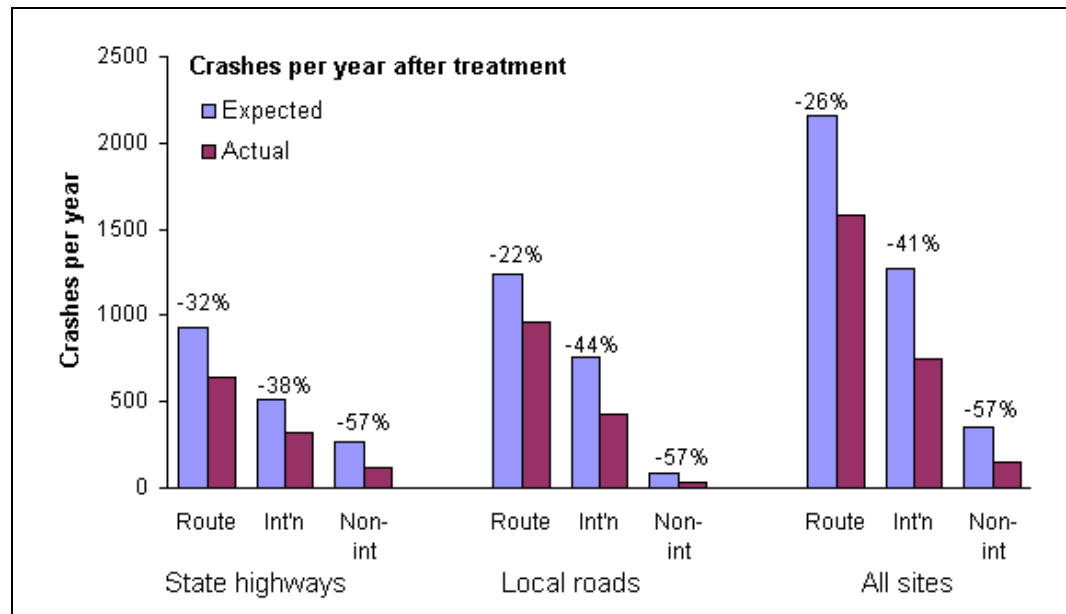
	91	92	93	94	95	96	97	98	99	00	01	02	03	Total	Crash/Yr	Reduction
<b>1 S1 WEYMOUTH/RUSSELL INTER</b>																
Injury Study Period	2	1	1	2	2									8	1.6	
Pre Implementation						2	0	0	1	1	0					
Post Implementation											0	1	2	3	1.16	27.4%
Non-Injury Study Period	4	2	2	3	2									13	2.6	
Pre Implementation						2	2	6	2	6	1					
Post Implementation											3	2	7	12	4.65	-78.8%
<b>2 S2 BROWNS/DALGETY INTER</b>																
Injury Study Period	1	2	0	2	1									6	1.2	
Pre Implementation						0	1	0								
Post Implementation								1	0	1	1	1	0	4	0.7	41.9%
Non-Injury Study Period	1	2	3	2	2									10	2	
Pre Implementation						2	3	0								
Post Implementation								2	6	3	8	5	4	28	4.88	-143.9%
<b>3 S3 RONWOOD/SHARKEY/OSTERLEY INTER</b>																
Injury Study Period	1	2	2	1	2									8	1.6	
Pre Implementation						0	1	2	0	1						
Post Implementation										0	0	0	0	0	0	100%
Non-Injury Study Period	1	8	8	8	4									29	5.8	
Pre Implementation						5	5	7	9	6						
Post Implementation										1	0	1	2	4	1.15	80.2%
<b>4 S4 GTSOUTH/BAIRDS INTER</b>																
Injury Study Period	1	2	0	3	4									10	2	
Pre Implementation						2	1	1	2	1	1	1				
Post Implementation												1	2	3	2.59	-29.3%
Non-Injury Study Period	8	4	9	5	3									29	5.8	
Pre Implementation						8	9	7	6	3	6	4				
Post Implementation												0	5	5	4.31	25.7%

### Output 3: Monitoring system analysis reports

Land Transport NZ carries out analysis of the monitoring system data and produces a series of reports that detail the overall results of the crash reduction study programme and the safety effects of various safety measures. These reports are available from the Land Transport NZ website: <http://www.landtransport.govt.nz>.

#### Examples

##### 1 Overall analysis (all locations)



## 2 Detailed analysis (guard rail locations)

