

SOUTH WAIRARAPA DISTRICT COUNCIL

27 NOVEMBER 2013

AGENDA ITEM C7

SEAL EXTENSION PRIORITY LIST

Purpose of Report

To prioritise those sections of unsealed road network that could be sealed.

Recommendations

Officers recommend that the Community Board:

1. *Receive the information.*
2. *Note this information when considering upcoming Annual Plans and Long Term Plans.*
3. *Identify any specific sections of road for further analysis.*

1. Executive Summary

The Seal Extension Priority system is a process that allows council to rank unsealed roads in an order allowing them to be viewed as in a logical order. This is not an "as of right" process, that is, what the system lists as number one does not mean it will be done, only should council wish to invest in a larger sealed network it would look at this road as the first candidate project.

This was developed as a decision making and management tool for the following purposes:

- To assist the Council in the prioritisation of seal extension requests received each year as part of the Council's Annual Plan process and three yearly in the development of the Council's Long Term Plan (LTP).
- To assist in the development of the Council's Roding Forward Works Programme.
- To assist with the application for funding from NZTA for seal extension works on Special Purpose Roads.
- To assist the Council's Planning Department on making decisions on the taking of Development Contributions for residential developments adjacent to unsealed roads.

Funds to carry out all roads works is funded via a NZTA subsidy to either part or the entire project and comes from the pool of funds allocated to SWDC. In effect use of funds for the sealing of unsealed roads is in

competition with safety improvements and renewal projects as well as emergency works.

Funding of unsealed roads works and seal extensions is covered in the paper on **Seal Extension Funding - 2**.

The first cut of the data has been reviewed and is shown in Appendix 1. This highlights the inconsistency in some of council's data that is currently being reviewed. Any road that is to be considered would have the counts and information rechecked before application of the formula.

The introduction of the "One road classification" hierarchy may also highlight where roads strategically should be sealed. These would be predominantly sections of road classified above "access" class that have unsealed sections. These would be roads such as the Cape Palliser Rd or Tora Rd. Where the benefit of sealing is delivered to the district rather than the adjacent land owners and also fits strategy with the asset management plan and road hierarchy.

Note that Whangaimoana road is seen as an anomaly in the ranking table attached, this table is presented "as the data fell" and has not been manually adjusted.

2. Background

2.1 Introduction

South Wairarapa District has 270km of unsealed roads. Of these, approximately 34 km has an average daily traffic count of 100 or more vehicles.

Unsealed roads have a number of negative impacts relative to sealed roads. These include dust nuisance to neighbouring properties, damage to adjacent crops, reduced driver comfort and increased vehicle maintenance costs, reduced safety, higher number of customer complaints and requests for improvements, and resident expectations.

The cost of sealing is approximately \$18 to \$25/m² (March 2012) or \$81,000 to \$112,000 per km for a typical 4.5m wide unsealed road. Additional to this is the cost of pre-seal preparation, which is usually funded from maintenance and includes improving the drainage and shoulder clearance, and repairing pavement failures. Given the costs and limited funding it is necessary to prioritise which roads are to be sealed taking into account a range of factors to ensure an equitable approach is taken.

The length of road sealed annually will depend on how much money is allocated in the Annual Plan and LTP which may vary from year to year. While financial assistance is available from NZTA under Work Category 325 Seal Extension in practice few seal extension proposals can achieve the benefits required as the default strategic fit for funding assistance is "low".

This process excludes widening of sealed or unsealed roads, which are funded as road reconstruction.

3. Discussion

3.1 Procedure

This process is to primarily determine the priority of roads that could be sealed as seal extensions. The top ranked candidate projects would be then reviewed to ensure the data is correct is selection. The table was the first ever cut of data and running of the algorithm has displayed errors based on issues such as wrong traffic counts.

The top candidates can then be reviewed against other transportation projects such as shoulder widening or renewal works. This will form the forward works program that will be inclusive of all works funded (and unfunded) via NZTA. This will allow extensions to be viewed against all projects competing for funds and compared via a NPV (Net Present Valuation) calculation.

3.2 Setting the Priority

The priority is determined by the number of vehicles using the road based on average daily travelled (ADT). To determine the effect of those vehicles the ADT is modified by factors that reflect the impact of those vehicles on factors considered relevant to the community.

The factors are

- F1 Intensive Seasonal Use eg tourist route, lot of vehicles in summer
- F2 Heavy Vehicles eg going to a factory or production facility
- F3 Strategic Route eg connects to other roads and traffic will increase when sealed
- F4 Community Services eg community hall located on road or extensively used by school bus
- F5 Dust Nuisance eg houses or sensitive crops close to the road

The default value of each factor is 1 ie the priority is based solely on ADT when there are no factors involved. Where a factor is significant its value is increased to 1.1 to 1.3 increasing the effective ADT and therefore the priority.

Priority Rating = ADT x F1 x F2 x F3 x F4 x F5

The sections below describe how to score the factors high, medium, low or not applicable. The spread sheet has all factors set at 1.

Assessment of the factors is based on knowledge of the area and is subjective. The intention is that the table will be populated based on a desk/ google earth/GWRC GIS study and then progressively refined as it is reviewed by SWDC staff and residents.

3.2.1. F1 Intensive Seasonal Use.

Higher traffic volumes occur over periods of the year that are not reflected in the ADT eg. harvesting, tourism, going to the beach or to hike in the

hills. This can be assessed intuitively by identifying where people go for recreation eg. access race track meeting or beach via a gravel road.

Factor	Score	F1
>100% increase in ADT for one month/year	High	1.3
>60% increase in ADT for one month/year	Medium	1.2
>30% increase in ADT for one month/year	Low	1.1
<30% increase in ADT for one month/year	Not applicable	1

3.2.2. F2 Heavy Vehicles

Particular land uses and commercial activities may result in a higher percentage of heavy vehicles using the road. Heavy vehicles result in more damage to the road pavements. The default percentage of heavy vehicles is 10% of ADT. This can be assessed by identifying where industries are located.

Factor	Score	F1
Heavy vehicles are >25% of ADT	High	1.3
Heavy vehicles are >20% of ADT	Medium	1.2
Heavy vehicles are >15% of ADT	Low	1.1
Heavy vehicles are <15% of ADT	Not applicable	1

3.2.3. F3 Strategic Route

Through routes when sealed, become a viable alternative route with a significant increase in traffic volumes as they provide a preferred route. This does not apply to cul-de-sacs and only applies where the sealing of a route will provide a better route that drivers might use. It must connect to somewhere and be an alternative.

Factor	Score	F1
>50% increase in ADT after sealing	High	1.3
>30% increase in ADT after sealing	Medium	1.2
<30% increase in ADT after sealing	Not Applicable	1

3.2.4. F4 Community Services

Community services such as school bus routes, community halls or other facilities may be located on an unsealed road. These services will benefit from having the road sealed either in full or where the facilities are located.

Factor	Score	F1
Daily use of facility	Medium	1.2

3.2.5. F5 Dust Nuisance

Many of the complaints about unsealed roads relate to the dust nuisance at houses located adjacent to the road and or damage to horticultural crops.

Factor	Score	F1
High sensitive crops located within 10m of roadside	High	1.3
10 occupied houses or workplaces/km within 100m of roadside	High	1.3
5 houses or workplaces/km within 100m of roadside	Medium	1.2
3 houses or workplaces/km within 100m of roadside	Low	1.1

3.3 Consultation

The initial formula has been developed with Spiire Consulting and discussed among peering in local government. There are various formulas that looks at the prioritisation of candidate projects used nationally and internationally and this is seen as best fit for SWDC.

There has been no public consultation on the prioritisation of seal extensions over the past 4 years.

4. Appendices

Appendix 1 – First draft of the Seal Extension Hierarchy

Contact Officer: Mark Allingham, Group Manager Infrastructure and Services

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Appendix 1 – First draft of the Seal Extension Hierarchy

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Locality Name	F1 Seasonal Use	F2 Heavy Vehicles	F3 Strategic Route	F4 Community Services	F5 Dust Nuisance	Priority Rating	Start	Start Name	End	End Name	Area	Length	Width	U/R	Count Date	Count Status	ADT	% heavy
Whangaimoana Beach Rd [286]	1.3	1	1	1	1	601	299	END SEAL	599	SEAL START	TURANGANUI	300	4	Rural	1/01/1994	Estimate	462	
Underhill Rd [128]	1	1	1	1	1	470	0	GREYTOWN WOODSIDE RD	3126	COW SHED FN 2366	GREYTOWN	3123	4.4	Rural	14/05/2008	Count	427	10
Cross Creek Rd [161]	1	1	1	1	1	412	0	WESTERN LAKE ROAD	1035	GATE PRIVATE PROPERTY	WESTERN LAKE	1032	3.5	Rural	23/11/1995	Estimate	412	10
Tora Rd [229]	1.3	1	1	1	1	230	4684	END OF SEAL	13039	START OF SEAL	AWHEA	8355	5	Rural	20/11/2012	Count	177	8.7
Cape Palliser Rd [203]	1.3	1	1	1	1	195	30578	END OF SEAL	30695	50 KPH SIGN	TURANGANUI	117	7.3	Rural	14/12/2012	Count	150	3.9
Cape Palliser Rd [203]	1.3	1	1	1	1	195	30695	50 KPH SIGN	30741	START SEAL	TURANGANUI	46	6	Rural	14/12/2012	Estimate	150	3.9
Cape Palliser Rd [203]	1.3	1	1	1	1	195	31204	END OF SEAL	31275	50/100 KPH SIGN	TURANGANUI	71	6	Rural	14/12/2012	Estimate	150	3.9
Cape Palliser Rd [203]	1.3	1	1	1	1	195	31275	50/100 KPH SIGN	34364	START OF SEAL	TURANGANUI	3089	5.4	Rural	14/12/2012	Estimate	150	3.9
Whakatomotomo Rd [206]	1	1	1	1	1.1	179	0	LAKE FERRY ROAD	1644	TE RATA RD	TURANGANUI	1640	4.7	Rural	3/06/2009	Count	163	10
Greytown-Woodside Rd [257]	1	1	1	1.2	1	178	3725	END OF SEAL	4074	UNDER HILL RD	GREYTOWN	349	6.9	Rural	11/07/2012	Count	148	2.7
Lake Ferry Rd [202]	1	1	1	1.2	1	162	33611	END OF SEAL	33975	BEACH CAR PARK	TURANGANUI	364	5.3	Rural	12/12/2012	Estimate	135	1.5
Humphries St [13]	1	1	1	1	1	150	1326	END OF SEAL	1518	WILKIE ST	GREYTOWN	192	3.8	Rural	1/01/1994	Estimate	150	10
Whakatomotomo Rd [206]	1	1	1	1	1.1	136	1644	TE RATA RD	5969	FN 2675	TURANGANUI	4325	4.2	Rural	1/01/1994	Estimate	124	10
Whakatomotomo Rd [206]	1	1	1	1	1.1	136	5969	FN 2675	7221	GATE	TURANGANUI	1252	3.2	Rural	1/01/1994	Estimate	124	10
Ruakokoputuna Rd [189]	1	1	1	1	1	112	36	END SEAL	2960	START OF SEAL	OTARIA	2921	5.2	Rural	16/11/1995	Estimate	112	10
Waiohine Rd [132]	1	1	1	1	1.2	110	0	GREYTOWN-WOODSIDE RD	3487	GATE FN 2369	GREYTOWN	3483	4.2	Rural	23/09/2009	Count	92	10
Tora Rd [229]	1.3	1	1	1	1	107	4146	END OF SEAL	4512	START OF SEAL	AWHEA	366	5	Rural	20/11/2012	Count	82	4.4
Glenmorven Rd [133]	1	1	1	1	1.1	105	68	END OF SEAL	2226	END LAST HOUSE	GREYTOWN	2158	5.6	Rural	27/07/2012	Count	87	16.5
Warrens Rd [209]	1	1	1	1	1.3	96	0	LAKE FERRY ROAD	369	CATTLESTOP	TURANGANUI	365	4	Rural	10/06/2009	Count	74	10
Cape Palliser Rd [203]	1.3	1	1	1	1	95	34847	END OF SEAL	37684	GATE POSTS	TURANGANUI	2837	4	Rural	30/04/2000	Estimate	73	10
Kuratawhiti St [16]	1	1	1	1.2	1	90	2112	END OF SEAL	2994	END OF ROAD	GREYTOWN	882	4.7	Rural	27/07/2012	Count	75	0
Haurangi No. 1 Rd [187]	1.1	1	1	1.2	1	88	0	BLUE ROCK RD	1691	START OF SEAL	OTARIA	1691	4.6	Rural	24/06/2009	Count	51	10
Glenmorven Rd [133]	1	1	1	1	1	87	2226	LAST HOUSE	2826	END	GREYTOWN	600	5.6	Rural	27/07/2012	Estimate	87	10
Te Awaiti Rd [231]	1.3	1	1	1	1.3	85	2355	CATTLESTOP	6984	GATE PAST BRIDGE	AWHEA	4629	4.2	Rural	1/01/1994	Estimate	50	10
Parera Rd [181]	1	1.3	1	1	1.1	83	0	KAHUTARA RD	8129	ROAD ENDS AT GATE	KAHUTARA	8126	7	Rural	12/05/2012	Count	58	32.8
Georges Rd [175]	1	1	1	1	1.1	83	0	STATE HIGHWAY 53	1886	GATE ACROSS RD	KAHUTARA	1883	4.6	Rural	23/08/2012	Count	75	14
Western Lake Rd [259]	1.1	1	1	1	1	83	39874	END SEAL	40420	START SEAL	WESTERN LAKE	546	4.3	Rural	14/03/2012	Count(37900)	75	0
Ruakokoputuna Rd [189]	1	1	1	1	1.3	81	4939	END OF SEAL	5263	BLUE ROCK RD	OTARIA	322	5.5	Rural	5/06/2001	Estimate	62	10
Western Bay Rd [167]	1	1	1	1	1	75	0	WHAREKAUHAU RD	3418	RIMUTAKA FOREST PARK SIGN	WESTERN LAKE	3416	3.5	Rural	1/01/1994	Estimate	75	10
Moeraki Rd [237]	1	1	1	1	1.2	72	3096	END OF SEAL	6092	NGAKONUUI 2ND ABUT	PAHAOA	2996	3.7	Rural	1/01/1994	Estimate	60	10

Tora Farm Sett Rd [230]	1.1	1	1	1	1.1	71	56	END OF SEAL	4401	GATE FN 2785	AWHEA	4343	4.2	Rural	9/12/1998	Estimate	59	10
Te Hopai Rd [183]	1	1	1	1	1.2	68	0	EAST WEST ACCESS RD EAST	2432	PUMP SHED	KAHUTARA	2429	5	Rural	23/04/2012	Count	57	5.9
Phillips Line [155]	1	1	1	1	1.2	67	0	BATTERSEA RD	2377	PHARAZYN RD	GREYTOWN	2375	4.3	Rural	17/01/1996	Estimate	56	10
Longwood Rd West [141]	1	1	1	1	1.1	65	0	MURPHYS LINE	425	BURTS RD	FEATHERSTON	423	5	Rural	2/12/1996	Estimate	59	10
Kumenga Rd [184]	1	1.1	1	1	1.2	65	0	EAST WEST ACCESS RD EAST	1605	CATTLESTOP FN 2330	KAHUTARA	1602	4.8	Rural	2/05/2012	Count	49	14.6
Yeronga Rd [208]	1	1	1	1	1	64	0	LAKE FERRY ROAD	840	HUMES ROAD	TURANGANUI	837	4.5	Rural	27/05/2009	Count	64	10
Hinakura Rd [263]	1	1	1	1	1	62	21814	END OF SEAL	23274	START OF SEAL	MARTINBOROUGH	1460	5.1	Rural	13/09/1995	Estimate	62	10
Hecklers Rd [127]	1	1	1	1	1.2	60	0	PAPAWAI RD	380	BENMAR FARM (GATE)	GREYTOWN	373	3.1	Rural	1/01/1994	Estimate	50	10
Bush Gully Rd [233]	1	1	1	1	1	60	1546	END OF SEAL	2909	START OF SEAL	PAHAOA	1363	5.4	Rural	7/11/2012	Count	60	4.7
Moiki Rd [253]	1	1	1	1	1.1	55	962	END SEAL	1220	START SEAL	MARTINBOROUGH	258	3.5	Rural	1/01/1994	Estimate	50	10
Te Rata Rd [207]	1	1	1	1	1	52	0	WHAKTOMOTOMO RD	1346	CATTLESTOP	TURANGANUI	1344	5	Rural	17/06/2009	Count	52	10
Phillips Line [155]	1	1	1	1	1	52	2377	PHARAZYN RD	3149	DUDDINGS LINE	GREYTOWN	772	4.5	Rural	8/06/2012	Count	52	1.9
Fenwicks Line [255]	1.1	1.2	1	1	1.1	51	45	END OF SEAL	3056	PHILLIPS LINE	GREYTOWN	3011	5.8	Rural	27/07/2012	Count	35	9.7
Boar Bush Gully Rd [136]	1	1	1	1	1	50	223	CATTLESTOP END OF SEAL	321	GATE/CATTLESTOP	FEATHERSTON	98	3	Rural	1/01/1994	Estimate	50	10
Massey St [20]	1	1	1	1	1	50	191	MCMASTER	272	GATE	GREYTOWN	81	4	Urban	1/12/2000	Estimate	50	6
White Rock Rd [265]	1.3	1	1	1	1	49	45491	CATTLESTOP	47631	START OF SEAL	AWHEA	2140	4	Rural	17/04/2002	Estimate	38	10
White Rock Rd [265]	1.3	1	1	1	1	49	47916	CATTLESTOP WHITE ROCK STN	50645	CATTLESTOP	AWHEA	2729	4	Rural	17/04/2002	Estimate	38	10
White Rock Rd [265]	1.3	1	1	1	1	49	50645	CATTLESTOP	53998	START OF SEAL	AWHEA	3353	3.8	Rural	17/04/2002	Estimate	38	10
Pukio West Rd [169]	1	1	1	1.2	1	49	238	END OF SEAL	2630	START OF SEAL	KAHUTARA	2392	4.9	Rural	11/05/2012	Count	41	7.2
Tauherenikau Div. Rd [182]	1	1	1	1	1	49	53	END SEAL	2874	GATE FN 2232	KAHUTARA	2817	4.6	Rural	17/09/2008	Count	49	10
Phillips Line [155]	1	1.1	1	1	1.2	49	3149	DUDDINGS LINE	4829	START OF SEAL	GREYTOWN	1680	4.7	Rural	8/06/2012	Count	37	4.9
Pouawha Rd [213]	1	1	1	1	1.2	48	1003	END OF SEAL	4245	GATE COW SHED	TURANGANUI	3242	4.3	Rural	1/01/1994	Estimate	40	10
Yeronga Rd [208]	1	1	1	1	1.2	48	840	HUMES ROAD	2905	CATTLESTOP	TURANGANUI	2065	4.8	Rural	1/01/1994	Estimate	40	10
Raho Ruru Rd [212]	1	1	1	1	1.1	47	0	MARTINBOROUGH-PIRINOA RD	2175	GATE	TURANGANUI	2171	3.9	Rural	3/06/2009	Count	43	10
Moiki Rd [253]	1	1	1	1	1.1	47	468	END SEAL	834	START SEAL	MARTINBOROUGH	366	3.5	Rural	23/08/2012	Count	43	8.4
Duddings Line [154]	1	1	1	1	1	46	39	END SEAL	1620	PHILLIPS LINE	GREYTOWN	1576	4.9	Rural	4/10/2012	Count	46	14
Wilkie St [131]	1	1	1	1	1	46	17	END SEAL	383	START SEAL	GREYTOWN	366	4.5	Rural	19/07/2012	Count	46	10.8
Haurangi No. 2 Rd [188]	1	1	1	1	1	45	0	CLAY CREEK RD	3092	CATTLESTOP	OTARIA	3092	3.5	Rural	1/01/1994	Estimate	45	10
Haurangi No. 2 Rd [188]	1	1	1	1	1	45	3092	CATTLESTOP	4860	CATTLESTOP	OTARIA	1768	3.5	Rural	1/01/1994	Estimate	45	10
Haurangi No. 2 Rd [188]	1	1	1	1	1	45	4860	CATTLESTOP	7039	CATTLESTOP	OTARIA	2179	3.5	Rural	1/01/1994	Estimate	45	10
Haurangi No. 2 Rd [188]	1	1	1	1	1	45	7039	CATTLESTOP	9506	GATE	OTARIA	2467	3.5	Rural	1/01/1994	Estimate	45	10
Haurangi No. 2 Rd [188]	1	1	1	1	1	45	9506	GATE	11530	CATTLESTOP	OTARIA	2024	3.5	Rural	1/01/1994	Estimate	45	10
Haurangi No. 2 Rd [188]	1	1	1	1	1	45	11530	CATTLESTOP	12100	WAIKUKU LODGE ENT FN 2824	OTARIA	570	3.5	Rural	1/01/1994	Estimate	45	10
Te Muna Rd [247]	1.1	1	1	1	1.3	44	2851	SEAL END	6584	SEAL START	MARTINBOROUGH	3733	5	Rural	23/10/2012	Count	31	0
White Rock Rd [265]	1.3	1	1	1	1	44	30019	END OF SEAL	32666	CATTLESTOP	AWHEA	2647	4.6	Rural	20/11/2012	Count	34	4.3
White Rock Rd [265]	1.3	1	1	1	1	44	32666	CATTLESTOP	33804	CATTLESTOP	AWHEA	1138	3.2	Rural	20/11/2012	Estimate	34	4.3
White Rock Rd [265]	1.3	1	1	1	1	44	33804	CATTLESTOP	37476	CATTLESTOP	AWHEA	3672	3.5	Rural	20/11/2012	Estimate	34	4.3
White Rock Rd [265]	1.3	1	1	1	1	44	37476	CATTLESTOP	38565	CAPE RIVER RD	AWHEA	1089	3.5	Rural	20/11/2012	Estimate	34	4.3

White Rock Rd [265]	1.3	1	1	1	1	44	38565	CAPE RIVER RD	39591	CATTLESTOP RIVERSDALE STN	AWHEA	1026	4	Rural	20/11/2012	Estimate	34	4.3
White Rock Rd [265]	1.3	1	1	1	1	44	39591	CATTLESTOP RIVERSDALE STN	42375	CATTLESTOP	AWHEA	2784	4.7	Rural	20/11/2012	Estimate	34	4.3
White Rock Rd [265]	1.3	1	1	1	1	44	42375	CATTLESTOP	44289	CATTLESTOP/START OF SEAL	AWHEA	1914	4	Rural	20/11/2012	Estimate	34	4.3
White Rock Rd [265]	1.3	1	1	1	1	44	44851	END OF SEAL	45491	CATTLESTOP	AWHEA	640	4	Rural	20/11/2012	Estimate	34	4.3
Wharekauhau Rd [166]	1.3	1	1	1	1.1	41	0	WESTERN LAKE RD	946	CATTLESTOP	WESTERN LAKE	946	3.2	Rural	2/09/2009	Count	29	10
Wairio Rd [186]	1	1	1	1	1	41	0	KAHUTARA RD	3002	ROAD ENDS AT GATE	KAHUTARA	2998	7	Rural	2/05/2012	Count	41	4.9
Pouawha Rd [213]	1	1	1	1	1	40	66	END SEAL	838	START OF SEAL	TURANGANUI	769	4.2	Rural	1/01/1994	Estimate	40	
Pahaoa Rd [235]	1.3	1	1	1	1	39	12370	GLENDHU RD	14564	CATTLESTOP GATE	PAHAOA	2194	3.8	Rural	1/01/1994	Estimate	30	10
Blue Rock Rd [191]	1	1	1	1	1.3	36	0	FN 2804	5134	RUAKOKOPUTUNA RD	OTARIA	5131	4.5	Rural	29/04/2001	Estimate	28	10
Pahaoa Rd [235]	1.3	1	1	1	1	35	486	END OF SEAL	12370	GLENDHU RD	PAHAOA	11884	4.5	Rural	7/11/2012	Count	27	0
Wainuioru Rd [240]	1	1	1	1	1	35	0	SUMMERHILL RD	4424	DISTRICT BOUNDARY	PAHAOA	4421	3	Rural	1/01/1994	Estimate	35	10
Whareroto Rd [170]	1	1	1	1	1.1	32	0	KAHUTARA RD	1884	GATE FN 2314B	KAHUTARA	1881	4.6	Rural	2/05/2012	Count	29	0
Mcivors Rd [146]	1	1	1	1	1	31	0	MURPHYS LINE	204	LAST POWER POLE	FEATHERSTON	202	2.8	Rural	7/11/2012	Count	31	0
Moeraki Rd [237]	1	1	1	1	1	31	86	END OF SEAL	2848	SEAL JOIN	PAHAOA	2762	3.6	Rural	7/11/2012	Count	31	0
Beach Rd [165]	1	1	1	1	1	30	0	WESTERN LAKE NO. 2 RD	1485	BEACH	WESTERN LAKE	1485	3	Rural	1/01/1994	Estimate	30	10
Kaiwaka Rd [224]	1	1	1	1	1	30	59	END OF SEAL	4210	FN 2762/FN 2763	AWHEA	4151	3.7	Rural	1/01/1994	Estimate	30	10
Range Rd [226]	1	1	1	1	1	30	210	END OF SEAL	4611	CATTLESTOP	AWHEA	4401	3.8	Rural	1/01/1994	Estimate	30	10
Underhill Rd (Extension @ Wakefield [73])	1	1	1	1	1	30	2530	END OF SEAL	2994	ALGIES RD	FEATHERSTON	464	4.5	Rural	1/01/1994	Estimate	30	10
Underhill Rd (Extension @ Wakefield [73])	1	1	1	1	1	30	2994	ALGIES RD	3998	BUCKS RD	FEATHERSTON	1004	4.5	Rural	1/01/1994	Estimate	30	10
Hupenui Rd [134]	1	1	1	1	1	30	183	END OF SEAL	221	CATTLESTOP	GREYTOWN	38	9.5	Rural	11/07/2012	Estimate	30	5.4
Pukio East Rd [198]	1	1	1	1	1	30	0	LAKE FERRY ROAD	1520	HOUSE ENTRANCE	OTARIA	1517	3.9	Rural	10/09/2012	Count	30	2.5
Shooting Butts Rd [249]	1	1	1	1	1	29	401	END SEAL	3006	WHITE ROCK ROAD	MARTINBOROUGH	2605	3.5	Rural	12/10/2012	Count	29	0
Whakarua Rd [242]	1	1.1	1	1	1.2	28	75	END OF SEAL	3854	GATE	PAHAOA	3779	4.3	Rural	16/11/2012	Count	21	0
Bucks Rd [147]	1	1	1	1	1.1	28	0	UNDERHILL RD	2315	CATTLESTOP FOREST PARK	FEATHERSTON	2313	3.6	Rural	1/01/1994	Estimate	25	10
Ngapotiki Rd [223]	1.3	1	1	1	1	26	90	END OF SEAL	2331	GATE NGAPOTIKI STATION	AWHEA	2241	3.5	Rural	1/01/1994	Estimate	20	10
Hikawera Rd [241]	1	1	1	1	1	25	0	HINAKURA RD	2106	GATE	PAHAOA	2104	3.5	Rural	22/04/2009	Count	25	10
Papatahi Rd [160]	1	1	1	1	1.2	24	0	EAST WEST ACCESS RD WEST	627	GATE	WESTERN LAKE	623	4.5	Rural	1/01/1994	Estimate	20	10
Bartons Rd [163]	1	1	1	1	1.1	22	0	WESTERN LAKE ROAD	237	GATE	WESTERN LAKE	227	3.4	Rural	1/01/1994	Estimate	20	10
Humes Rd [211]	1	1	1	1	1.1	22	0	YERONGA RD	1001	CATTLESTOP GATE	TURANGANUI	995	3.3	Rural	1/01/1994	Estimate	20	10
Longwood Rd West [141]	1	1	1	1	1.1	22	425	BURTS RD	2182	VILES RD	FEATHERSTON	1752	4.1	Rural	1/01/1994	Estimate	20	10
Judds Rd [177]	1	1	1	1	1	22	0	KAHUTARA RD	2028	GATE BOGGY CREEK	KAHUTARA	2025	4	Rural	11/05/2012	Count	22	0
Cannock Rd [243]	1	1	1	1	1	21	61	END OF SEAL	3261	START SEAL	PAHAOA	3200	3.7	Rural	16/11/2012	Count	21	3.7
Cannock Rd [243]	1	1	1	1	1	20	3481	END SEAL	3767	START SEAL	PAHAOA	286	3.7	Rural	1/12/2000	Estimate	20	10
Backwater Rd [176]	1	1	1	1	1	20	0	STATE HIGHWAY 53	1830	GATE ACROSS RD ALPINE...	KAHUTARA	1825	4.5	Rural	1/01/1994	Estimate	20	10
Buicks Rd [171]	1	1	1	1	1	20	215	END OF SEAL	1081	GATE FN 2291	KAHUTARA	866	4.5	Rural	1/01/1994	Estimate	20	10
Cape River Rd [225]	1	1	1	1	1	20	2505	1ST ABUT	4725	GATE	AWHEA	2220	3.4	Rural	1/01/1994	Estimate	20	10
Pharazyns Rd [156]	1	1	1	1	1	20	0	PHILLIPS LINE	2336	GATE	GREYTOWN	2334	4	Rural	1/01/1994	Estimate	20	10
Riverside Rd [244]	1	1	1	1	1	20	0	PONATAHI RD	4297	CATTLESTOP	MARTINBOROUGH	4294	3.6	Rural	31/08/2012	Count	20	5

									STATION BUSH	GH								
Kemptons Line [123]	1	1	1	1	1	20	1556	END OF SEAL	2562	START OF SEAL	GREYTOWN	1006	5	Rural	25/06/2012	Estimate	20	2
Te Rata Rd [207]	1	1	1	1	1	19	1346	CATTLESTOP	2394	PICKET GATE FN 2678	TURANGANUI	1048	2.9	Rural	1/01/1994	Estimate	19	10
Chrishams Rd [199]	1	1	1	1	1	18	0	LAKE FERRY ROAD	907	GATE	OTARIA	904	3.7	Rural	10/09/2012	Count	18	8.7
Maramamau Rd [180]	1	1	1	1	1	17	0	KAHUTARA RD	1084	GATE FN 2250	KAHUTARA	1081	4.5	Rural	4/10/2012	Count	17	3
Mahaki Rd [197]	1	1	1	1	1	17	0	LAKE FERRY ROAD	3391	GATE	OTARIA	3388	4.1	Rural	20/09/2012	Count	17	0
Underhill Rd (Extension @ Wakefield [73]	1	1	1	1	1.1	17	3998	BUCKS RD	4757	GATE AT RIVER	FEATHERSTON	759	3.6	Rural	15/08/2012	Count	15	0
Lagoon Hill Rd [228]	1	1	1	1	1	16	0	WHITE ROCK NO. 2 RD	901	CATTLESTOP	AWHEA	895	3.8	Rural	9/07/2009	Count	16	10
Haurangi No. 1 Rd [187]	1	1	1	1	1	15	1986	END OF SEAL	2759	START OF SEAL	OTARIA	773	4.4	Rural	1/01/1994	Estimate	15	10
Haurangi No. 1 Rd [187]	1	1	1	1	1	15	2851	END OF SEAL	3193	CLAY CREEK RD	OTARIA	342	3.8	Rural	1/01/1994	Estimate	15	10
Summerhill Rd [239]	1	1	1	1	1	15	0	WAINUIORU RD	3107	CATTLESTOP	PAHAOA	3105	3	Rural	1/01/1994	Estimate	15	10
Hikunui Rd [172]	1	1	1	1	1	15	1067	END SEAL	3012	END	KAHUTARA	1941	4.1	Rural	11/05/2012	Estimate	15	5.6
Clarks Rd [200]	1	1	1	1	1	13	0	KAHUTARA RD	983	TANK	TURANGANUI	980	4.1	Rural	8/06/2012	Count	13	9.1
Cape River Rd [225]	1	1	1	1	1	12	0	WHITE ROCK NO. 3 RD	2505	1ST ABUT	AWHEA	2500	3.2	Rural	9/07/2009	Count	12	10
Paruwai Rd [227]	1	1	1	1	1	11	0	CATTLESTOP RANGE RD	2110	PARUWAI RD STH LHS	AWHEA	2110	3.5	Rural	2/07/2009	Count	11	10
Western Lake Rd [259]	1.1	1	1	1	1	11	40802	END OF SEAL	40907	WHAREKAUHAU RD	WESTERN LAKE	105	4	Rural	1/01/1994	Estimate	10	10
Clay Creek Rd [190]	1	1	1	1	1	11	0	HAURANGI NO. 1 RD	1400	CATTLESTOP FN 2820	OTARIA	1398	3.3	Rural	28/09/2012	Count	11	8.3
Dry River No. 2 Rd [193]	1	1	1	1	1	11	0	LIME WORKS ENT LHS	1592	FN 2804	OTARIA	1592	5	Rural	20/09/2012	Count	11	0
Bicknells Rd [178]	1	1	1	1	1	10	0	KAHUTARA RD	915	GATEWAY OLD COW SHED	KAHUTARA	911	3.3	Rural	1/01/1994	Estimate	10	10
Bidwills Rd [174]	1	1	1	1	1	10	0	KAHUTARA RD	424	GATE	KAHUTARA	420	2.8	Rural	1/01/1994	Estimate	10	10
Paruwai Rd [227]	1	1	1	1	1	10	2110	PARUWAI RD STH LHS	2849	GATE (WHITE HOUSE)	AWHEA	739	3.1	Rural	1/01/1994	Estimate	10	10
Tilsons Rd [121]	1	1	1	1	1	10	0	PAPAWAI/PAH RD	1945	GATE LAST HOUSE	GREYTOWN	1943	3.9	Rural	1/01/1994	Estimate	10	10
Algies Rd [151]	1	1	1	1	1	10	0	UNDERHILL RD	731	RAILWAY GATE	FEATHERSTON	729	3.3	Rural	25/12/2010	Estimate	10	0
Oystershell Rd [248]	1	1	1	1	1	8	0	HINAKURA ROAD	326	2ND ABUT	MARTINBOROUGH	323	3	Rural	6/05/2009	Count	8	10
Cundys Rd [164]	1	1	1	1	1	8	0	FEATHERSTON-CROSS CREEK	569	ROAD ENDS	WESTERN LAKE	567	2.8	Rural	9/08/2012	Count	8	0
Glendhu Rd [236]	1.3	1	1	1	1.2	8	0	PAHAOA RD	447	GLENDHU STATION GATE	PAHAOA	443	4.1	Rural	1/01/1994	Estimate	5	10
Glendryneoch Rd [234]	1	1	1	1	1	6	0	PAHAOA RD	1545	LAST HOUSE FN 2877	PAHAOA	1541	3.4	Rural	7/11/2012	Count	6	0
Glendryneoch Rd [234]	1	1	1	1	1	6	1545	LAST HOUSE FN 2877	2304	CATTLE YARDS GATE	PAHAOA	759	3.4	Rural	7/11/2012	Estimate	6	0
Birch Hill Rd [232]	1	1	1	1	1.1	6	0	WHITE ROCK NO. 1 RD	284	2ND BRIDGE ABUT	AWHEA	281	2.8	Rural	1/01/1994	Estimate	5	10
Ngakonui Rd [238]	1.3	1	1	1	1	4	0	1ST ABUT NGAKONUI BRIDGE	4419	SUMMER HILL RD	PAHAOA	4413	3.4	Rural	7/11/2012	Count	3	0
Greens Rd [149]	1	1	1	1	1.1	1	0	STATE HIGHWAY 2	229	FN 2009	FEATHERSTON	225	2.6	Rural	1/01/1994	Estimate	1	10
Hodders Rd [144]	1	1	1	1	1	1	0	MURPHYS LINE	400	HOUSE ENT	FEATHERSTON	398	3.7	Rural	1/01/1994	Estimate	1	10
Ahikouka Rd [126]	1	1	1	1	1	0	1138	END OF SEAL	1469	GATE FN 2426	GREYTOWN	331	3.5	Rural				
Backwater Road East Leg [313]	1	1	1	1	1	0	0	BACKWATER RD	515	END	KAHUTARA	515	3.8	Rural				
Boar Bush Gully Rd [136]	1	1	1	1	1.1	0	321	GATE/CATTLESTOP	954	PADLOCKED GATE	FEATHERSTON	633	4	Rural				
Cannock Rd [243]	1	1	1	1	1	0	4150	END SEAL	5352	GATE	PAHAOA	1202	3.7	Rural				
Cape River Rd (Sth Branch) [268]	1	1	1	1	1	0	0	WHITE ROCK NO. 3 RD	31	CAPE RIVER RD	AWHEA	23	3	Rural				
Donald St [43]	1	1	1	1	1	0	538	END SEAL	1638	LONGWOOD RD WEST	FEATHERSTON	1100	3.6	Rural				

