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Ruapehu District Council
Report on River Valley Safety
Improvement Works

2009/10

April 2010

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1. Introduction

1.1 Background

At the commencement of the 2009/10 year, public meetings were convened by the Ruapehu District Council in the Kaitieke, Kirikau and Ruatiti River Valleys, to identify work that would improve road safety and access. At these meetings, residents were advised the funding of approximately \$50,000 per River Valley was being allocated to improve safety, alignments and access within each Valley. Residents were invited to advise Council of any concerns related to the safety of the roads in their areas.

Council staff followed up with roadside meetings with individual residents, to view first hand their concerns over sections of road where safety was an issue. These sites were then quantified in terms of cost and priority, added to sites already identified by Council staff and included in a forward works programme.

This report summarises the work programmed in 2009/10 as identified from the issues raised at the Valley Meetings. This work is set out in summary tables and identifies the sites route positions (RP) on corresponding maps. The total value of safety improvement work programmed for 2009/10 is approximately \$265,500.

1.2 Estimates

Table 1 shows which roads within the valleys will receive improvements, in 2009/10, together with the estimated value of expenditure on those roads. Note, this report excludes Dobbs Bluff and Shorts Hill which are major safety improvements and were not included in the \$50,000 allocation per River Valley.

It should be noted that while this report details work proposed for the current year, the total work identified as a result of the River Valley Meetings extends over three years and is the start of a continuing process of upgrading road safety on the Ruapehu rural road network.

Table 1. Estimated expenditure on each River Valley Road.

River Valley	Roads	Estimated Cost
Kaitieke	Oio Road	\$77,600
	Kouturoa West Road	\$600
	Kurua Road	\$1,700
	Maungaroa Road	\$5,500
	Retaruke Road	\$1,800
		<hr/> <hr/> \$87,200
Kirikau	Kirikau Valley Road	\$15,000
	Paparoa Road	\$88,600
	Tawata Road	\$19,300
		<hr/> <hr/> \$122,900
Ruatiti	Makakahi Road	\$4,200
	Makino Road	\$5,600
	Murumuru Road	\$45,500
	Raetihi Ohura Road	\$150
		<hr/> <hr/> \$55,450
	Total	<hr/> <hr/> \$265,550

1.3 Glossary of Work Types

Bridge – Work associated with a bridge.

Drainage – Controlling stormwater e.g. culvert replacements, water channel cleaning.

Emergency – Work resulting from storm events.

Environment – Removing trees, slips, mowing.

Minor Improvements (Minor Imp) – Are minor projects to improve the road (safety, visibility, etc.).

Seal – Reinstating road seal e.g. edge break, potholes.

Signs – Installing sight rails and other signs.

2. Safety Improvement Work Detailed

2.1 Kaitieke Valley

Table 2. Safety improvements proposed for Oio Road.

RP	Work Type	Description	Estimate
4,700	Signs	Sight rail in front of drop off	\$ 1,700
4,750	Environment	Remove dangerous overhanging tree	\$ 1,000
5,260	Signs	Sight rail in front of drop off	\$ 500
6,115	Signs	Sight rail in front of drop off	\$ 1,000
6,250	Signs	Sight rail in front of drop off	\$ 2,400
8,000	Signs	Hazard markers on power pole's close to the road	\$ 700
13,000	Signs	Place sight rails on the bridge approaches	\$ 700
30,000	Minor Imp	Sight benches at 30km peg	\$ 10,500
31,500	Environment	Remove trees over 35m length to improve visibility at curve	\$ 200
31,500	Drainage	Replace culvert with 375mm diameter culvert	\$ 2,800
32,655	Minor Imp	Sight bench 65m to improve visibility	\$ 1,700
33,620	Minor Imp	Sight benching over 165m to improve visibility. Stockpile pumice on flats below road for future use.	\$ 10,700
35,300	Minor Imp	Blind corner, wattle and pumice removal to improve visibility.	\$ 6,100
35,895	Minor Imp	Widen road, removal tree to improve visibility, and infill water table with riverrun	\$ 5,700
36,530	Minor Imp	Sight bench and remove approx 10 large poplars to improve visibility	\$ 1,700
37,670	Minor Imp	Widen 70 - 100m of road	\$ 4,900
38,000	Minor Imp	60m of sight benching and tree removal	\$ 2,100
38,565	Minor Imp	Provide site bench	\$ 1,300
39,590	Minor Imp	Remove 40m of overhanging rock, 20m sight bench and extend #254x1 pipe if possible.	\$ 4,500
41,000	Minor Imp	Provide 40m sight bench. Helens gravel to here for old earthworks cover	\$ 3,000
41,835	Minor Imp	Realign and sight bench.	\$ 7,000
41,835	Drainage	Replace culvert with 375mm diameter pipes. Use old pipe on access by culvert 271	\$ 2,800
42,800	Minor Imp	Realign and sight bench for 55m at Helens creek. Reuse gravels as subbase at other sites	\$ 4,600
Total			\$ 77,600



Figure 1. Oio Road safety improvement sites.

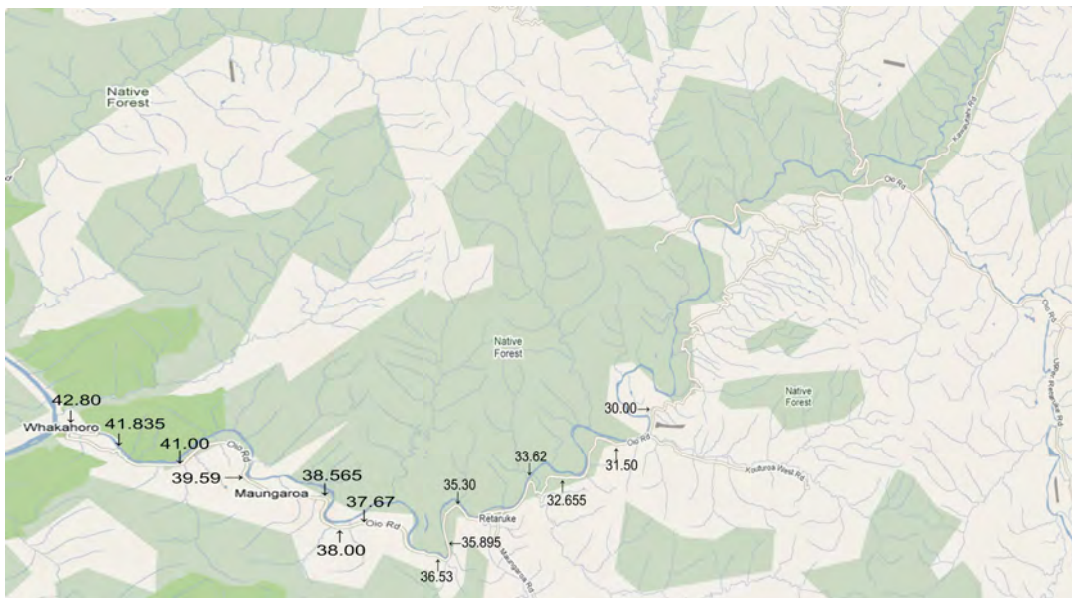


Figure 2. Oio Road safety improvement sites.

Table 3. Safety improvements proposed for Kouturoa West Road.

RP	Work Type	Description	Estimate
0	Signs	Place "No Exit" sign	\$ 300
0	Signs	Place "SH 4" and "Owhango 31km" sign	\$ 300
Total			\$ 600



Figure 3. Kouturoa Road safety improvement sites.

Table 4. Safety improvements proposed for Kurua Road.

RP	Work Type	Description	Estimate
2,000	Signs	Sight rail in front of drop off	\$ 1,700



Figure 4. Kurua Road safety improvement sites.

Table 5. Safety improvements proposed for Maungaroa Road.

RP	Work Type	Description	Estimate
0	Minor Imp	Reconstruct intersection	\$ 3,000
0	Signs	"Whakahoro"	\$ 300
5,050	Minor Imp	Truck turning area	\$ 2,200
Total			\$ 5,500



Figure 5. Maungaroa Road safety improvement sites.

Table 6. Safety improvements proposed for Retaruke Road.

RP	Work Type	Description	Estimate
1,500	Signs	Sight rail in front of drop off	\$ 1,800

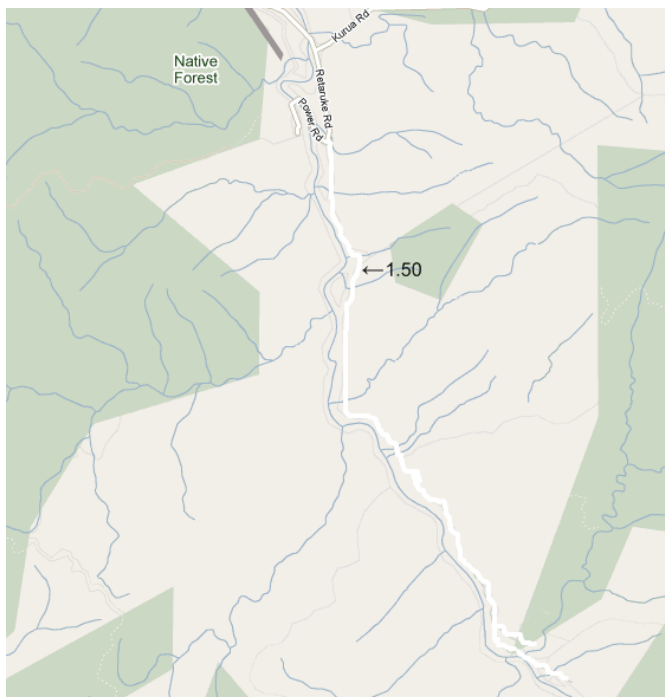


Figure 6. Retaruke Road safety improvement sites.

2.2 Kirikau Valley

Table 7. Safety improvements proposed for Kirikau Valley Road.

RP	Work Type	Description	Estimate
3,330	Minor Imp	Widen bridge approach	\$ 15,000



Figure 7. Kirikau Valley Road safety improvement sites.

Table 8. Safety improvements proposed for Paparoa Road.

RP	Work Type	Description	Estimate
500	Signs	Two "45km" Curve	\$ 300
1,000	Signs	Two Curve 45km	\$ 300
1,850	Signs	Windy Road next 4km	\$ 300
2,130	Environment	Cut vegetation for sight distance and remove overhanging trees	\$ 9,600
2,150	Signs	Sight rail in front of drop off	\$ 300
2,668	Signs	Sight rail in front of drop off	\$ 400
3,300	Signs	Hairpin	\$ 300
3,385	Signs	New Edge Markers on Sharp corners	\$ 800
3,385	Signs	Edge line to Ercegs Bluff	\$ 600
3,420	Minor Imp	Sump, widening, kerb & channel, and seal	\$ 37,400
3,500	Signs	Hairpin	\$ 300
3,875	Minor Imp	Sight bench	\$ 8,900
4,079	Emergency	Culvert 21 outlet	\$ 7,500
4,853	Signs	Sight rail in front of drop off	\$ 700
4,913	Signs	Sight rail in front of drop off	\$ 400
4,920	Minor Imp	Widening and Seal	\$ 14,800
4,973	Signs	Sight rail in front of drop off	\$ 500
5,300	Signs	Windy Road next 4km	\$ 300
6,130	Signs	Sight rail in front of drop off	\$ 700
6,270	Signs	Clean and paint handrails and Sight rails	\$ 300
6,328	Signs	Sight rail in front of drop off	\$ 500
6,918	Signs	Sight rail in front of drop off	\$ 400
7,828	Signs	Sight rail in front of drop off	\$ 700
7,892	Signs	Sight rail in front of drop off	\$ 400
8,330	Seal	Edge Break	\$ -
11,645	Signs	Sight rail in front of drop off	\$ 700
11,770	Signs	Sight rail at Culvert 77 outlet	\$ 300
12,575	Signs	Sight rail in front of drop off	\$ 100
12,657	Seal	Edge Break	\$ 100
13,190	Signs	Clean and paint handrails and Sight rails	\$ 700
Total			\$ 88,600

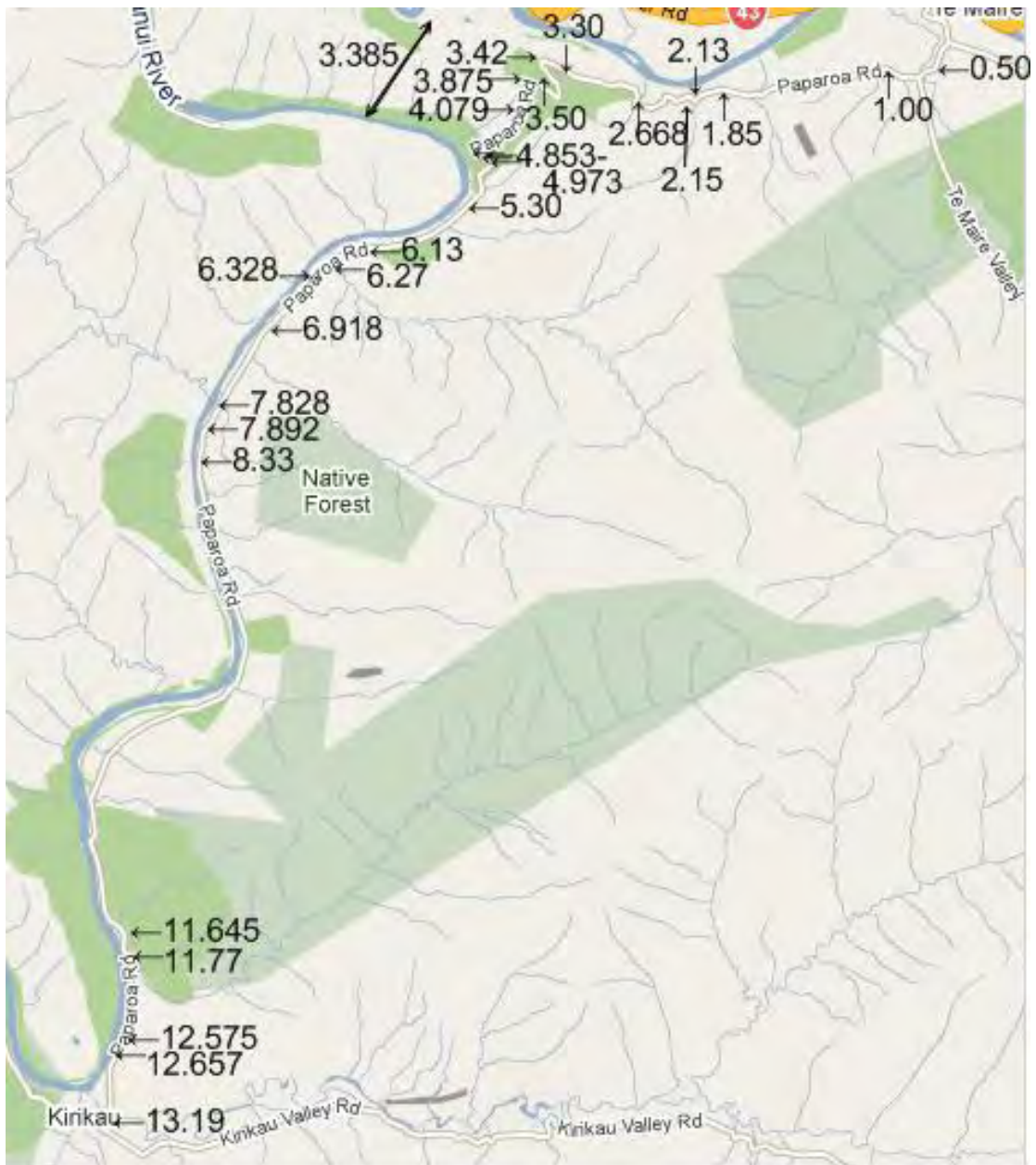


Figure 8. Paparoa Road safety improvement sites.

Table 9. Safety improvements proposed for Tawata Road.

RP Work Type	Description	Estimate
0 Signs	New no exit sign required	\$ 300
805 Signs	Sight rail at Culvert 4 outlet	\$ 500
890 Signs	Sight rail above Culvert 6	\$ 500
950 Signs	Sight rail Below 1km peg	\$ 500
1,010 Signs	Sight rail in front of drop off	\$ 500
3,180 Signs	Sight rail Approx 60m past Culvert 16	\$ 500
3,650 Signs	Sight rail Approx 150m past Culvert 20	\$ 500
3,800 Signs	Sight rail in front of drop off	\$ 500
4,550 Environment	Cut vegetation for sight distance	\$ 500
4,600 Minor Imp	Seal bridge approaches	\$ 9,000
5,100 Signs	Sight rail at culvert 32 dropout	\$ 500
5,230 Signs	Sight rail in front of drop off	\$ 500
5,760 Signs	Sight rail before Culvert 36	\$ 500
7,850 Signs	Sight rail by Culvert 51	\$ 500
11,500 Drainage	Replace Culvert 90. Rock wall. Leave trees	\$ 3,500
11,800 Signs	Sight rail past Culvert 91	\$ 500
Total		\$ 19,300

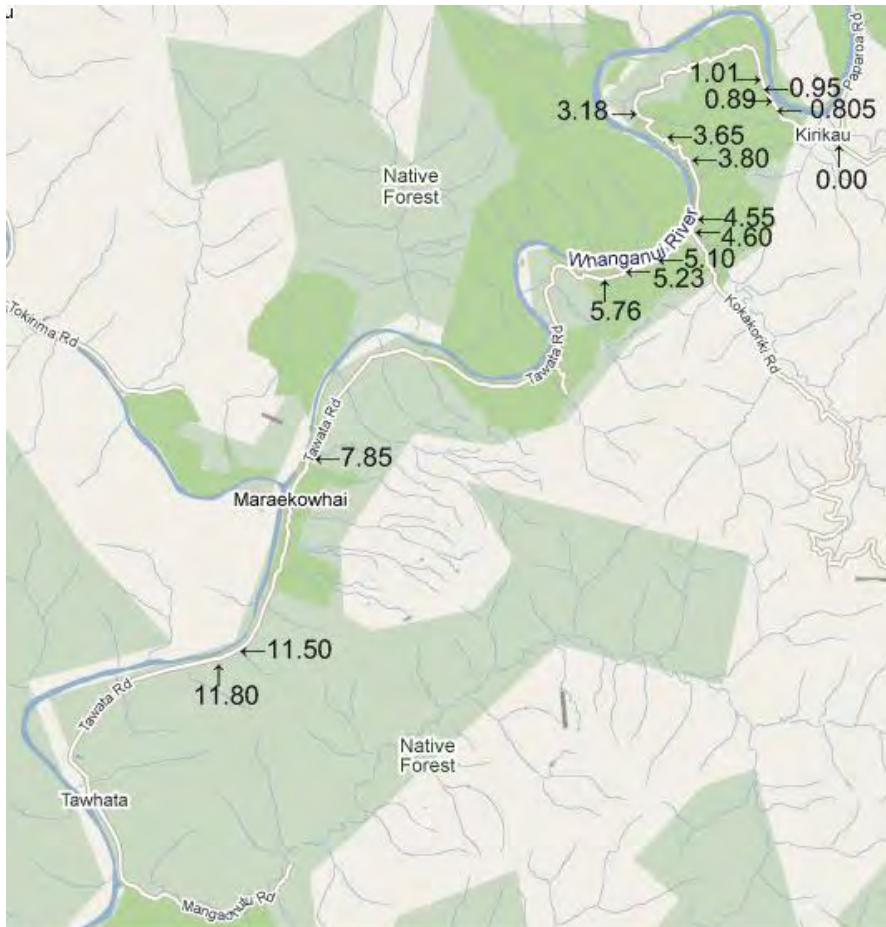


Figure 9. Tawata Road safety improvement sites.

2.3 Ruatiti

Table 10. Safety improvements proposed for Makakahi Road.

RP	Work Type	Description	Estimate
11,940	Signs	Sight rail on blind rise corner	\$ 700
13,600	Signs	Sight rail along 100m bluff to river	\$ 3,500
Total			\$ 4,200

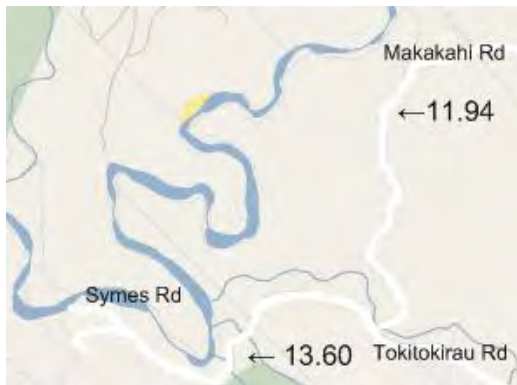


Figure 10. Makakahi Road safety improvement sites.

Table 11. Safety improvements proposed for Makino Road.

RP	Work Type	Description	Estimate
1,625	Minor Imp	Widen approach to bluff	\$ 4,500
1,670	Minor Imp	Widen bluff start and remove toe of rest of bluff (has significant cost; thus, will be spread over the next couple of years)	-
3,648	Signs	Sight rail at inside bend above culvert30	\$ 700
4,730	Emergency	Minor slips on last years site	\$ 400
Total			\$ 5,600



Figure 11. Makino Road safety improvement sites.

Table 12. Safety improvements proposed for Murumuru Road.

RP	Work Type	Description	Estimate
800	Bridge	Remove kerbs, install sight rails	\$ 1,600
2,917	Emergency	Dropout retreat into hill face	\$ 7,500
3,000	Emergency	Armco damaged inlet. Washout at outlet.	\$ 5,200
3,315	Emergency	Dropout retreat into hill face	\$ 12,500
4,970	Minor Imp	Cut corner off for truck alignment	\$ 18,700
Total			\$ 45,500

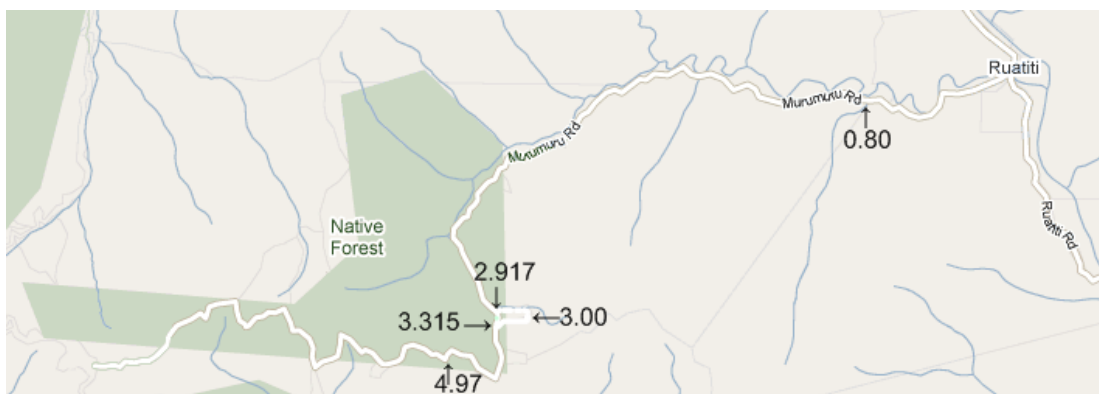


Figure 12. Murumuru Road safety improvement sites.

Table 13. Safety improvements proposed for Raetihi Ohura Road.

RP	Work Type	Description	Estimate
11,380	Signs	Safety Issue: Relocate Telecom stay away from seal edge	\$ 150



Figure 13. Raetihi Ohura Road safety improvement sites.

3. Conclusion

This report details the large number of safety improvement projects occurring in the Kaitieke, Kirikau and Ruatiti river valleys, totalling some \$ 265,500, that is expected to occur in 2009/10.

Public feedback on the consultation process has been positive and highlights the benefit of involving the community in safety related work where Council has discretion to allocate funds according to local priority.

It should be noted that while this report details work proposed for the current year, the total quantum of work identified as a result of the River Valley meetings extends over three years and is the start of a continuing process of upgrading road safety on the Ruapehu rural road network.

It should also be noted that the work detailed in this report is programmed according to estimated costs. It is probable that the programme will vary slightly once firm prices have been obtained for the work and some work activities may shift between 2009/10 and 2010/11 to ensure current budgets are not exceeded.

At the time of writing this report, 20% of the work had been completed with all work programmed for completion by 30 June 2010.


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