

quality, was subdivided into 257 quarter-acre lots, comprising about 120 acres; 71 suburban sections ranging from 3 to 20 acres, comprising 870 acres; and 28 rural sections, ranging from 20 to 247½ acres, comprising about 3,010 acres. It is due to Mr. Frith that I should state that he completed Mr. Crombie's Wangaehu-Ihuraia survey. The areas defined comprised, in the main, hilly country covered with a dense forest growth, requiring on the part of the surveyors care, skill, and energy in devising a scheme of sections suited to the character of the country and the requirements of the settlers, whilst conserving, as far as possible, public interests by selecting the key points, township sites, reserves for public purposes, and at the same time insuring the best location for roads, a fair apportionment of flat land, water frontages, homestead sites, and other natural advantages, and laying off selections where possible with good fencing boundaries along spurs and ridges. As the result of the practice which has prevailed for many years hundreds of miles of river-beds and their banks have been reserved wherever settlement-surveys have been carried out. As many of the streams in this land district are splendidly adapted for and as no doubt they will at no remote period be stocked with fish, the public will appreciate the privilege of unrestricted access to the rivers. One good object gained by reserving the banks and beds of rivers in this way will be that there will at all times exist on same a right to erect protective-works and plant trees with a view to controlling the flood-waters, which unfortunately cause such havoc in our rich alluvial valleys.

The area of the settlement-surveys aggregates to 45,397 acres; and, after making due allowance for the preliminary surveys in two cases, the cost is exceptionally low. In proof that the work has not deteriorated in accuracy I append, for your information, the following table, showing the results for the past five years:—

				Number of Closures.	Number of Stations.	Mileage.	Mean Error per Mile. Links.
1884-85	...	...	...	80	1,990	116	1.9
1885-86	...	...	...	101	2,275	149	1.6
1886-87	...	...	...	50	1,804	109	1.7
1887-88	...	...	...	95	4,911	266	2.0
1888-89	...	...	...	92	5,707	237	1.5

The following table shows the closures in the Wellington District for the year ending the 30th June, 1889:—

Name of Surveyor.	Number of Closures.	Number of Stations.	Number of Miles.	Total Error.		Total Error per Mile.		Remarks.
				Meridian.	Perpen- dicular.	Meridian.	Perpen- dicular.	
L. Smith	13	250	19.2	39.9	35.8	1.57	1.88	Undulating bush-lands.
J. Climie	7	542	16.2	10.5	23.9	1.0	1.6	Rough bush-lands.
John Annabell ..	28	952	13.0	64.3	54.0	2.1	1.6	Very rough bush-lands.
A. E. Ashcroft ..	17	593	32.4	52.1	59.8	1.6	1.8	Hilly and flat bush-lands.
R. P. Grevelle ..	..	921	39.4	54.8	78.6	1.4	2.0	Rough hill and bush-lands.
.. ..	..	391	18.9	13.9	11.0	2.17	2.2	
C. A. M. Crombie ..	..	608	51.0	41.1	34.1	0.8	0.7	Hilly and undulating bush-lands.
H. J. Lowe	15	608	51.0	41.1	34.1	0.8	0.7	Average hilly and flat bush-lands.
J. F. Frith	4	227	9.5	32.2	23.8	3.4	2.5	Hilly bush-lands.
T. L. Humphries ..	2	298	6.5	7.8	11.0	1.2	1.7	Very rough country, with scrub and bush.
G. F. Murray	6	925	30.6	39.7	35.9	1.3	1.2	Hilly bush-lands. There are three miles of disconnected traverse chained and observed not included.
Grand total and final means	92	6,315	287.7	387.4	422.0	1.34	1.46	

TRIG CLOSURE.

J. Annabell	7	..	13	18.7	1.4	Rough bush.
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The results for the past year cover the work of the whole staff—ten officers—exclusive of Mr. Mountfort, who sent in no data. For the information of those unacquainted with this country and the survey system, it is as well to state that nearly the whole of the traverses were executed in hilly forest lands; the chief instruments used were 5in. theodolites and 5 chains or 10 chains steel wire or bands for measurements. It is strange that the measuring apparatus in common use here is not universally adopted, and more strange still that it is not produced with the links and tallies marked so as to dispense with the steel tape. It is submitted for your consideration that the present limit of 8 links in the mile is an excessive allowance and might be reduced.

Town-section Surveys.—An extension of the Scarborough Township, the Ngaturi Village on the Tiraumea-Makuri Block, and the Horowhenua Township comprise the surveys under this head.

Native Land Court Surveys.—The only staff surveys were those of Mangatainoka and Piraunui Blocks; but the out-turn of work was increased to 260,578 acres by the contract surveys of Tawhakotapua and Awarua. The field-inspection of the latter block has yet to be made, and will be attended to as soon as the winter is past.

Road and Railway Surveys.—The lines returned this year include the Palmerston-Gorge and portions of the Eketahuna-Woodville Railway-lines. Much of the work was executed in former years, but not mapped. The roads include the Kakariki and Waimutu lines.