

certainly be more satisfactory, in the conflict of interests already alluded to, that the staff surveyors only were charged with the execution of the Governor's warrant in the taking of roads.

#### PUBLICATION OF MAPS.

This important branch of the service is under the immediate direction of Mr. Barron, from whose report in the Appendix it will be seen that for the Survey Department and for other departments there are always arising demands for special services in this branch—such as maps for the Representation Commission, for the Midland Railway, for the report of the expedition to the Kermadec Islands, for illustrations of works on forestry, on grasses, and for other miscellaneous work. But the main work is in the preparation of plans for Crown lands for sale, of geographical maps of the colony, and of the survey districts, on the scale of an inch to the mile. The publication of maps on the one-mile scale is a work of great public utility, and all the attention possible is given to its furtherance, twenty survey districts having been issued during the year. In addition five county maps on this scale were prepared by the Auckland office, and published there by the trade.

#### EXHIBITS AT THE MELBOURNE EXHIBITION.

The two large maps of the colony, on a scale of eight miles to an inch, which were exhibited at the Indian and Colonial Exhibition of London in 1886, were retouched and sent on through the New Zealand Commissioners to Melbourne. Each map is 14ft. by 10ft. The one is a physical map showing all the lakes, rivers, and other natural features; the other shows the land tenure, and the latest statistics of the colony in population, in pastoral and agricultural and mining industries. Of published maps, mounted copies of the following have also been sent: New Zealand: scale, 25 miles to an inch, sheets 23 and 24; Auckland: scale, 4 miles to an inch; one map each of Nelson and Marlborough, Wellington, Hawke's Bay and Taranaki, and Otago: scale, 8 miles to an inch; besides a number of chromo-lithographs, lithographs, and photographs.

#### ROADS TO OPEN UP CROWN LANDS FOR SALE.

In the settlement of the Crown lands, the clearing and formation of road-lines through the bush, the bridging of rivers, and the drainage of swamps, are all works which come under the category of opening lands for sale, and their execution must go hand-in-hand with the survey of the land, else the settlement of the country would soon come to a stop. A perusal of the reports of the Chief Surveyors in the Appendix will show that a large amount of work has been done at many points in the opening-out of the Crown lands. In all, 118 miles of cart-road formed, 73 miles of bridle-track, 63 miles felled and cleared, and 78½ miles maintained, at a cost of £61,670, in the several land districts, as follows:—

In Auckland, 17·11 miles of cart-road were formed, 12·75 miles of bridle-road were felled and cleared, 38·2 miles were formed, 19·5 miles of road were maintained, and 5·55 miles of drains through swamps were cut; the total cost being £15,762 12s. 8d.; and the area of Crown land given access to is about 80,000 acres, and 21 miles of road were graded ready for contract.

In Hawke's Bay, 24·25 miles of cart-road and 5 miles of bridle-road have been formed, and 70 miles of road have been improved and maintained, at a cost of £6,680 17s. 2d.; the Crown lands receiving benefit being about 60,000 acres.

In Taranaki, 21·55 miles of cart-road have been felled and cleared, 7·9 miles have been formed, and 22 miles maintained, at a cost of £4,780 7s. 8d.; the Crown lands improved being about 21,000 acres.

In Wellington, 4·54 miles of cart-road have been gravelled, 6·9 miles formed, and 13·3 miles felled and cleared; 12·3 miles of bridle-road have been felled and cleared, and 12 miles formed; 35 miles of road have been graded ready for construction, and 37 miles have been maintained; at a cost of £10,586 12s. 7d.; the Crown lands improved amounting to over 70,000 acres.

In Nelson, 9 miles of cart-road have been formed, 2 miles metalled, 11 miles of bridle-road formed, and 9 miles of road improved, at a cost of £3,592 0s. 9d.

In Westland, 14 miles of cart-road have been constructed, at a cost of £2,539 12s. 6d., improving the value of 12,700 acres of Crown lands.

In Canterbury, 7·8 miles of cart-road have been formed, at a cost of £920 18s. 8d., improving the value of 5,000 acres of Crown lands.

In Otago, 24 miles of cart-road have been formed, and 6·75 miles of bridle-track, at a cost of £5,328 11s. 4d., improving the value of 60,000 acres of Crown lands.

In Southland, 3·4 miles of cart-road have been felled and cleared, 6·5 miles have been formed, and 5·5 miles gravelled, at a cost of £4,057 10s. 10d.; improving the value of 17,700 acres of Crown lands.