

future be towards an increased cost per acre, as the surveys in bush will bear a greater proportion to those in open land than in the past; and for the same reason the selection of practicable road-lines will be more difficult. It is most essential that every care should be taken in the laying-out of road-lines; for a mistake once made in this matter can hardly ever be rectified, except at a cost which in many cases is prohibitory. The progress of some districts is very much hindered through a bad arrangement of road-lines. The officers of the department have had the importance of this work so well impressed on them that every road-line wherever the surface of the country is at all uneven is carefully graded, and taken over the lowest saddles, and to the best fords and bridge-sites; and gravel and quarry reserves are marked off where there is suitable material for road-formation. The difference in cost between a well-laid out scheme of roads through a block of country, and a chess-board or carelessly laid-out scheme, is only a few pence per acre; but the after-difference in value to the settler, once the country is occupied and fenced in, it would be difficult to over-estimate. The principal sectional surveys during the year have been in the Forty-Mile Bush, in the Wellington Province, with extensions into the bush in the Hawke's Bay District. In point of accuracy of measurement the sectional surveys close on the trigonometrical distances well within the limit of error allowed of 8 links to the mile. The increase of accuracy during the last few years is largely due to the use of the steel tape and wire instead of the linked chain.

NATIVE SURVEYS.

There have been sixty-four blocks, covering an area of 146,428 acres, surveyed for investigation of title before the Native Land Court, of which fifty-eight blocks, comprising 106,680 acres, were done at the cost of Government, a lien being registered against the land for recovery of advance. The survey of the remaining blocks of 39,748 acres were paid for direct by the Natives.

The area surveyed for land-purchase is only 8,877 acres; but there is now in hand the survey of the Waimarino Block purchase, of an estimated area of four hundred thousand acres, and there are also some large blocks on the west side of Lake Taupo under survey preparatory to investigation of title by the Native Land Court.

LAND TRANSFER SURVEYS.

The nature of this class of surveys and the principles on which they are conducted have been so fully described in former annual reports that reiteration will be unnecessary.

Very considerable delays in passing plans frequently arise from the inaccuracies brought to light in the subdivisions of areas Crown-granted on imperfect surveys. The investigation necessary to clear up discrepancies, it may be of only a few inches in a valuable street-frontage, is often a very tedious matter, requiring patient research in the office, and, it may be, involving the re-survey of a whole block. The standard surveys of towns and suburbs, and, in some few cases, of rural districts, have, whenever executed, greatly facilitated the dealings under the Land Transfer Act. It is proposed shortly to extend standard-survey lines through a portion of Auckland City which has not yet been overtaken.

PUBLICATION OF MAPS.

In Mr. Barron's report in the appendix, details are given of the out-turn of lithographic work and maps for the various departments of the public service, and more especially of the Survey Department proper. There is a great accumulation of topographical information stored up in the manuscript maps of the department which it would be of much convenience to the public to have published. This is being pushed on as rapidly as current work will permit; but it would be well if the lin.-scale district maps could be put through in greater numbers, as they are of very great utility for all general purposes, and save the labour and expense of making tracings from the original maps. One great hindrance to a more rapid rate of publication is the restricted room and small printing-presses, a drawback which cannot be amended until more extensive premises are obtained.

Two of the sheets of the map of Auckland Provincial District, to a scale of four miles to an inch, are issued, and of the two remaining to complete the map, one is now in the hands of the photographer, and the other is being prepared by the draughtsman.

For the Middle Island, the sheet of the geographical map on the eight-mile scale has been issued down to the 43rd parallel of latitude, comprehending the Provincial Districts of Nelson and Marlborough, and parts of Westland and Canterbury. The next sheet, going south to the 45th parallel, is in the hands of the draughtsman, and covers the remainder of Canterbury and Westland and a portion of Otago.