

tion in connection with surveys and land sales. In some provinces they are very numerous, as, for example, in Hawke's Bay, where there are no fewer than twenty-two rural and ten town districts in an area of some three millions of acres. Then there are Provincial Electoral Districts, General Assembly Electoral Districts, Road Board, Sheriffs', Education Districts, and others—these having legal definition. The boundaries of these innumerable subdivisions, as at present constituted, cross and interlace with one another in the direst confusion; and each must be separately defined, described, and in some cases marked on the ground. It is very much to be desired in the future interests of public business—especially of that concerned with registration of any kind—that the boundaries under these various denominations should, if political circumstances admit, be made conformable to one another in the simplest practicable way. If it be urged that no particular inconvenience is felt under the present system, the case of England may well be quoted as one for this country to take warning by; the non-conformity of the old parish, hundred, lathe, county, and other boundaries, is at this moment a cause of the very greatest inconvenience and labour in the formation of new districts for various purposes; nothing but the cost of the undertaking and the counter inconvenience which might be inflicted on other transactions has hitherto prevented the country from remodelling and simplifying the whole system. Here it may not be too late now to begin, especially as there is some prospect of the abolition of provinces. The basis of the most convenient rearrangement is in theory very simple. Suppose, for example, that it were intended to divide New Zealand into parishes, hundreds, divisions, and counties. It would only be necessary to decide upon and describe and mark out every parish boundary: then to make every hundred contain an exact (not necessarily a fixed) number of parishes, every division an exact number of hundreds, and so on. If all boundaries of whatever kind were brought into conformity with this simple and intelligible plan, an immense deal of confusion and trouble would certainly be saved.¹ Public boundaries thus settled upon and marked should in every case be surveyed, and shown with proper characteristics on the cadastral maps. The principal subdivisions of territory would form a basis for the Surveyor-General's scheme of meridians and systems of sheets: probably divisions of from 3,000 to 5,000 square miles might conveniently be chosen for each separate group of cadastral plans, the sheets in each group being all laid out symmetrically with respect to a central meridian. Six miles by four (or 48 inches by 32 inches) would be a convenient size for the large-scale sheets. The sheet lines of town plans should conform to those of the eight-inch plans. For the topographical map, one central meridian for each island might be taken: for the ten-mile map, one meridian for the whole colony. It may be well, before leaving the subject of boundaries, to suggest that they ought to be so definite and explicitly described as to leave no room for doubt. Roads, streams, and banks make good parish boundaries. Straight undefined lines, marked at the extremities with stones, are convenient, lasting, and indisputable. Ridges or water-partings should be excluded, as too indefinite, and replaced by straight lines from point to point. The south boundary of Auckland, I may add, needs early amendment: nothing is harder to mark out than a parallel of latitude.

To resume the subject of the detail surveys. It has been explained that each centre will be supplied by the trigonometrical branch as soon as possible with all *data* for the preparation of the eight-inch sheets with trigonometrical stations accurately marked on them. On these sheets *every correct detail survey, new or old, should be laid down: those of doubtful accuracy should not be laid down at all.* These sheets will be of exactly the same size and kind all over the country. They will form the record maps, and when filled should be sent to head-quarters and stored there, transfers or lithographs or tracings on calico being retained for use in the various district Survey and Land Offices. As regards Crown grants, one result of the system proposed will be that, after certain dates, no grants will be issued for lands the survey of which has not been properly connected with the trigonometrical basis. And, by degrees, the descriptions in all Crown grants which may have been issued prior to the incorporation of the surveys to which the grants relate on the final record maps, ought to be amended, and brought into conformity to the particulars as to districts, sheets, and numbering which the new system would introduce; and this without extra charge to the grantee.² By these means one perfect and methodical system of registration would ultimately be extended to the whole country. It will of course be seen that the effects of the different measures of reform which I have advocated will not become apparent all at once. The changes can only be gradually made. It must be enough to promise that in due course order will be evolved out of chaos, and everything be brought into its place and shape as part of a systematic whole.

In the preparation of Topographical maps, the method to be pursued will vary according to the particular circumstances and the means available in different parts of the country. In some parts there are already accurate materials to hand; in others some revision and addition will be needed, to work up existing details. All future section surveys should be so made as to

¹ Might not a small Boundaries Commission of say three members (one of whom should be a topographical officer) be appointed, to visit the various centres, and ascertain how far such a re-arrangement would be practicable; and wherever possible, to recommend a definite plan of action. The advice of the Surveyor-General should be taken in the actual working out of details.

² Though I do not see any particular objection to the system now adopted in some provinces of writing the bearings to section boundaries, I am disposed to doubt its usefulness, and it adds to the work. The number of the section and sheet, and the name of the district, &c., with descriptions of boundaries, and the exhibition of surrounding detail on the grant plan, would be quite sufficient for identification.