

The various steps that have been taken by Mr. Ward in this matter, and the result of the interviews he has had with the authorities in England, will be found in the appendix to this report. Side p. 1a

ELECTRIC TELEGRAPHS.

There are three short lines of Telegraph established in the Colony. One from Auckland to Drury, another from Lyttelton to Christchurch, and a third from Port Chalmers to Dunedin.

The first was constructed by, and is carried on under the direction of, the Military authorities. The other two by the Provincial Governments of Canterbury and Otago. Arrangements are now being made between the Provincial Governments of Southland, Otago, and Canterbury for a through line from Invercargill to the Northern boundary line of the Canterbury Province. The materials have been sent for, and in the course of this summer the work will be commenced. It only requires the co-operation of Nelson and Marlborough (and there can be no real difficulty about this) to secure a line of Telegraph from one end of the Middle Island to the other. The probable cost is estimated at about £60 per mile.

Mr. Alfred Sheath has been appointed Telegraphic Engineer, whose duty it is to advise with the Provincial Governments as to the crossing places at the boundaries of Provinces, to undertake a general supervision of the line, to see it carried out in such a manner, and such a system adopted in its working, that its advantages instead of being confined to Provincial limits may be extended to the Colony generally. Should the General Government, as it ought to do, take this subject of telegraphic communication into its own hands, there can be no difficulty in making such arrangements with the Provincial Governments as will enable it to take up the work at any time and at any point.

It will be impossible for some years safely to attempt the construction of an extensive inland line of telegraph in the Northern Island; but there is no reason why arrangements should not be made during the ensuing session of the Assembly to connect the principal settlements of that Island with the Middle Island by means of a submarine telegraphic cable. There is no practical difficulty in the way. It is now fully recognised by telegraphic engineers that cables laid in a depth which is under 100 fathoms are seldom broken and can be easily repaired, and are not liable to those accidents to which deep sea cables are constantly exposed. The shortest distance across Cook's Straits is from Wellington Head on the South shore to Cape Terawiti on the North, it does not exceed 12 nautical miles; the soundings however are too deep, varying from 110 to 150 fathoms, to render it advisable to lay a cable between those points. From Runandur point to Sinclair head is 21 nautical miles, and the deepest soundings are only 80 fathoms; a cable laid down there would be in shallow water, be out of the great tide rip so common in the narrowest part of the Straits, and would connect Wellington with the Middle Island. From Cape Stephens, the extreme Northern point of Durville's Island to the Manukau Harbour, is 210 nautical miles. The deepest soundings in crossing the Straits to Cape Egmont do not exceed 54 fathoms. From Cape Egmont to Manukau the greatest depth does not exceed 46 fathoms, and off that Cape there is no greater depth of water. A cable along that line would connect Auckland with the Middle Island, and a short branch cable from the main line to Taranaki would include that settlement in the great line of telegraphic communication. Should engineering difficulties, as is very possible, present themselves in connecting Cape Stephens with Nelson by land, there is another line which is no longer, and with no deeper soundings from Cape Farewell to Manukau. In none of the proposed lines does the bottom present any difficulties, throughout the whole distance it is either gravel, sand, or mud.

The cost of laying cables in shallow water, that is to say, in water under 100 fathoms, is about £400 per nautical mile. The Malta and Alexandria cable, which is 1300 miles long, cost £500,000, and a Company offers to lay down the Java and Australia cable, a length of 1830 miles, for £725,000. That now proposed at the same rates, would cost about £92,400. If the whole system of telegraphic communication by land as well as by sea were in the hands of the General Government, to carry out a comprehensive scheme, a sum of about £160,000 would be sufficient to do all that is here proposed. It is a matter of the utmost importance politically and commercially to this Colony, possibly even involving its integrity, that steps be taken without any delay to connect the settlements of the two Islands with each other by wires on land in the Middle Island, and by cables in the North.

LIGHT-HOUSES.

Light-houses are an indispensable requisite to safe navigation round the Coast of New Zealand. The Chief Marine Board, in conjunction with some of the Provincial Governments, took steps immediately upon its constitution to secure the proper Lighting of the Entrances to the various Harbours, and of the most dangerous part of the Coast.

At present the only Lights are—One at Wellington, one on the Boulder Bank near the entrance to the Harbour of Nelson, and one which shows remarkably well, considering that it is only a make-shift, at the Entrance of Port Chalmers. Arrangements have now been made for a Light in Foveaux Straits, a proper Light at Port Chalmers, another at Port Lyttelton, one in Cook's Straits, and one on Tiri-tiri-matangi. The cost of the Lights alone, independently of the expense of erecting the Towers, will be about £2,000 each; and when these lights are all burning, navigation round the Coast will be much safer and easier than it is at present.

The Lights have been all ordered from England, and Mr. Crosbie Ward, to whom the duty of procuring them has been entrusted, has taken the utmost pains to have them of the best description