

WAITEMATA-MANUKAU CANAL.

The waters of the Waitemata Harbour, on which Auckland is situated, on the north-east coast of the Island, are separated at two points by only narrow necks of land from the waters of the Manukau Harbour on the western coast. At one point the tidal waters of the Manukau are distant little more than 3,000 ft. from the tidal waters of the Otahuhu branch of that arm of the Waitemata Harbour that is known as the Tamaki River, and the dividing land is of low elevation, rising only to some 40 ft. above high-water level. This neck of land is crossed by the Auckland South Main Trunk Railway, by the Great South Road, and by the Panmure Road, which railway and roads would have to be considered in connection with any canal scheme across this isthmus. The proposal to construct a canal at this spot, where a Maori portage used to exist, is by no means a new one, and there remains in the possession of the Crown, for the purpose, a canal reserve 2 chains in width. A report dated 1st February, 1860, and made by Colonel Thomas R. Mould, R.E., who was then Inspector of Public Works, is contained in the Journals of the Auckland Provincial Council. Colonel Mould provided for one lock and gates at each end of the canal, a depth of 8ft. 6in. in the canal at high-water, a width of 18 ft., and a tow-path 6 ft. wide; also for cutting channels through the shallow water on both the Manukau and Tamaki sides, and for two wooden road-bridges over the canal; and he estimated the cost at £22,876, whilst if the canal were carried down to 10ft. 6in. below high water Colonel Mould estimated the cost at £27,500.

In January, 1887, Mr. W. N. Blair, M.Inst.C.E., reported that a canal for coastal steamers upon this route could be then constructed for the sum of £250,000.

Mr. J. E. Taylor, of Mangere, in the year 1907, being much interested in the proposed scheme for a canal on the Tamaki route, very public-spiritedly, at his own expense and labour, drilled a series of six boreholes, 600 ft. apart, along the canal reserve, five of which he carried down to a depth of 24 ft. below high water, and the sixth, being that bored at the highest point of the section, he carried down to a depth of 45 ft. below high-water level; and in no case was any hard material found. A plan and section showing the locality and borings were published by the Auckland Harbour Board in a small book issued in December, 1908, a copy of which is forwarded herewith.

This book also contains reports about, and particulars of, a proposed ship-canal known locally as the Whau scheme. This latter canal is proposed to be built between the branch of the Waitemata Harbour known as the Whau River and a point on the Manukau Harbour known as Karaka Bay, about $5\frac{1}{2}$ miles to the west of Onehunga. The Whau route was promoted by a company, which, in 1905, had surveys made and levels taken and borings and shafts sunk upon the proposed line of the canal, in order to determine the character of the country that would be passed through. In 1907 Mr. W. H. Hamer provided that company with plans and estimated the cost of the canal as designed by him, exclusive of land-purchase, at about £788,000. These plans provided for a canal having 20 ft. depth of water below low-water spring tides in the locks and in the harbour approaches thereto at each end, with a depth of 20 ft. below high-water neap tides in the canal itself. It was proposed that the locks should have a length of 350 ft. between the outer gates and a width of 60 ft. If the depth were increased to 25 ft. Mr. Hamer estimated the then cost at an additional £100,000.

The distance between tidal waters in the two harbours at this point is about 6,900 ft., and Mr. Hamer proposed to put a lock on the Waitemata side near the top of the Whau Creek, excavating a channel in the creek to the required depth from the deep water of the harbour. On the Manukau side a lock was proposed to be placed near the shore-line. The greatest depth of cutting is given in the description of the canal proposed by the company as being about 131 ft., and the scheme was intended to provide for vessels up to a length of 350 ft., the canal and approaches being so laid out and curved as to render navigation easy by vessels of that size. The line of the canal is crossed by the North Main Trunk Railway, and the Great North and two other lines of road. It was proposed to provide for the railway by a swing bridge, and for the Great North Road in connection with the Whau lock, a single high-level bridge to take the traffic of the other two roads.