

*Roads.*—No road formation was undertaken this year, the only work done in connection with roads being the erection of 40 chains of fencing on Bell's Road, and the clearing and deepening of some road drains included in above statement.

*Stop-banks.*—No new stop-banks were erected. Eight miles of existing bank was maintained and repaired as required, and the flood-gates frequently inspected and kept in repair.

*Bridges.*—Two pile bridges were erected, one to give access to property severed by cut No. 30 in the Awanui River, and one on the Quarry Road where Whangatane spillway cuts through.

The following summary gives particulars of the works carried out during the year: New drains, 3 miles 13 chains; deepening drains, 7 miles 3 chains; cleaning drains, 5 miles 25 chains; dredged channels, 2 miles 78 chains; stop-banks kept in repair, 8 miles; fencing, 40 chains. Spoil excavated by dredges, 149,789 cubic yards; spoil excavated by scoops, 7,950 cubic yards; pile bridges, 2; breastwork, 1.

*Works Expenditure.*—The total expenditure for the year as shown in the books at the Auckland Office was £12,476 17s. 7d., the principal items being—day labour, £4,866; piecework contracts, £1,922. The local officer in charge is Mr. T. S. McMillan, Assistant Engineer.

#### WAIHI DRAINAGE AREA (22,720 ACRES), TAURANGA COUNTY.

The development of this swamp is well advanced. Works on the upper and higher portions are well on to completion, and areas already settled as dairying propositions are coming in well.

The flax-growth on the low-lying areas is well ahead of anticipation, and the full development of these areas for flax purposes is well warranted. It is becoming apparent that practically the whole of the lands will come naturally into flax directly the surface and more or less stagnant waters are removed. A flax lease of 440 acres has already been disposed of, and further areas will be made available in the near future.

The rain-gauge installed at the Pongakawa Office showed that a total of 72.85 in. of rain fell during the year, the wettest month being May, with a fall of 12.53 in., and the driest being March, with a fall of 1.90 in. The heaviest daily fall was 4 in. recorded at 8 a.m. on the 27th December, 1924.

*Wharere Canal.*—The deepening of this canal was continued northwards to the Waihi Estuary and was completed early in July. Further dredging was carried out a short distance seawards from the junction of the Wharere Canal and Kaikokopu Stream.

*Kaikokopu Stream.*—About the middle of July the widening and deepening of this channel was taken in hand, and by the end of the period 110 chains had been completed. This work will be continued southwards to Waerenga Road by the Priestman dredge, which will then turn and finally deepen the channel on the way back to the estuary. A Monighan walking-dredge to be shortly transferred from the Rangitaiki works will complete the widening and deepening of the Kaikokopu Stream from Waerenga Road to the railway.

*Pongakawa Stream.*—An American steel dipper dredge has been employed widening and deepening the stream during the year, and completed a distance of 148 chains. The result of this dredging is the further lowering of the water-level at the Main Road bridge, so that water-level is now nearly 11 ft. below the old level of some years three ago. The spoil removed from this stream has been deposited on either side, and will be a valuable asset in the future for roading access purposes.

The drainage of the area of swamp between the Swamp Road and the old Main Road, containing approximately 800 acres, has been investigated, but owing to the excessive cost of the works required it has been decided to leave this area in its present state. The cost of the works would be so heavy that the land could not possibly carry the rating necessary to repay the money spent as well as give the owner a return for his outlay in internal drainage and other necessary improvements.

*Leaschold Block East of Pongakawa Stream.*—A canal 30 ft. wide is now practically complete through the centre of this block, 128½ chains having been formed during the year. Very sandy country was traversed for the most part, but the dredge is now working in richer country consisting of approximately 3 ft. of peat on a sandy bottom. A dam was erected across the mouth of this canal in June, thus doing away with tidal influence and considerably augmenting the progress of the work.

*Dredges.*—Three dredges, No. 5 (Priestman) and Nos. 25 and 26 (American Steel), have been kept working continuously throughout the year.

No. 5 Priestman dredge carried on operations on the Wharere Canal, and by July had completed the deepening to the Waihi Estuary. The plant was then headed up the Kaikokopu Stream, widening and deepening the existing channel. In August the dredge was brought down to the estuary and beached, and several parts of the pontoon which were in a bad state of repair were replaced. Dredging was resumed in October, and although very hard country was experienced good progress was maintained. During the period the machine covered a distance of 170 chains, removing 55,190 cubic yards of spoil.

No. 25 American Steel dredge was engaged during the whole period in widening and deepening the Pongakawa Stream. Owing to the crank-shaft of the 75 h.p. engine breaking just at the latter end of last year, the plant was laid up during April and May while a new shaft was procured and fitted. Apart from this a good year's work has been carried out: 148 chains were completed and 103,606 cubic yards of spoil removed.

No. 26 American Steel dredge carried on dredging the new Pukehina Canal through the leaschold block east of the Pongakawa Stream. The country here is very sandy, and caused such great wear on the bucket that towards the end of August a new one had to be fitted. The dredge will complete this canal early in the coming period, and will then construct a stop-bank across the block from the Pukehina Canal to the sandhills. During the year a distance of 128½ chains was completed, 93,822 cubic yards of spoil being moved.