

but apart from that it has worked continuously, shifting a total of 58,674 cubic yards of spoil over a distance of 191 chains.

No. 25 American Steel dredge was engaged in straightening the upper Pongakawa Stream. Plant was thoroughly overhauled in February, 1924, and is in good order with the exception of the engine main crank-shaft, which carried away towards the end of March, 1924. This plant shifted a total of 104,638 cubic yards for the period, over a distance of 120 chains.

No. 26 American Steel dredge was engaged in the lower Pongakawa Stream, working southwards. Towards the end of April, 1923, the bucket was found to be badly cracked owing to continual bumping on the hard sandy material in the bottom of canal, and some delay ensued while a new bucket was being obtained. In August the engine main crank-shaft carried away where it had been welded after previous break, and reserve shaft was brought down and fitted. However, the dredge had been working only ten days when this shaft also carried away, the welded break again being the trouble. By the middle of November a new shaft was procured and fitted, and since then good progress has been maintained. Work on the Lower Pongakawa Stream was completed in March, 1924, and the dredge was then transferred to proposed canal through leasehold block east of the Pongakawa Stream. During the year this plant shifted a total of 78,192 cubic yards over a distance of 168 chains.

The following table shows the amount of spoil dredged and cost per cubic yard for the last seven years :—

							Cub'c Yards.	Cost per Cubic Yard
1917-18	..	..	..	..	..	..	55,538	4-57d.
1918-19	..	..	..	..	..	..	20,780	7-67d.
1919-20	..	..	..	..	..	..	44,250	9-29d.
1920-21	..	..	..	..	..	..	63,495	7-77d.
1921-22	..	..	..	..	..	..	77,535	6-17d.
1922-23	..	..	..	..	..	..	164,527	6-97d.
1923-24	..	..	..	..	..	..	241,504	7-54d.

Roads.—The formation and ballasting of roads on the subdivided Crown land between the Wharere Canal and the Kaikokopu Stream was pushed ahead during the year, with the result that the Kaikokopu Road is now complete as far as the Waerenga drain, Tainui and Arawa Roads are complete throughout, and Wharere West Bank Road is complete from the Main Road to the junction with Waerenga drain. In addition the Wharere East Bank Road was formed for a distance of 86 chains from the Main Road northwards.

Drains.—New drains have been cut along the Kaikokopu Road southwards from the Waerenga drain, along Wharere West Bank Road southwards from Waerenga drain to the Punene drain, and along the Wharere East Bank Road southwards from the Waihi Estuary to the Main Road. Deepening of existing drains has been carried out where necessary, notably Sections 23-28 drain, in which considerably more fall was available after dredge had lowered water-level in the Wharere Canal. Eastwards from the Wharere Canal a new drain was commenced opposite Waerenga drain, and this will junction with the Central drain where a start has been made deepening and widening. South of the railway Sections 14-15 drain has been continued southwards for 64 chains, and the widening and deepening of the Mangatoetoe Stream has been completed practically to the boundary of the drainage area. Maintenance work, clearing growth and slips, has been carried out on the Punene and lower Mangatoetoe drains, and a small amount of willowing has been done on the upper reaches of the Kaikokopu Stream. In the Waewactutuki Block No. 2 drain has been widened and deepened from the Kaikokopu Stream westwards to the eastern boundary of Section 7, Block IV, Maketu Survey District, and Wilson's drain has been deepened from the Kaikokopu Stream westwards to about the middle of Section 8, Block IV, Maketu Survey District. Mend's drain, which branches off Wilson's drain, has been completed as far as the Main Road. A large quantity of timber has been encountered in all these drains, necessitating a free use of explosives.

Bridges.—During the year six sill bridges were erected on the works.

Buildings.—A store-shed, 25 ft. by 20 ft., and an explosives magazine, 6 ft. by 6 ft., were built at headquarters during the year.

The following is a summary of the various works performed during the year :—

						M. ch.	Cub. yd.
Canal dredges	..	..	..	..	..	5 78	241,704
New drains	..	..	..	..	..	8 75	41,332
Drains widened and deepened	..	..	..	..	..	11 3	29,853
Cleaning drains	..	..	..	..	..	4 51	..
Clearing road-lines	..	..	..	..	..	1 72	..
Carting and spreading spoil on roads	..	..	..	..	..	1 10	10,458
Roads formed	..	..	..	..	..	2 51	..
Fencing	..	..	..	..	..	1 6	..
Sill bridges erected	..	..	..	..	..	(number)	6

The major works proposed to be carried out during the coming year are—(1) Deepening Kaikokopu Stream; (2) widening and deepening upper Pongakawa Stream; (3) excavation of canal through leasehold block; (4) completion of drainage system on block between Wharere Canal and Pongakawa Stream; (5) stop-banking Waihi Estuary.

The total expenditure for the year was £15,973; of this amount £3,851 was expended in day labour (which includes dredge hands), and £7,694 in piecework contracts. The local officer in charge is Mr. D. S. B. Heather, Acting Engineer, a capable and energetic officer.