

Very satisfactory work has been done by No. 4 dredge on the Omeheu Canal, a total of 111,866 cubic yards being excavated over a distance of 174 chains. At the end of August the staff of this dredge was reduced to three men, one ten-hour shift being worked, and very satisfactory results have been obtained. The dredge is now working along the southern boundary of Section 155, and has approximately 70 chains to complete before connecting up with the Tengaroa drain, where the canal is to finish.

No. 8 dredge has proceeded steadily with the work of straightening the Tarawera River and erecting a substantial stop-bank on the eastern bank. A distance of 153 chains has been completed, some 86,645 cubic yards of spoil being removed. Owing to the strong current running in the river every care has to be taken with this dredge, but the dredgemaster in charge has kept his machine running very satisfactorily.

No. 9 dredge commenced operations in the Awaiti Stream in May, 1921, and, after cleaning up as far as Section 109 drain, turned inland up the line of that drain. Very good progress was made for some months until an extremely hard ridge south of the Kohika Lagoon was encountered, when progress was very slow. However, better ground is now being encountered, and consequently the dredge is proceeding more rapidly. The effect of this canal is now being felt by the surrounding country, which, though formerly one of the wettest parts of the swamp, is now comparatively dry. Subdivisional drainage is now all that is required to "bring in" this first-class area of land. The distance dredged amounted to 119 chains, 68,684 cubic yards of spoil being shifted.

No. 17 Monighan dredge: In November, 1921, one of the Monighan drag-line excavators lately imported from America commenced operations on Te Rahu Canal at the Whakatane River end. It was at once evident that the Monighan was an ideal machine for the job, and splendid results have been obtained. This machine widened the cut to a full 30 ft., as well as deepening it by as much as 4 ft. and 5 ft. in places. The result is a fine canal of ample width and depth, and also a stop-bank of fine proportions composed of spoil from the canal. During the five months worked a distance of 152 chains was covered, and a total of 40,726 cubic yards of spoil removed from the canal.

No. 18 Monighan dredge: Late in November, 1921, the second Monighan commenced operations some two miles farther up Te Rahu Canal. The country traversed was of a peaty nature, and did not permit of the machine remaining very long in one spot, owing to subsidence. However, a satisfactory amount of spoil was taken out of the bottom of canal. Towards the end of the year the machine had picked up approximately 4 ft. of fall, and is giving the country round Awakeri just the relief it needs. Owing to the inequality of the ground along the bank of the canal the dredge has to level up a path for itself, and then as the spoil is removed from the canal it is spread behind the dredge and levelled roughly to permit of easy road-formation, should need arise for same at some future date. The dredge is now nearly up to the main Whakatane-Rotorua Road at Awakeri, and on reaching the junction of drains in Section 83 will dredge up the Mangaroa Stream for some 20 chains with the object of forming a silt-trap. During the four months worked the machine removed 24,306 cubic yards over a distance of 108 chains.

No. 21 Bay City dredge: This dredge commenced work on the Tarawera Western drain towards the end of August, 1921, but for about six weeks was engaged in cleaning up the bottom and sides of drain, for which it was impossible to gauge quantity shifted. However, in October a face to work on was obtained, and the machine immediately began to pick up fall in the drain. By the end of the period some 5 ft. was being taken from the bottom of the drain, and despite timber encountered progress remains satisfactory. From October, 1921, to March, 1922, a distance of 120 chains was completed, 19,750 cubic yards of spoil being removed.

The following table shows the total amount excavated, with the cost per cubic yard, for the past ten years:—

				Cubic Yards.	Cost per Cubic Yard.
1912-13	..	..	..	31,486	4.12d.
1913-14	..	..	..	272,370	3.07d.
1914-15	..	..	..	268,760	3.48d.
1915-16	..	..	..	224,740	4.54d.
1916-17	..	..	..	261,751	4.36d.
1917-18	..	..	..	320,614	3.72d.
1918-19	..	..	..	229,659	5.70d.
1919-20	..	..	..	176,672	6.62d.
1920-21	..	..	..	215,768	8.82d.
1921-22	..	..	..	473,994	6.68d.

ROADWORK.

Very little roadwork has been done during the last twelve months. Surfacing has been carried out on the White-pine Bush Road, Eastern Drain Road, McLean's Road, and Feist's Road.

The Awakaponga section of the Railway Road has been partially formed. This was a costly undertaking, particularly through the old lagoon, where alternate layers of fascines and spoil were deposited until at length a firm foundation was obtained. The preliminary work on this section is now finished, and when some 2 ft. of spoil is spread along the whole length the road will be ready for traffic.

BRIDGES.

The two bridge gangs have been constantly employed all over the swamp, erecting flood-gates and bridges. Nine new pile bridges (30 ft. span) have been erected, as well as twenty-five sill bridges over drains of widths varying from 6 ft. to 16 ft. The timber for these bridges has been obtained from Tauranga and Pongakawa mills, and is of good-quality rimu. Difficulty was experienced in obtaining hardwood piles, but latterly good supplies have been coming to hand from Australia.