

the upper Awaitei and lower Elstow Canals, it was found necessary to reinstall a temporary dam in the Awaitei Canal to prevent excessive bank-caving, and this work caused some delay. 14,137 cubic yards of material was excavated from 190 chains of canal at a cost of 10·94d. per cubic yard.

No. 29 Bay City Light Drag-line Excavator is a valuable addition to the excavating plant made during the year. The machine weighs about 10 tons and operates a $\frac{3}{8}$ yard drag-line bucket on a 30 ft. boom. In addition to caterpillar traction, it is provided with a pneumatic-tired trailer for road transport. After being assembled at Kerepeehi, the machine commenced work on the 11th January, building a small stop-bank on the Waihou River at Orongo. On 16th February it was transported by barge to Waitakaruru and thence by road to complete the stop-banking of the Waitakaruru Stream above the Mahuta Road Bridge. During the period of forty-six days that the machine was actually excavating, the material built into the stop-banks was 13,729 cubic yards, and the cost, including plant-moving costs and all charges, was 3·39d. per cubic yard.

The following table shows the total quantities excavated each year during the past sixteen years :—

Year.	Cubic Yards.	Cost per Cubic Yard.
1921-22	246,022	7·29d.
1922-23	440,092	8·20d.
1923-24	508,654	7·27d.
1924-25	822,286	5·86d.
1925-26	856,653	6·32d.
1926-27	647,182	7·42d.
1927-28	652,413	7·32d.
1928-29	619,911	6·54d.
1929-30	595,565	6·25d.
1930-31	536,692	8·32d.
1931-32	390,611	7·99d.
1932-33	200,954	8·00d.
1933-34	116,224	5·96d.
1934-35	52,517	10·02d.
1935-36	164,046	8·26d.
1936-37	171,717	8·69d.

KEREPEEHI DISTRICT.

A working party of ten to eighteen men has been camped on the Awaitei Canal and engaged throughout the year on presettlement land-development work on the Kerepeehi Extension Blocks. The work comprised the cleaning of 1,157 chains of field and boundary drains, excavating 10,054 cubic yards of material in the construction of 321 chains of new drains, and improving 94 chains of existing drains, clearing scrub and rushes, burning and sowing with grass 104 acres, also road-work and noxious-weed control. Other works carried out in the Kerepeehi district include cleaning 1,334 chains of main drains by manual labour, 592 chains with weed-cutting launch, and 542 chains at Orongo. Road formation and metalling was completed for a distance of 85 chains on Wani Road ; a top course of metal was laid for a distance of 21 chains of the same road and 17 chains of Pukahu Road. The Awaitei Canal Road was formed for a distance of 80 chains and base-course metal was laid for a distance of 69 chains. A 20 ft. span hardwood bridge was built on pile abutments at the junction of the Awaitei Canal and Otakawe Roads, and a similar bridge commenced on one of the inlets of the Reservoir Canal.

Operating from the depot and workshops at Kerepeehi, the staff has been busily engaged receiving and distributing stores, material, and fuel for the widely dispersed works, providing camp accommodation for workmen, and repairing machinery, buildings, and plant.

WAITAKARURU-TOREHAPE DISTRICT.

Construction activities in this district have been extensive, and concerned principally with the reclamation of the western portion of the Pouarua area and tract of 11,000 acres of peat land lying to the south of Waitakaruru, and between the settled land bordering on the Piako River to the east and the foothill of the Pataroa Range to the west. The number of men in a camp established some years ago was increased from ten to twenty-five men in May, 1936, and later the camp strength was increased to twenty-eight men, who have been engaged principally on road and drain construction. The work included cleaning 424 chains of drains, excavating 17,909 cubic yards of material in widening and deepening 504 chains of existing drains and 858 cubic yards of material in constructing 35 chains of new drains.

A comprehensive scheme for several miles of road-construction, consisting of clay ballast laid on fascines over a peat subgrade, commenced in this district several years ago, and carried on intermittently when funds were available for the work, was continued this year. The clay ballast is hauled for a distance varying between 1 and $5\frac{3}{4}$ miles on light railways. Owing to past delays in completing the work, it has been necessary to renew a large proportion of sleepers, and this has retarded progress during this year. 5,522 sleepers of willow and other timber were obtained along the banks of the Piako River for renewals and extension of the line, 1,260 fascines were laid under 45 chains of new line, and 4,483 cubic yards of clay ballast hauled an average distance of $4\frac{1}{2}$ miles.

Operating from a camp situated on the Waitakaruru-Maukoro Canal, three miles south of the Waitakaruru Township, a working party varying from eleven to nineteen men has been employed deepening drains in the northern Pouarua area. 553 chains of drain were deepened, 12,930 cubic yards of material were excavated by manual labour in enlarging 551 chains of existing drains, and 321 chains of new drains were constructed involving 9,114 cubic yards of excavation. The raising of the Waitakaruru Stream stop-banks by manual labour, commenced in 1933 as a relief-of-unemployment