

PATETONGA DISTRICT.

The metalling of a seven-mile section of the Patetonga Main Road, commenced in May, 1929, was continued during the summer months, and at the end of the year the base-course metal had been laid throughout and top course for a distance of 6 miles. The work carried out on the main road during the year comprised 51 chains of hill-road reconstruction, the spreading of 4,710 cubic yards of metal, and the cartage of 1,285 cubic yards of clay for haunching metal on the peat section of the road. The base-course metal was laid for a distance of 100 chains on the Patetonga Landing Road 1,095 cubic yards of metal being used, and 590 cubic yards of clay carted by tramway for haunching the metal. The metal for these roads is obtained from a quarry opened up by the Department on Hauraki Plains County Council property. The quarrying, crushing, and delivering of the metal is carried out by contract.

Drain-maintenance work carried out in this district comprised 37 miles 51 chains of drain-cleaning, and the excavation of 1,492 cubic yards for the widening and deepening of 61 chains of drain.

The metalling of the main road has affected the river traffic, and cargo for Patetonga is now discharged at Ngatea or Kaihere Wharves, and all cream is now conveyed by road, instead of by launch as formerly. In consequence of these changes the tramway service for the delivery of goods from Patetonga Wharf to the township, which had been operated by the Department for thirteen years, was discontinued in June.

142 cubic yards of gravel was obtained from the Mangawhero Road drain and used on that road, and the important work of maintaining the roads during reconstruction and after metalling has not been neglected.

STRUCTURAL WORK.

Particulars of the flood-gates, culverts, and bridges completed during the year are contained in the summary. Extensive alterations and repairs were carried out to the Kaihere Wharf. The wharfshed was placed on shore on grid foundation, new approach to wharf constructed, and six piles in the original wharf renewed. Three large temporary dams were built of timber and steel-sheet piling to float dredges in canals under construction. All repairs to dredges and other plant were carried out on the works or at the Kerepeehi workshops.

ENGINEERING AND LAND SURVEYS.

In addition to engineering survey work, land-subdivisional surveys of 2,030 acres were carried out, 41 miles of theodolite traverse were completed, 36 miles of leveling for road and drainage works, and 153 cross-sections of the river-channel were taken. Investigations and reports of several small schemes have been made. Rainfall records have been kept up to date, also river stage records. No stream-flow gaugings have been carried out, as practically normal river conditions prevailed throughout the year.

SUMMARY.

The total length of the subsidiary drains constructed on the Hauraki Plains to date since the inception of the works is 731 miles 26 chains. Particulars of the works carried out during the year under review are summarized in the following schedule:—

	Length. Miles ch.	Excavation. Cub. yd.
Drains cleaned by manual labour	93 61	..
Drains widened and deepened by manual labour	26 29	60,176
Drains—New construction by manual labour	21 64	60,520
Stop-bank constructed by manual labour	0 52	2,300
Total quantity of drainage excavation by manual labour		122,996
New canals constructed by machines	0 77	28,394
River and canal improvement, machine construction	12 34	479,969
Reconditioning drains by machines	5 75	28,329
Total excavation by machines		536 692
Stop-banks constructed or partially constructed in conjunction with river-improvements and canal-construction	10 74	..
	Miles ch.	Cub. yd.
Roads metalled	2 13	3,981
Roads metalled, base course only	1 20	1,095
Roads metalled, top course only	7 21	7,353
Total quantity of road-metal laid		12,429
New roads formed, Hauraki Plains	2 21	..
Roads reconstructed and improved	1 78	..
Clay carted for ballasting roads on peat subgrade and haunching metal	3 68	9,598
Fences erected	2 41	..