

1937.
NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY.

RANGITAIKI LAND DRAINAGE.

REPORT FOR THE YEAR ENDED 31st MARCH, 1937, TOGETHER WITH STATEMENTS OF ACCOUNTS.

Presented to both Houses of the General Assembly in pursuance of Section 10 of the Rangitaiki Land Drainage Act, 1910.

SIR,—

Department of Lands and Survey, Wellington, 1st August, 1937.

I have the honour to submit herewith the report of the Chief Drainage Engineer on drainage operations in the Rangitaiki Plains for the year ended 31st March, 1937, pursuant to the provisions of the Rangitaiki Land Drainage Act, 1910.

I have, &c.,

W. ROBERTSON,

The Hon. Frank Langstone, Minister of Lands.

Under-Secretary for Lands.

REPORT OF CHIEF DRAINAGE ENGINEER.

SIR,—

In accordance with the provisions of the Rangitaiki Land Drainage Act, 1910, I have the honour to submit the report on the works for the year ending 31st March, 1937:—

A generally favourable season was experienced on this area, the rainfall being very well distributed, and being unattended by serious flooding. In spite of this, however, certain areas were affected by abnormally high water-levels, and the inability of the canals to function to their full capacity in carrying away the local rainfall. As indicated in previous reports, the necessity for the adequate maintenance of the vital outlets by machine dredging is becoming urgent. Following the provision of increased funds for this purpose, a commencement was made with the overhaul of a Monighan dredge previously employed on this area, and this plant will be put into commission on the main arterial canal in the eastern area early in the coming year. It is anticipated this plant will be able to work progressively maintaining the main canals in the area.

There was no serious flooding from any of the three rivers in the area. The Tarawera River stop-banks were in serious danger on several occasions through the winter, and continued attention was necessary, several blowouts in the banks being repaired as they appeared. A new Diesel caterpillar drag-line was purchased during the year, and commenced work widening and raising the stop-bank south from the railway. It is anticipated that the removal of pumice from the bed of the river for stop-banking will tend to effect a return to the previous low levels recorded in the middle portion of this river.

A commencement was made late in the year to procure stone from the hills adjoining Matata to strengthen groynes near the mouth of the Tarawera River, with a view to arresting the tendency of the channel to widen and shoal. This stone will be placed early in the coming year.

The Tarawera River is the most dangerous river on the Plains, as its bed is generally above the level of the land immediately adjacent to the stop-banks. As the formation is all pumice, and the banks formed of pumice and Tarawera ash, there is always a possibility of a break in the banks, and if not checked the river would form a new channel with the possibility of large areas being permanently ruined. The banks on the eastern side of the river are now being strengthened, but the main problem is the silt brought down by the river. There seems to be no other solution to this problem than regular dredging.

The work of removing willows from the Rangitaiki River banks was carried forward during the year, and this work is effecting a pronounced improvement to the channel. The mouth of this river has a tendency to wander eastwards along the coast inside the sandspit, and periodical straightening through the sandspit is necessary to prevent damage from the backing-up of the river waters.

Considerable anxiety has been expressed by a number of settlers on account of the frequent and serious flooding of an area near the White Pine Bush from the Whakatane River. The protection of this area has given the Department some concern for a number of years. Unfortunately it has not been possible to formulate a scheme in which the costs are not extremely high in relation to the benefits which would accrue.

A substantial increase was again recorded in the total production of butterfat from the area. The Rangitaiki Plains Dairy Co. manufactured a total of 3,852 tons of butter, an increase of 156 tons over last year's figures. The Arawa Dairy Co., which draws a considerable portion of its supplies from the Rangitaiki Plains, manufactured 1,166 tons of butter, an increase of 165 tons over the figures for the last fiscal year. Some of this increase was no doubt due to the favourable season experienced. The better prices obtaining for dairy and farm products have given an impetus to development in the area, and, particularly during the latter part of the year, there was increased activity in this direction. There is no doubt that, with increased private enterprise and the land-development in hand and to be undertaken by the Crown, the district, of which the Rangitaiki Plains forms the centre, will with its dairying and cattle, flax, and wood-pulp industries produce a rapidly increasing share of the Dominion's wealth. Milling was commenced by the Flax Company which controls the major portion of the flax-plantations in the area, portion of the old freezing-works building being utilized for the purpose of an up-to-date mill. The balance of the building is being prepared, with considerable extensions, to house the workmen and plant of the Whakatane Paper Mills, Ltd.

Rainfall.—The rainfall for the year totalled 54.30 in., rain falling on 114 days. The wettest month was December, with a fall of 9.02 in., and the driest was February, with a fall of 0.25 in. The average rainfall for the nineteen years was 52.74 in.

Maintenance.—The hand drains throughout the area were maintained in good order, where possible this work being done by contract. Several lengths of canals were cleared by hand or with the Sanderson weed-cutting launch. Repairs were carried out to the number of flood-gates in the area, and several lengths of stop-banks were repaired and raised. The Tarawera River stop-banks were periodically inspected, and the strengthening of danger-points put in hand.

A new 3 ft. flood-gate was placed in Allan's drain, and two flood-gates were placed in the Eastern Boundary Drain.

Rangitaiki River.—A gang was employed throughout the year ring-barking and removing willows and obstructions from the channel, the section of river from the mouth to a point south of the railway being given attention. On certain sections of the channel the growth was completely removed, and at others the banks were protected to prevent further erosion. The result of this work will be to provide a more uniform and direct channel in the lower reaches of the river, with a consequent increased flood capacity.

Dredges.—The light Bay City dredge was in commission throughout the year. The main work carried out was the improvement of the lower reaches of the Awaite Stream, where serious channel-deterioration had taken place. On completion of this work the plant was moved to carry out deepening-work on Greig's Road drain. The distance covered by this plant during the year was 177 chains, a total of 24,935 cubic yards of spoil being lifted.

Late in the month a new Bay City Diesel drag-line was put to work raising and widening the Tarawera River east stop-bank. The distance dredged during the two months worked was 25 chains, 11,930 cubic yards of spoil being removed from the river and deposited to widen existing stop-banks.

Considerable repair and renovation work was carried out on Monighan No. 17 Dredge to prepare this plant for maintenance work on the main canals. At the close of the period the plant was preparing to walk to commence work on Reid's Central Canal, after completing which it will operate on the Kopeopeo Canal.

Drains in Operation.—Several lengths of hand drains were taken over for maintenance purposes during the year, and the total length is now as follows:—

						Miles	ch.
Dredge canals	..	..	..	..	..	68	28
Main outfall drains	..	..	..	..	..	118	52
Road drains	..	..	..	..	..	30	46

Of these, 109 miles 75 chains are maintained annually by the Department, whilst the growth is removed by the Sanderson weed-cutting launch or by hand from 18 miles of machine-excavated canal.

Plant and Machinery.—This consists of two Priestman dredges, two Bay City drag-lines, one Monighan, one oil launch, one coal punt, and two small boats.

Summary of Work done:—

				Miles	ch.	Cubic yd.
Drains cleared by hand	..	..	..	121	70	..
Canals cleared by hand	..	..	..	18	37	..
Drains deepened by hand	..	..	..	3	5	3,470
Spoil dredged	..	..	..	2	42	36,865
Stop-banks repaired and raised by hand	..	..	..	0	37	3,457
				Number.		
Flood-gates erected	..	..	..	3		..

Drainage Rates.—Rates struck for the year amounted to £10,512 0s. 9d., whilst £14,155 5s. 5d. was collected.

The expenditure for the year amounted to £7,269 1s. 11d.

I have, &c.,

R. G. MACMORRAN,

Chief Drainage Engineer.

The Under-Secretary for Lands, Wellington.

