

1944
NEW ZEALAND

DEPARTMENT OF LANDS AND SURVEY

RANGITAIKI LAND DRAINAGE

REPORT FOR THE YEAR ENDED 31st MARCH, 1944

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

Department of Lands and Survey, Wellington, 1st May, 1944.

SIR,—

I have the honour to submit herewith the report of the Chief Drainage Engineer on drainage operations on the Rangitaiki Plains for the year ended 31st March, 1944, pursuant to the provisions of the Rangitaiki Land Drainage Act, 1910.

I have, &c.,

R. G. MACMORRAN,

Under-Secretary for Lands.

The Hon. the Minister of Lands.

REPORT OF THE CHIEF DRAINAGE ENGINEER

SIR,—

In accordance with the requirements of the Rangitaiki Land Drainage Act, 1910, I have the honour to submit the following report on the work carried out during the year ended 31st March, 1944.

Heavy rainfall inland caused floods in the Whakatane and Rangitaiki Rivers at the end of February, 1944. An area of approximately 8,000 acres was affected, and this necessitated the removal of stock. Another flood occurred on the 17th March, when most of the water left by the previous flood had escaped and about 3,000 acres was again inundated. Floods occurring in the dairy season must result in considerable loss to the farmers, but the settlers generally accepted these trying conditions with characteristic fortitude, and pastures destroyed by flood-water have been resown with commendable determination to maintain farm production.

It is gratifying to be able to report that in spite of the loss of production caused by floods, the Rangitaiki Dairy Co., which handles a large portion of the dairy production of the district, manufactured 4,450 tons of butter between 1st April, 1943, and 31st March, 1944. The maximum seasonal production for this factory has been about 5,000 tons.

The rainfall recorded at Thornton during 1943 was 43.49 in., rain falling on 101 days. The wettest month was June, with a fall of 9.63 in., and the driest month March, when the total rainfall was 0.07 in.

All available labour has been employed on maintenance work, 121 miles 32 chains of drains being cleaned by manual labour and 15 miles 4 chains with weed-cutting launch. Two excavators have also been engaged on canal and drain maintenance throughout the year. Brief particulars of the work carried out by these machines are given below:—

No. 17 Monaghan Drag-line Excavator.—This machine has reconditioned the Omeheu Canal between its junction with the Awaitei Stream and the railway. Work on the lower 16 chains of this canal was completed this year after the machine had been transferred from the left to the right bank. From the junction of the Omeheu Canal the plant has worked a distance of 100 chains down-stream on the right bank of the Awaitei Stream, removing silt from the canal and placing the spoil on the stop-bank. A dense growth of willows had to be cleared ahead of the dredge, and the task of removing the stumps delayed the progress of the machine. The output for the year was approximately 57,000 cubic yards.

No. 30 Bay City Excavator has been engaged on a number of maintenance jobs. During April it deepened part of the Kapua Drain leading to a newly-constructed outlet into the Kopeopeo Canal. During May and June it was employed on stop-bank repairs and river-bank protection on the Rangitaiki River. In July and August it deepened the

berthage at the Whakatane Wharf, reopened the White Pine Drain, where it had been filled by soil scoured from the road embankment, and repaired 4 chains of stop-bank on the Whakatane River. Between October and February this machine deepened the Te Rahu Drain for a distance of 138½ chains, and has since been employed repairing flood damage on the Kopcopeo and Te Rahu Canals. The total quantity of material handled was approximately 39,500 cubic yards.

To repair flood damage, two additional light excavators have been temporarily transferred to the Rangitaiki District.

RANGITAIKI RIVER

In the Rangitaiki Drainage Scheme no attempt has been made to control major floods in the Rangitaiki River. Where the natural banks of the river are low, stop-banks have been constructed to confine floods not exceeding the maximum capacity of the river-channel at bank full stage, which is about 20,000 cubic feet per second. Considerably greater flood discharges may be expected to occur with frequencies of fifteen to twenty years. The peak flow during the flood of last March was about 27,000 cubic feet per second. The previous comparable flood occurred in 1925. With floods of this magnitude overflow is severe, with loss to the farming community and damage to drainage and protection works. Works to provide complete protection from floods would be very costly, and, owing to the nature of the country, it is considered stop-banking to eliminate overflow is, at the present stage at least, out of the question.

It is considered that the intermittent work previously carried out to improve and enlarge the flood channel of the river could now be safely speeded up. This work would, of course, require to go hand in hand with a regrading of the present stop-banks.

During the year a considerable amount of work has been necessary to control the regrowth of willows on the river-banks, and an unusual amount of revetment has been required to prevent bank-caving. The large volume of water passing down the river has had the effect of retarding the easterly movement of the river mouth.

TARAWERA RIVER

The recent raised stop-banks on the right bank of the Tarawera River prevented flood overflow along the eastern bank, but the low stop-bank above the railway on the left bank was topped, and overflow occurred along the unprotected portion of the left bank between the railway and sea. Scour and wave action caused some damage to the recently reconstructed stone groyne at the mouth of this river.

SUMMARY

The principal works carried out during the period of thirteen months from 1st March, 1943, to 31st March, 1944, are summarized as follows:—

	Miles.	Ch.	Excavation. Cubic Yd.
Drains cleaned by manual labour	121	32	..
Drains cleaned by weed-cutting launch ..	15	4	..
Drains widened and deepened by manual labour	1	59	1,943
Drains constructed by manual labour ..	1	1	1,087
Drains and canals improved with excavators	3	49	61,970
Stop-banks, rivers, streams improved with excavators	..	71	16,501
Cutting and clearing willows from banks of rivers and canals	8	32	..
Installation of flood-gates and culverts: One 3-ft.-diameter flood-gate and 5 culverts.			

EXPENDITURE AND RATES

Net maintenance expenditure, £10,684.

Rates struck: Special, £10,623; general, £6,093.

Rates collected, including arrears: Special, £10,932; general, £6,386.

NATIVE RATING

The total Native rates paid, including arrears, during the year under review was £1,705, which is the equivalent of one year's rates levied on Native lands in this area.

I have, &c.,

R. L. INNIS,

Chief Drainage Engineer.

The Under-Secretary for Lands, Wellington.

STATEMENT OF ACCOUNTS

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