

1938.
NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY.

RANGITAIKI LAND DRAINAGE.

REPORT FOR THE YEAR ENDED 31st MARCH, 1938, 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 June, 1938.
I have the honour to submit herewith the report of the Land Drainage Engineer on drainage operations in the Rangitaiki Plains for the year ended 31st March, 1938, pursuant to the provisions of the Rangitaiki Land Drainage Act, 1910.

I have, &c.,
W. ROBERTSON,
Under-Secretary for Lands.

The Hon. Frank Langstone, Minister of Lands.

REPORT OF LAND 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, 1938.

Although last season was generally classed as being not favourable to dairying, the Rangitaiki Plains came through remarkably well. On certain of the lighter lands the pastures were affected by the dry conditions, but generally the drained and grassed swamp lands were suited by the prolonged periods of low rainfall, and the dry conditions were favourable to cultivation and drainage improvement.

Following the dry spell, exceptionally heavy rainfall, totalling 15 in. for the month, caused flooding in the rivers, with an overflow of the Whakatane River into the White Pine Bush area and minor flooding on several other areas, with the usual pasture damage which results from a summer flood. The prevention of flooding of this nature is one of the most difficult problems on this or any other drainage area, and in many cases must be accepted as the risk attendant on the farming of swamp lands, particularly where these are only a few feet above sea-level. On the Rangitaiki Plains, fortunately, the soil is of a free-draining nature and the land readily responds to cultivation after the passage of the flood waters.

A commencement was made during the year with a programme of maintenance dredging of the main outfalls in the area, the Monighan dredge previously employed being thoroughly reconditioned for this work. This plant started work on the eastern district. A light drag-line plant was also employed continuously on the smaller canals and drains. The result of this work will be to give the added depth made desirable by the subsidence of the country and will also allow for the freer passage of flood-waters.

Extensive groyne work was carried out at the mouth of the Tarawera River to prevent the channel widening and shoaling beyond a safe point. This work has been successful in providing in addition a slightly lower water-level in the lower levels of the river. Dredging of the river to provide spoil for the raising of the east bank stop-bank was proceeded with throughout the year. On the completed section where the banks are fenced against stock there is now a reasonably safe protection. As previously emphasized, the river flowing at a considerably higher level than the land exerts a constant and considerable pressure on the loose understrata of the banks, and it is here that the weakness lies.

Every endeavour has been made to impress on settlers adjoining the river the danger attendant on the construction of drains immediately inside the banks, thereby weakening the resistance, but for the safety of the district generally it is necessary that some definite form of control of drain-construction should be exercised.

The removal of willows from the Rangitaiki River was carried forward, a heavy tractor being employed with excellent results during the latter portion of the year. This work, together with the constant channel-improvement that is taking place, has had a decided effect on the flood-capacity of the river.

Improvement-work was carried on in the Waioho Stream, and maintenance dredging of the canal outlet for the stream will be carried out when the Monighan dredge is available. This work will not, as anticipated by some settlers, have any material effect on the flood-level in this area, as this is governed entirely by the level of the Whakatane River.

The area has made substantial progress during the year and this is reflected by an increase in the manufacture of butter. The Rangitaiki Plains Dairy Co., situated centrally in the area, manufactured a total of 4,793 tons, an increase of 941 tons over the total of last year. The Arawa Dairy Co., which drew a portion of its supply from the Plains, was closed down during the year, its supply being distributed among the adjoining factories.

The flax companies, who have considerable holdings of the lower lands on the Plains, made very little progress with development. Unfortunately, these areas in their now undrained state seriously affect the drainage of the adjoining farm lands.

Considerable attention has been given to the improvement of the drainage of low-lying areas by the installation of flood-pumps. There are now eighteen such pumps of varying capacities, and the installation of several more is contemplated. Excellent results are in most cases being obtained, and there is no question that this area lends itself ideally to this form of auxiliary drainage.

Rainfall.—The rainfall for the year totalled 57.99 in. falling on 108 days. The wettest month was February with a fall of 15.43 in., and the driest October with a fall of 1.54 in. The average rainfall for the past twenty years was 53 in.

Maintenance.—The hand drains throughout the area were maintained in good order, the bulk of the work being done by competitive contract. A new weed-cutting launch was purchased during the year, and this was employed in removing the weed-growth from several lengths of canal. Certain canals are maintained annually by hand, and this work and the clearing and maintenance of flood-gates and stop-banks in the area was carried out this year.

Rangitaiki River.—The improvement of the channel of the Rangitaiki River by the removal of willows and obstructions was proceeded with throughout the year, and this work will be continued in the coming year. If favourable conditions obtain, the channel of this river will be straightened through the sandspit at the mouth this winter.

Tarawera River.—The placing of stone groynes near the mouth of this river was completed, a total of 2,946 cubic yards of heavy rock being quarried and carted into position.

The inspection and protection from erosion of sections of the Upper Tarawera River was carried out as required.

Dredges.—Three dredges were in commission during the year. The light Bay City dredge was engaged in drain-improvement work and covered a distance of 188½ chains, removing 21,596 cubic yards of spoil.

The Bay City drag-line was engaged in raising and widening the Tarawera River east stop-bank. The distance dredged during the year was 216 chains, 70,915 cubic yards of spoil being lifted from the river-bed and deposited on the existing stop-bank.

Monighan No. 17 drag-line commenced maintenance dredging in June on Reid's Central drain and worked northwards on this canal. A section of very heavy willow-growth on the canal-bank was removed in conjunction with this work and this delayed excavation work considerably. The distance covered during the year was 174 chains, 62,254 cubic yards of spoil being moved.

Drains in Operation.—The total length of drains constructed by the Department or taken over for maintenance purposes is as follows:—

						Miles.	Ch.
Dredge canals	..	..	..	..	..	68	28
Main outfall drains	..	..	..	..	..	121	9
Road drains	..	..	..	..	..	30	46

Of these, 112 miles 32 chains are maintained annually by the Department, whilst the growth is removed by hand.

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

Summary of Work done—

					Miles.	Ch.	Cubic Yd.
Drains cleared by hand	..	..	..	..	111	40	
Canals cleared by hand	..	..	..	..	14	70	
Drains deepened by hand	..	..	..	..	4	40	5,700
Spoil dredged	..	..	..	..	7	18	154,765
Stop-banks repaired and raised by hand	..	..	..	..	0	18	2,156
Canals cleared by weed-cutter	..	..	..	..	21	74	
Boulder groynes erected	..	..	..	..	0	20	2,946
Cottages erected	..	..	..	..	2		
Store sheds	..	..	..	..	1		

I have, &c.,

R. L. INNIS,

Land Drainage Engineer.

The Under-Secretary for Lands, Wellington.

RANGITAHI LAND DRAINAGE SCHEME.

RATE ACCOUNT AS AT 31ST MARCH, 1938.

<i>Dr.</i>	Capital.			Maintenance.	<i>Cr.</i>	Capital.			Maintenance.
	£	s.	d.			£	s.	d.	
Transfer to Drainage Works—					Balance as at 1st April, 1937 ..	3,820	11	2	5,747 1 0
Capitalized Interest Account ..	3,820	11	2	..	Penalty on rates ..	153	15	7	178 8 6
Interest on capital cost ..	8,712	14	0	..	Subsidy on maintenance-costs ..	..	..	..	2,405 15 7
Cost of maintenance ..	..	..	..	7,939 17 6	Balance as at 31st March, 1938 ..	10,016	2	11	..
Remissions ..	214	18	6	120 19 4					
Transfer to Reserve Fund ..	1,242	6	0	..					
Balance as at 31st March, 1938 ..	..	..	..	270 8 3					
	£13,990	9	8	£8,331 5 1		£13,990	9	8	£8,331 5 1

NOTE.—The rates for 1937–38 rating year were not struck until after 31st March, 1938, but the charge for interest and sinking fund in respect of the capital rate has been brought into the account.

REVENUE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 1938.

	£	s.	d.		£	s.	d.
Loss written off	0	4	3	Accrued rent	153	6	9
Loose tools written off	0	10	5	Hire of plant	2	11	6
Adjustment of overcharged rent	0	19	6	Interest on capital cost recoverable by rates ..	8,712	14	0
Law-costs remitted	3	19	0	Balance, transferred to Drainage Works Account	90,884	1	9
Capitalized interest written off (section 11, Finance Act, 1937 (No. 2))	80,180	0	0				
Interest on Public Works Fund capital	19,567	0	10				
	£99,752	14	0		£99,752	14	0

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 1938.

<i>Receipts.</i>			<i>Payments.</i>		
Public Works Fund.	Consolidated Fund.		Public Works Fund.	Consolidated Fund.	
£ s. d.	£ s. d.		£ s. d.	£ s. d.	
Plant : amount transferred from Consolidated Fund	15 0 0	..	Maintenance completed works	10,477	17 8
Rents	..	157 8 2	Refund rents	..	3 19 11
Rates	10,423	17 10	Refund rates	..	131 4 5
Law-costs	..	75 5 2	Refund amount received in error	..	6 17 0
Subsidy on maintenance costs	3,330	0 0	Refund transferred to Public Works Fund	15	0 0
Sundries	2,348	10 5	Transfer net receipts to Treasury Adjustment Account	16,178	0 3
Transfer expenditure to Treasury Adjustment Account	10,477	17 8	Transfer receipts to Public Works Fund Account	15 0 0	..
	£15 0 0	£26,812 19 3		£15 0 0	£26,812 19 3

BALANCE-SHEET AS AT 31ST MARCH, 1938.

<i>Liabilities.</i>			<i>Assets.</i>		
	£	s. d.		£	s. d.
Public Works Fund	489,168	12 7	Drainage works—		
Treasury Adjustment Account	268,262	16 11	Recoverable : Capital expenditure (section 11, Finance Act, 1937 (No. 2))	205,000	0 0
Reserve : Repayment capital costs	1,242	6 0	Not recoverable : Capital expenditure and capitalized interest	513,530	5 6
Unpaid purchase-money for land taken	210	1 1	Plant and machinery	7,738	17 4
Sundry creditors—	£ s. d.		Buildings	1,389	12 3
Departmental	942	5 10	Loose tools	418	8 3
Miscellaneous	249	13 0	Sundry goods	1,082	6 2
	1,191	18 10	Rate Account : Capital	10,016	2 11
Rate Account : Maintenance	270	8 3	Sundry debtors—	£ s. d.	
Writings-off in Suspense	130	8 10	Rates capital	11,584	18 0
Payments in advance—			Rates maintenance	8,911	17 0
Rates	139	5 0	Law-costs	545	7 4
Law-costs	0	4 0	Rents	1	2 6
	139	9 0	Miscellaneous	152	4 11
			Departmental	114	10 6
	£760,616	1 6		21,310	0 3
			Losses in Suspense	130	8 10
				£760,616	1 6

W. ROBERTSON, Under-Secretary for Lands.
WM. E. SHAW, Chief Accountant.

I hereby certify that the Rate and Revenue Accounts and Balance-sheet have been duly examined and compared with the relative books and documents submitted for audit, and correctly state the position as disclosed thereby, subject to the departmental note enclosed thereon and to the explanatory notes dealing with Departmental Accounts generally as appearing at commencement of Parliamentary Return B.-1. [Pt. IV.]—J. H. FOWLER, Controller and Auditor-General.

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