

1937.
NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY.

SWAMP DRAINAGE.

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

*Presented to both Houses of the General Assembly pursuant to Section 13 of the
Swamp Drainage Act, 1915.*

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

SIR,— In pursuance of section 13 of the Swamp Drainage Act, 1915, I have the honour to forward the report of the Chief Drainage Engineer covering operations on lands proclaimed under the Swamp Drainage Act and amendments.

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

The Hon. Frank Langstone, Minister of Lands.

REPORT OF CHIEF DRAINAGE ENGINEER.

SIR,— I have the honour to submit my annual report on the areas proclaimed under the Swamp Drainage Act, 1915, and its amendments.

KAITAIA DRAINAGE AREA (61,430 ACRES), MANGONUI COUNTY.

The maintenance of completed works was the only work of importance undertaken during the year. As usual the contracts were called for in the late summer, and all this work was satisfactorily carried out by the contractors. In addition to the cleaning of drains in the autumn, it is found necessary to carry out minor cleaning at other times of the year. In the lower-lying areas it would be a decided benefit if the flat, gradient drains could be given an extra dragging in the spring, but consequent on the response from rates not being very satisfactory it is impossible to provide for extra work of this nature.

Rainfall and river-gauge readings were taken throughout the year as shown on schedule hereunder :—

RAINFALL AND RIVER-GAUGE READINGS AT KAITAIA FOR YEAR ENDING 31ST MARCH, 1937.

Month.				Rainfall (Inches).	Wet Days in Month.	Highest Rain- fall for Twenty-four Hours (Inches).	Kaitaia River-gauge, Wai- kuriki Bridge.	
							Highest.	Lowest.
1936.								
April	..	..	..	1.58	10	0.34	53.7	52.6
May	..	..	..	1.40	9	0.60	58.4	52.5
June	..	..	..	3.52	18	1.15	56.6	52.5
July	..	..	..	5.26	24	1.15	59.7	54.0
August	..	..	..	5.99	17	1.73	66.3	53.6
September	..	..	..	3.09	19	0.94	58.4	53.6
October	..	..	..	3.73	12	1.54	65.4	52.9
November	..	..	..	7.87	15	2.34	67.8	53.6
December	..	..	..	4.24	7	2.00	66.0	52.9
1937.								
January	..	..	..	6.84	15	1.37	64.5	54.0
February	..	..	..	3.10	9	0.97	55.8	52.7
March	..	..	..	2.12	8	1.33	55.9	52.7
Totals				..	..	48.74	163	

Stop-banks.—As stated in the previous year's report, a very high spring tide topped the stop-banks on the foreshore and did considerable damage to these banks and also to the settlers' land adjoining. The repairing of these banks was taken in hand immediately, and is now well on towards completion. These banks were constructed with a view to preventing only ordinary spring tides from overflowing the lands, and now the settlers affected have requested that the banks should be enlarged so as to safeguard their lands from the extraordinary high tides. This is being investigated, and from the data now available it is evident that a very large expenditure would be necessary to achieve that object.

Drains.—Some 65 miles of drains were cleaned during the year.

Whangatane Spillway.—The erosion at the spillway intake has not increased very much during the year, but shortly it will be necessary to erect some protective works in this locality. The construction of a breastwork on the western side of the channel would remove the source of danger, and with this object in view inquiries are being made as to the amount of steel-sheet piling that can be made available from other works.

There is no question that the construction of this overflow channel is the key to the solution of the drainage problem in the district, but it is not large enough to cope with the considerable volume of water that is to be expected periodically.

Kaitia River.—The river above the spillway intake is definitely enlarging its channel, and as a result of this erosion the banks, in places, have slipped in to a considerable extent.

The contract mentioned in last year's report for the clearing of fallen timber from the channel was completed before last winter, and appreciably improved the carrying-capacity of the river.

Works Expenditure.—The total expenditure for the year was £1,820.

Drainage Rates.—The following schedule shows the position of the rates struck and collected in the two wards:—

			Capital.		Maintenance.	
			Struck.	Collected.	Struck.	Collected.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
Town	..	..	411 8 8	221 19 6	201 1 3	86 18 8
Rural	..	..	3,136 18 9	374 3 4	1,357 12 11	207 12 9

HIKURANGI DRAINAGE AREA (50,000 ACRES), WHANGAREI COUNTY.

No work has been carried out on this area during the year under review, and all staff has been disbanded or transferred to other localities. The investigation made by the District Engineer and myself definitely showed that it was impossible to prevent flooding on the swamp area, and that if further major works were carried out between Lewis's Bridge and the falls at Ruatangata there was very grave danger of serious slips occurring in this narrow valley, whilst it was certain that the hastened discharge would detrimentally affect the low-lying lands farther down the Wairua River.

The stores at Apotu are being overhauled, and every endeavour is being made to utilize them on other works, but, unfortunately, there is a lot of plant that has been used on the works for many years and is now practically worn out and unserviceable.

The works expenditure was—Capital, £346 8s. 4d.; maintenance, £115 19s.: total, £462 7s. 4d.

WAIHI DRAINAGE AREA (20,000 ACRES), TAURANGA COUNTY.

The drainage outlets, stop-banks, and flood-gates in this area were maintained by the Department, improvements and replacements being carried out when desirable. The total length of drains annually maintained is 37 m. 73 ch., the bulk of this work being done by contract. Two lengths of drain totalling 225 ch. were reconditioned during the year.

A gang was employed removing willows and other obstructions from the upper reaches of the Kaikokopu Stream.

Two new steel flood-gate doors were installed to replace concrete doors, and the outlets of these gates were protected with stone.

The Monighan dredge was employed for four months of the year removing accumulated silt from the upper reaches of the Wharere Canal. The distance covered during this period was 115 ch., a total of 30,438 cubic yards of spoil being removed. It will be necessary to consider in the near future the employment of a light walking-plant on maintenance dredging in the lower reaches of the Kaikokopu Canal.

Flax-milling was carried out throughout the season by the company which leases the major portion of the unsettled swamp area. Development was proceeded with by the Department on a swamp area west of the Wharere Canal, the total area grassed to date being 738 acres. This land is being prepared as dairy-farms, five farms being fully equipped for this purpose. Bullocks and sheep are being run on the balance of the area to assist consolidation and to control ragwort. A water-supply was provided for the area, and an electrically operated flood-pump will shortly be installed to maintain a lower average water-level in the low-lying areas.

Late in the year the Native Department commenced development operations in the Wacwaetutuki Block.

The expenditure during the year was £1,109 12s. 8d.

Drainage rates struck totalled—Capital £658 7s. 9d., maintenance £934 2s. 7d., whilst the amount collected was—Capital £322 19s. 5d., maintenance £812 1s. 11d.

POUKAWA DRAINAGE AREA (15,567 ACRES), HAWKE'S BAY.

Maintenance of completed work was carried out during the year, and I am indebted to the Commissioner of Crown Lands, Napier, for carrying out inspections of cleaning contracts.

The expenditure during the year was £94 1s. 9d.

Rates struck amounted to £1,121 1s. 5d., whilst £679 13s. 9d. was collected by the District Office at Napier.

I have, &c.,

R. G. MACMORRAN,

Chief Drainage Engineer.

The Under-Secretary for Lands, Wellington.

SWAMP LAND DRAINAGE SCHEMES.

RATE ACCOUNTS FOR YEAR ENDED 31ST MARCH, 1937.

KAITALA DRAINAGE AREA.

Special Rate Accounts: Capital.

	Rural	Town		Rural	Town
	Subdivision.	Subdivision.		Subdivision.	Subdivision.
<i>Dr.</i>	£ s. d.	£ s. d.	<i>Cr.</i>	£ s. d.	£ s. d.
Transfer to Reserve Fund	391 9 2	53 9 9	Balance	1,077 15 2	45 10 4
Interest charge	2,248 10 10	356 10 3	Rates levied	3,110 8 2	
Remissions	188 8 0	0 15 9	Less Rebate	376 17 5	
Balance at 31st March, 1937	1,208 0 6	68 14 2		2,733 10 9	411 8 8
			Penalty, 10 per cent. unpaid rates	225 2 7	22 10 11
	<hr/>	<hr/>		<hr/>	<hr/>
	£4,036 8 6	£479 9 11		£4,036 8 6	£479 9 11

General Rate Accounts : Maintenance.

<i>Dr.</i>		Rural Subdivision.		Town Subdivision.		<i>Cr.</i>		Rural Subdivision.		Town Subdivision.	
		£	s. d.	£	s. d.			£	s. d.	£	s. d.
Cost of maintenance	..	1,191	15 9	183	11 6	Balance ..	..	31	13 7	75	11 4
Remissions	..	37	12 4	0	4 11	Rates levied	..	1,344	12 4	201	1 3
Balance at 31st March, 1937	..	257	9 10	103	15 5	Penalty, 10 per cent. unpaid rates	..	110	12 0	10	19 3
		£1,486	17 11	£287	11 10			£1,486	17 11	£287	11 10

WAIHI DRAINAGE AREA.

Special Rate Accounts: Capital.

<i>Dr.</i>		Pukehina Ward.		Kaikokopu Ward.		<i>Cr.</i>		Pukehina Ward.		Kaikokopu Ward.	
		£	s. d.	£	s. d.			£	s. d.	£	s. d.
Transfer to Reserve Fund	..	34	2 6	51	3 9	Balance	..	867	2 7	31	2 4
Interest charges	..	215	17 6	323	16 3	Rates levied	..	339	9 7	407	6 4
Remissions	..	..	..	9	15 11	Penalty, 10 per cent. unpaid rates	..	33	18 11	22	15 9
Balance at 31st March, 1937	..	990	11 1	76	8 6						
		£1,240	11 1	£461	4 5			£1,240	11 1	£461	4 5

General Rate Accounts : Maintenance.

<i>Dr.</i>				<i>Cr.</i>			
	Pukehina Ward.	Kaikokopu Ward.	Central Ward.		Pukehina Ward.	Kaikokopu Ward.	Central Ward.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
Balance .. ..	..	..	43 10 7	Balance	833 12 3	672 9 2	..
Cost of maintenance ..	135 9 6	812 18 6	406 9 3	Rates levied	122 4 4	314 19 0	399 15 7
Remissions .. ..	..	18 19 9	8 10 11	Penalty, 10 per cent. un- paid rates	12 4 5	14 12 9	21 3 7
Balance at 31st March, 1937	832 11 6	170 2 8	..	Balance at 31st March, 1937 .. ..	..	..	37 11 7
	£968 1 0	£1,002 0 11	£458 10 9		£968 1 0	£1,002 0 11	£458 10 9

POUKAWA DRAINAGE AREA.

Special Rate Account: Capital.

<i>Dr.</i>				£	s.	d.	<i>Cr.</i>				£	s.	d.
Remissions .. ..	..	..	..	11	15	4	Balance .. .. .	..	..	..	280	0	5
Transfer to Reserve Fund .. ..	..	..	..	128	15	3	Rates levied .. .. .	..	..	..	1,121	1	5
Interest charge .. ..	..	..	..	948	14	9	Penalty, 10 per cent. unpaid rates ..	..	..	..	55	0	10
Balance at 31st March, 1937 ..	..	..	..	366	17	4							
				£1,456	2	8					£1,456	2	8

General Rate Account: Maintenance.

<i>Dr.</i>						£	s.	d.	<i>Cr.</i>						£	s.	d.
Maintenance, completed works	..	..	..	..	..	55	13	1	Balance	..	..	..	..	..	274	7	5
Balance	..	..	..	..	..	218	14	4									
						<hr/>									<hr/>		
						£274	7	5							£274	7	5

RECEIPTS AND PAYMENTS ACCOUNT FOR YEAR ENDED 31ST MARCH, 1937.

<i>Receipts.</i>	Public Works Fund. £ s. d.	Consolidated Fund. £ s. d.	<i>Payments.</i>	Public Works Fund. £ s. d.	Consolidated Fund. £ s. d.
Rents from national endowment land in Waihi Drainage Area ..	..	£54 11 1	Kaitaia Drainage Area : Maintenance, completed works ..	..	1,821 11 0
Special rate for interest and sinking fund—			Waihi Drainage Area : Maintenance, completed works ..	..	1,137 2 8
Waihi Drainage Area .. ..	..	322 19 5	Poukawa Drainage Area—		
Kaitaia Drainage Area .. ..	..	596 2 10	Drainage works, &c.	95 16 3	..
Poukawa Drainage Area .. ..	..	679 10 0	Maintenance, completed works ..	..	57 12 3
General rate for administration and maintenance—			Hikurangi Drainage Area—		
Waihi Drainage Area .. ..	..	812 1 11	Drainage works, &c.	347 8 4	..
Kaitaia Drainage Area .. ..	..	294 11 5	Maintenance, completed works ..	..	115 19 0
Poukawa Drainage Area .. ..	..	0 3 3	Refund of rates .. ..	..	8 15 6
Rates paid in advance .. ..	..	0 0 6	Plant, &c. (general)	2,261 18 11	..
Thirds .. ..	..	145 7 10	Transfer, receipts to Treasury		
Sundry rents .. ..	..	25 17 6	Adjustment Account .. ..	..	3,436 15 9
Miscellaneous .. ..	..	114 5 6	Transfer, receipts to Public Works Fund	325 13 9	..
Credits in reduction of expenditure	325 13 9	..			
Transfer, expenditure to Treasury Adjustment Account .. ..	..	3,132 4 11			
Transfer, expenditure to Public Works Fund	2,705 3 6	..			
	£3,030 17 3	£6,577 16 2		£3,030 17 3	£6,577 16 2

BALANCE-SHEET AS AT 31ST MARCH, 1937.

Liabilities.				Assets.			
£ s. d.				£ s. d.			
Capital Account, Public Works Fund 692,020 18 5				Kaitaia Drainage Area—			
Reserve : Repayment capital costs—				Allocated cost of works on which			
Kaitaia Drainage				rates are levied—			
Area—				Rural subdivision 60,000 0 0			
Rural subdivision 2,423 15 5				Town subdivision 8,200 0 0			
Town subdivision 331 4 9				68,200 0 0			
2,755 0 2				Excess cost of works not recover-			
Waihi Drainage				able 155,944 14 2			
Area—				Interest Account — Proportion			
Pukehina Subdi-				chargeable to district .. 141,686 17 9			
vision .. 236 16 7				297,631 11 11			
Kaikokopu Subdi-				Waihi Drainage Area—			
vision .. 355 4 11				Allocated cost of works on which			
592 1 6				rates are levied—			
Poukawa Drainage Area .. 595 13 3				Pukehina Subdivision .. 5,000 0 0			
3,942 14 11				Kaikokopu Subdivision .. 7,500 0 0			
Rate Accounts—				Central Subdivision .. 49,414 3 6			
Special Rate Accounts : Capital—				61,914 3 6			
Kaitaia Drainage				Excess cost of works not recover-			
Area—				able 24,526 1 6			
Rural subdivision 1,208 0 6				Interest Account — Proportion			
Town subdivision 68 14 2				chargeable to district .. 43,052 11 11			
1,276 14 8				67,578 13 5			
Waihi Drainage				Poukawa Drainage Area—			
Area—				Drainage works 16,013 19 9			
Pukehina Subdi-				Interest Account : Proportion			
vision .. 990 11 1				chargeable to district .. 2,247 1 4			
Kaikokopu Subdi-				18,261 1 1			
vision .. 76 8 6				Hikurangi Drainage Area—			
1,066 19 7				Drainage works 247,249 9 0			
Poukawa Drainage Area .. 366 17 4				Interest Account : Proportion			
2,710 11 7				chargeable to district .. 135,213 0 4			
General Rate Accounts : Mainten-				382,462 9 4			
ance—				Mangawai Drainage Area—			
Kaitaia Drainage				Drainage works 1,877 19 3			
Area—				Interest Account : Proportion			
Rural subdivision .. 257 9 10				chargeable to district .. 1,411 5 0			
Town subdivision 103 15 5				3,289 4 3			
361 5 3				Harihari Drainage Area—			
Waihi Drainage				Drainage works 4,355 2 11			
Area—				Interest Account : Proportion			
Pukehina Subdi-				chargeable to district .. 2,892 16 7			
vision .. 832 11 6				7,247 19 6			
Kaikokopu Subdi-				Buildings 1,406 1 9			
vision .. 170 2 8				Wharves 56 8 5			
1,002 14 2				Plant and machinery 29,537 9 10			
Poukawa Drainage Area .. 218 14 4				Loose tools 269 10 6			
1,582 13 9				Stores on hand 3,769 0 3			
Sundry creditors—				Sundry debtors for rates—			
Miscellaneous 18 8 9				Drainage District.			
Departmental 0 15 4				Capital.		Maintenance.	
19 4 1				£ s. d.		£ s. d.	
Rents charged in advance 223 18 0				Kaitaia .. 14,550 10 3		5,027 19 2	
Payments in advance—				Waihi .. 5,229 10 0		6,331 7 4	
Rents 5 2 0				Poukawa .. 2,506 6 10		169 4 0	
Rates 4 18 4				Sundry debtors—		2,675 10 10	
10 0 4				Rent under section 4 (2), Swamp			
Suspense Account 0 6 0				Land Drainage Amendment Act,			
Writings-off in Suspense 810 19 2				1926 1,200 7 0			
Treasury Adjustment Account 288,796 14 7				House-rents 20 5 0			
£990,118 0 10				Law-costs 679 6 1			
				Miscellaneous 48 3 0			
				Departmental 602 16 10			
				2,550 17 11			
				Rate Account—			
				General Rate Account—Maintenance—			
				Waihi Drainage District : Central Subdivision			
				Maintenance-costs : Hikurangi 37 11 7			
				Postponed rent 434 8 9			
				Premiums on conversion 502 19 11			
				Revenue Account — Waihi Drainage Area :			
				Central Ward 153 0 0			
				Losses in Suspense 9,829 5 6			
				Cash in transit from Post-office 810 19 2			
				£990,118 0 10			

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

I hereby certify that the Rate 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 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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