

1931.  
NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY.

# SWAMP DRAINAGE.

REPORT FOR THE YEAR ENDED 31ST MARCH, 1931, TOGETHER WITH STATEMENT OF ACCOUNTS.

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

SIR,—

Department of Lands and Survey, Wellington, 1st July, 1931.

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. E. A. Ransom, Minister of Lands.

## REPORT BY CHIEF DRAINAGE ENGINEER.

SIR,—

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

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

The principal works carried out comprise: (1) Completion of excavation, Whangatane spillway and school cut; (2) improving Awanui River; (3) installation of flood-gates; (4) shaping stop-banks and maintenance of drains.

*Classification and Rating.*—In terms of sections 44 and 45 of the Finance Act, 1930 (No. 2), the capital expenditure chargeable against the Kaitaia Town District subdivision was assessed at £8,200.

The rural subdivision capital expenditure was assessed at £60,000, reduced to £40,000 for 1930–31, and increasing by £2,000 for each financial year until 1939–40, when the capital rate on the full £60,000 will be struck. Previous capital rates were cancelled, and a subsidy of 18s. in the £1 on maintenance rate was provided by the Government. During the year 557 rate notices were sent out, and rates struck totalled £3,813 12s. 4d.

*Rainfall, &c.*—Rainfall and river-gauge readings have been recorded daily at Kaitaia. The year was a particularly dry one, and the total rainfall (39·27 in.) is the lowest recorded for eleven years. The 6th June, 1930, was the only occasion on which the Awanui River overflowed its banks, following 2·53 in. of rainfall in twenty-four hours. During the remainder of the year only small floods occurred, which did not overtax the channel capacity. The following table gives details of rainfall for the past thirteen years:—

Year.	Rainfall for Year.	Wettest Month and Rainfall.		Driest Month and Rainfall.	
	Inches.		Inches.		Inches.
1918–19 ..	47·30	Oct., 1918 ..	9·06	Aug., 1918 ..	1·39
1919–20 ..	31·71	July, 1919 ..	7·37	Dec., 1919 ..	0·62
1920–21 ..	53·11	May and Aug., 1920 (each) ..	8·02	Mar., 1921 ..	1·13
1921–22 ..	49·42	Mar., 1922 ..	5·84	Jan., 1922 ..	2·24
1922–23 ..	44·81	Oct., 1922 ..	7·46	Jan., 1923 ..	2·02
1923–24 ..	49·23	Oct., 1923 ..	7·92	Dec., 1923 ..	1·38
1924–25 ..	48·89	May, 1924 ..	10·34	Mar., 1925 ..	0·51
1925–26 ..	57·90	May, 1925 ..	10·43	Feb., 1926 ..	0·88
1926–27 ..	64·91	Oct., 1926 ..	9·62	Dec., 1926 ..	1·51
1927–28 ..	55·97	July, 1927 ..	11·35	Jan., 1928 ..	0·22
1928–29 ..	58·21	June, 1928 ..	9·13	Feb., 1929 ..	0·28
1929–30 ..	51·11	May, 1929 ..	6·30	Mar., 1930 ..	0·98
1930–31 ..	39·27	June, 1930 ..	7·55	Dec., 1930 ..	0·68

*Awanui River.*—Bullock teams were employed to scoop back spoil previously dredged from the river-bed in order to provide space on the banks for further dredge spoil. Dredger No. 10 (Priestman) was engaged for six months in dredging sand from the bed of the channel between the Northern Steamship Co.'s wharf at Awanui and the Dairy Company's wharf. Approximately 27,662 cubic yards of spoil was dredged and placed on the river-banks.

Some 20 chains of this channel was snagged by bullock team where a quantity of timber had lodged below the Whangatane spillway intake. Fallen poplar-trees and other timber were removed from the stream for 80 chains above Kaitaia Township, and young poplars and willows removed or ring-barked and poisoned wherever they appeared throughout the portion of the channel which had been cleared.

Some 96 chains of the channel, from Sunray Park cut to spillway intake, was dredged by drag-lines, which removed overhanging trees from the banks and timber from the bed of the stream. 12,600 cubic yards of spoil was removed from the bed of the stream and in easing bends, and 4,350 yards was removed by drag-lines in widening and deepening 5·30 chains of this channel through Sunray Park cut.

*Whangatane Spillway.*—Excavation of this spillway was completed in July, and flood-water passed down the channel in August and subsequently whenever freshes occurred in the river. Two drag-lines were employed on excavation, and enlarged 49·04 chains from 20 ft. to 50 ft. bottom, and 23·20 chains from 30 ft. to 50 ft. bottom, excavating 57,120 cubic yards of spoil. Bridging and flood-gates were completed throughout, and 190 ft. of concrete floor and stonework on batter was placed below the weir at intake to prevent scour. Two swing-gates have been erected on boundary-fences crossing the channel, and further gates will shortly be placed on all boundaries intersected.

*School Cut.*—Excavation of this cut was commenced by drag-lines in August and completed in December. 20·05 chains of new cut was excavated through heavy clay, and 5 chains of old river-bed cleared and deepened. The new channel has 30 ft. bottom at average depth of 18 ft., and the total excavation was 48,850 cubic yards. The new channel was bridged at Church Road, and flood-gates and culverts placed for drainage of adjacent lands into the cut. Other works entailed in connection with the cut were the erection of fences and the provision of a new playing-area for the Kaitaia School. This has been drained, cleared, and ploughed, and will be finally worked up and levelled for sowing of grass as soon as the ground is in favourable condition.

*Drains.*—48 miles 50 chains of drains were cleared, of which 14 miles 47 chains were cleared twice during the year. 3 miles 18·7 chains of new drain was constructed by hand, and 66·5 chains of the Kareponia Creek widened and deepened by drag-line which excavated 15,700 cubic yards of spoil. 5 miles 45 chains of drain was widened and deepened by hand labour. In the Motutangi area 50 chains of the main outlet was cleared of weeds and silt deposits removed from bottom. 27 chains of tile drain was placed on the school playing-field, which is being prepared at Church Road.

*Flood-gates.*—Thirteen flood-gates were installed as outlets to take local run-off into main channels and prevent backflow of flood-waters. The total number of flood-gates now installed in the area is fifty-three, ranging from 36 in. to 15 in. in diameter, and these were inspected at frequent intervals for clearing of blockages and to ensure efficient operation.

*Stop-banks.*—Two miles of stop-bank was planted with Kikuyu grass, which appears to grow well in various classes of soil, and will eventually provide good binding for the banks to ensure stability. 66·5 chains of bank was thrown up on the Kareponia Creek by drag-line, and of this 10 chains was shaped by hand. 4 miles 69 chains of bank was raised and strengthened.

*Bridges.*—One timber bridge, 107 ft. in length, was erected over the Whangatane spillway at Donald's Road crossing. One steel-girder bridge, 105 ft. in length, with traffic and footway in hardwood decking, was erected over the school cut at Church Road, and two sill bridges, of 14 ft. and 20 ft. length, were erected over outlet drains.

*Dredges.*—The amount of spoil excavated by dredges totalled 166,282 cubic yards, and, in addition, a large amount of timber was handled in clearing the Awanui River.

*Surveys.*—Levels, peat soundings, &c., were taken over a large area of Crown land—west of the Awanui River. The land generally consists of deep peat or low-lying country liable to flood under conditions which had existed up to this year. A considerable reduction in flood-levels is anticipated as a result of works recently completed, but it appears desirable to check results by observation in this area during a period of high water produced by heavy rainfall, and this will be done at the first opportunity.

*Proposals for ensuing Year.*—Maintenance of existing drains and other works, completion of stop-banks at lower end of Whangatane spillway, and some fencing are the only works proposed for the ensuing year.

*Works Expenditure.*—The total expenditure for the year was £18,397 8s. 5d., of which day labour absorbed £10,498 16s. Some nineteen piecework contracts were let, totalling £1,074 10s. 9d.

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

*Rainfall.*—The rainfall was comparatively light during the year, save for a very heavy storm in June. The yearly total recorded at the Apotu gauge was 41·12 in. During the last four months of the period under review the river in the main swamp area has been consistently low, at an average of 16·8 ft.

*Floods.*—Serious flooding of the main swamp area occurred in June, and the maximum stages recorded on the Wairua River were: 0 m. 55 c., 14·8 ft.; Purua Bridge, 26 ft.; Lewis's Bridge, 33·1 ft.; Jordan Bridge, 33·9 ft.

The maximum river-discharge at 0 m. 55 c. was 4,800 cusecs, with a recorded rainfall at Ruatanga of 4·48 in.; Apotu, 4·26 in.; Marua, 9·95 in.; Puhipuhi, 14·60 in.

*Data.*—Data of precipitation at various stations, gaugings of run-off, water stages, &c., has been collected.

*Construction Work.*—Construction work with excavators on the Wairua River and hand-dug drains where desirable were carried on as expeditiously as general working-conditions allowed.

#### *Excavator Work, Wairua River.*

*Main Diversions.*—No work has been carried out on same.

*Main Diversion Spillways.*—The upper end of the long D-B spillway was completed by the removal of the treacherous soft pug and the large stone that could be handled with the dump-trucks.

*River-improvement.*—Throughout the length from Purua Bridge to Section 133 (below Lewis's Bridge) No. 14 Bucyrus and No. 3 Priestman have been engaged on the removal of timber, rock bars, easing of bad bends, and lowering the grade-levels of diversions constructed when the river-level was some feet higher than at present. As a result present low summer levels at Purua and Lewis's bridges are 14·8 ft. and 16·4 ft. respectively.

*Up-river Diversions.*—No. 2: The grade of this has been lowered to 9 ft. on a width of 30 ft. The widening of the new bottom to 60 ft. cannot be done till stages of high water.

No. 3: This has been regraded down to a level of 10·5 ft. on a width of 40 ft. at the narrowest part. Further width between the existing batters is not possible, and must be sought by widening from the severance side.

No. 4: Work is in hand to regrade this diversion to a level of about 10·5 ft. on a width of some 50 ft.

No. 5: This work is in very bad country, and a scooping contract is in hand to attempt to clear the cut to present low summer level on a width of 40 ft.

No. 6: Work is well in hand by the drag-line to clear the rock, &c., at the lower end of this cut, and by the time of the first winter fresh there should be a good channel.

No. 7: Through the year the drag-line completed this work to a grade of 11 ft. on a width of 50 ft.

No. 8: Three chains only of this work has so far been done.

No. 10: This work is in extremely unstable country, there being some 8 ft. to 10 ft. of heavy clay over a peat-seam about 8 ft. thick. An attempt was made to carry out this work with No. 26 dipper with the machine working inside dams with water at ground-level, but even then the peat has been forced up almost to original ground-level. Through the coming winter the work already done will act as a spillway only.

No. 13: The drag-line has completed this work to a grade of 12 ft. on a bottom width of 50 ft.

No. 15: The drag-line has constructed this work to a grade of 15 ft. (no more depth being desirable, owing to underlying sand) on a width of 60 ft.

#### *Hand-work.*

*Okarika Valley Drainage.*—Improvements have been carried out to the main outfall drain from 2 m. 20 ch. to 3 m. 50 ch. The work has been extended 40 chains from the latter mark to reach the narrow lagoon in Section 13A, and the clearing of this lagoon is almost completed. The branch drain has been improved from 1 m. 60 ch. to 2 m. 10 ch. and the work extended to 3 m. 60 ch. in Section 14. The old drain along the south-east boundary of Section 17 has been improved on the right side of main outfall. The outlet to serve Sections 7, 12, and 11 has been completed to reach the lower boundary of Section 11.

*Outlet through Sections 10, 9, 5, Block XV, Hukerenui.*—This work has been completed to reach the lower boundary of Section 5.

*Riponui Outlet.*—Early in the year improvements were completed to the stream at the lower end of the new drain in this locality.

*Otonga Outlet.*—The construction of the branch drain through Section 97 has been completed to reach the lower boundary of Section 94.

*Hikurangi Arm Drainage.*—A small drain has been completed, from the Mangawhero diversion, through the low country of Sections 6, N.W. 2, and S.E. 2 to the lower boundary of Section 1.

*Maintenance.*—The Ngararatunua Canal was cleaned during the last month of the period.

#### *Bridges.*

*No. 10 Diversion.*—An access bridge, consisting of three 40 ft. spans with rolled-steel joists on H.W. pile piers, has been constructed at the lower end of this diversion to serve the large severance created.

*Plant and Machinery.*

*Bucyrus Plant.*—The Bucyrus plant (Nos. 12, 13, and 14 excavators) have been engaged throughout the year as drag-lines on diversion work and river-improvement. The wear-and-tear on the plant has not been excessive, save perhaps for unavoidable travelling, and on buckets in grappling with timber and rock under water.

*No. 26 Dipper.*—The only work undertaken by this machine was in an attempt to construct the No. 10 diversion, which job, unfortunately, was far short of success, through the unstable nature of the country.

*No. 3 Priestman.*—This machine has been wholly on river-improvement work above Purua Bridge, and has had a hard year in grappling with massive timber, rock, and rubble.

*Drilling and Compressor Plant.*—This plant was used early in the period to complete the long D-B spillway; since then it has been overhauled thoroughly and later used on the rock-work of Nos. 7 and 6 diversions.

*Locomotives, Trucks, &c.*—These have not been used since the completion of the D-B spillway. The two Plymouth locomotives have been taken to Apotu and overhauled.

*Truck and Cars.*—One 30 cwt. truck and two cars have been in constant use for the year.

*Workshops.*—These have been kept busy through the year, where many machine parts have been made and repaired.

*Other Works.*

*Survey Work.*—A complete engineering survey has been made of the Whakapara arm of the swamp, and of the Parker Lamb Block in the upper reaches of the Waiotu arm. Levels, cross-sections, &c., have been taken as required for fields of relief work.

Through the first three months of the year some forty relief workers were engaged on hand drainage. These men had to be put off in June. Early in December thirty new men were engaged, and of these sixteen still remain.

*Proposals for coming Year.*—Excavator work on river improvement and diversion and hand-work on Okarika Valley is proposed, and cleaning of subsidiary canals and drains will be necessary in the coming Autumn.

*Works Expenditure.*—The sum of £21,859 6s. 5d. was expended during the year, of which day labour absorbed £9,886 5s. 5d. Some twenty-four piecework and co-operative contracts were let, entailing an expenditure of £2,989 13s. 9d.

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

In addition to the usual maintenance and improvement of hand drains, maintenance dredging was carried out on the Kaikokopu and Wharere Canals, and this work was completed towards the end of the period. The programme of drain improvement and construction commenced during the previous year by relief labour was carried to completion.

*Dredges.*—Monighan No. 17 dredge was employed on redredging the lower Kaikokopu and the Wharere Canals. Some 1 mile 72 chains of the Kaikokopu Canal and 2 miles 12 chains of the Wharere Canal were redredged, and the spoil removed totalled 123,070 cubic yards.

*Maintenance.*—All hand drains in the area were cleaned during the year; also repairs carried out to stop-banks and flood-gates as required. The length of hand drains cleaned was 34 miles 17 chains. The lower end of the Wharere Canal for a distance of 1 mile 35 chains was cleared of all growth by hand.

*Relief Works.*—Relief workers were engaged in completing the programme of drain-construction work in the flax-lease area between the Pongakawa and Wharere Canal, and in constructing new drains in the Pukehina Block. The length of drain bordering the Upper Kaikokopu Stream was also completed. The total length of new drains constructed was 5 miles 23 chains in the Pukehina area, of a total yardage of 4,022 cubic yards, and 4 miles 72 chains in the Nos. 1, 2, and 3 flax leases, of a total yardage of 7,055 cubic yards. In addition, a total length of 2 miles 51 chains of drains in the Central Block and Upper Kaikokopu were widened and deepened, with a total of 7,650 cubic yards of spoil removed.

*Flax-culture.*—There is an increasing growth of flax reaching the millable stage on the Crown leasehold areas, but milling was not proceeded with during the year owing to the very low price of fibre. The drains constructed by the Department have been of great benefit, and with the good season experienced the low-lying areas have rapidly dried out and a certain amount of consolidation taken place. The subsoil of this country is of a porous nature, and, despite the small amount of freeboard available, there is no doubt that with adequate maintenance of internal drainage sufficient movement can be maintained in the ground-water to prevent the stagnation which is fatal to the healthy growth of flax.

*Rates.*—Rates struck totalled £2,505 19s. 3d., some eighty-nine rate demands being issued.

Rates collected amounted to £202 16s. 8d.

*Works Expenditure.*—The expenditure for the year was £4,116 2s. 1d., of which day labour absorbed £2,521 9s. and twenty-three piecework or co-operative contracts amounted to £702 4s.

## POUKAWA DRAINAGE AREA (13,567 ACRES), HAWKE'S BAY COUNTY.

Dredge-work by No. 5 Priestman dredge was continued from the commencement of the period under review until November, 1930, with a total of 71,648 cubic yards excavated. The channel, 30 ft. wide and 7 ft. deep, from the southern end of Lake Poukawa through the Crown land was dredged for a further 67 chains. In places fairly heavy timber was encountered, and trouble was also experienced with soft peat, which filled up the cut at times, necessitating the digging of hand drains outside the spoil-bank.

The dredge also deepened and improved 124 chains of canals constructed in the previous year. The dredging programme having been completed, the dredge was laid up in November, 1930.

The dredging-work on the main outlet channel let by contract to Dredgers Ltd. was continued with the drag-line, and a total yardage of 20,963 excavated during the year, covering a distance of 83 chains.

Some 139 chains of hand drains were dug, and other minor works comprised erection stock-bridge to severances, small outlet drain through stop-banks, excavating drinking-places for stock, and erecting 50 chains of fences. The work of opening the old Poukawa Stream for some 30 chains was also carried out.

The temporary timber control-gate installed to control the water-level in Lake Poukawa and provide the necessary depth of water to operate the floating dredge suddenly collapsed early in December. Emergency measures were taken, and the dam was blocked again within two days, the water being by-passed through the old stream channel. Comparatively small damage was done to the lower lands lying down-stream. Preparations for the proposed permanent structure had therefore to be hurried forward, and plans were prepared for a double-skinned dam of steel-sheet piling with two waterways, provision being made to absorb the shock of the overflow by means of a water-filled concrete drop. The rows of sheet piling are to be driven through and sealed. The construction is expected to commence early in April, as the steel-sheet piling will not be landed until then.

The February earthquake was very severe in this particular area, and the hills on the route from the lake were badly shattered. The bottom of the dredge-cut through the swamp portion rose generally several feet, and slips occurred in several places. The damages sustained in the dredged channels can be rectified next summer.

The level of the lake at the end of the period was 77.6 ft. above datum, the average level prior to drainage having been 83 ft.

The expenditure for the year totalled £4,502 6s. 9d., of which day labour absorbed £1,242 2s. 4d., and six contracts totalled £2,068 19s. 3d.

I have, &c.,

R. G. MACMORRAN,

Chief Drainage Engineer.

The Under-Secretary for Lands, Wellington.

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## SWAMP LAND DRAINAGE ACCOUNT.

RATE ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 1931.

## KAITAIA DRAINAGE AREA.

*Special Rate Accounts.*

	Rural Subdivision. £ s. d.	Township Subdivision. £ s. d.		Rural Subdivision. £ s. d.	Township Subdivision. £ s. d.
To Transfer to Sinking Fund ..	300 0 0	41 0 0	By Rates levied ..	3,296 13 8	459 9 0
Interest charge ..	2,000 0 0	410 0 0	Balance ..	3 6 4	..
Rebate ..	1,000 0 0	..			
Balance ..	..	8 9 0			
	<u>£3,300 0 0</u>	<u>£459 9 0</u>		<u>£3,300 0 0</u>	<u>£459 9 0</u>

*General Rate Accounts.*

	Rural Subdivision. £ s. d.	Township Subdivision. £ s. d.		Rural Subdivision. £ s. d.	Township Subdivision. £ s. d.
To Cost of maintenance ..	2,215 10 0	200 0 0	By Balance ..	349 2 8	..
Balance ..	..	9 17 8	Rates levied ..	1,799 3 4	204 12 11
			Penalty, 10 per cent., 1929-30	..	..
			rates ..	51 7 3	5 4 9
			Balance ..	15 16 9	..
	<u>£2,215 10 0</u>	<u>£209 17 8</u>		<u>£2,215 10 0</u>	<u>£209 17 8</u>

NOTE.—General rates levied were subsidized from Consolidated Fund as follows: Rural subdivision, £854 16s. 10d.; township subdivision, £95 3s. 2d.

## WAIHI DRAINAGE AREA.

*Special Rate Accounts.*

	Pukehina Ward. £ s. d.	Kaikokopu Ward. £ s. d.		Pukehina Ward. £ s. d.	Kaikokopu Ward. £ s. d.
To Balance ..	..	0 16 6	By Balance ..	99 2 0	..
Transfer to Sinking Fund ..	26 5 0	39 7 6	Rates levied ..	374 2 0	380 15 1
Interest charge ..	248 15 0	373 2 6	Penalty, 10 per cent., 1929-30 rates ..	36 17 7	37 3 5
Balance ..	235 1 7	4 12 0			
	<u>£510 1 7</u>	<u>£417 18 6</u>		<u>£510 1 7</u>	<u>£417 18 6</u>

*General Rate Accounts.*

	Pukehina Ward. £ s. d.	Kaikokopu Ward. £ s. d.	Central Ward. £ s. d.		Pukehina Ward. £ s. d.	Kaikokopu Ward. £ s. d.	Central Ward. £ s. d.
To Cost of maintenance	182 3 6	669 18 11	1,293 7 2	By Rates levied ..	370 16 5	671 1 2	709 4 7
Adjustment for in-				Penalty, 10 per cent.,			
correct apportion-				1929-30 rates ..	16 0 3	75 17 9	58 17 1
ment of costs for				Adjustment for in-			
1929-30 ..	118 7 10	..	..	correct apportion-			
Balance ..	86 5 4	344 12 8	..	ment of costs for			
				1929-30 ..	..	267 12 8	116 16 4
				Balance ..	..	..	408 9 2
	<u>£386 16 8</u>	<u>£1,014 11 7</u>	<u>£1,293 7 2</u>		<u>£386 16 8</u>	<u>£1,014 11 7</u>	<u>£1,293 7 2</u>

## RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 1931.

<i>Receipts.</i>	£	s.	d.	<i>Payments.</i>	£	s.	d.
To Balance—Cash in Public Account, 1st April, 1930 ..	7,007	10	6	By Kaitaia Drainage District—			
Debentures issued under Swamp Land Drainage Act, 1915, and Appropriation Act, 1918, section 46 ..	45,000	0	0	Drainage-works, &c. ..	12,985	18	8
Temporary transfers from other accounts under section 40, Public Revenues Act, 1926 ..	40,500	0	0	Management and engineering expenses ..	1,579	15	3
Rents and royalties from national endowment lands in Waihi Drainage District ..	404	2	9				14,565 13 11
Special rate for interest and Sinking Fund—				Waihi Drainage District—			
Kaitaia Drainage District ..	259	18	6	Drainage-works, &c. ..	3,721	3	5
Waihi Drainage District ..	43	14	0	Management and engineering expenses ..	184	15	4
			303 12 6				3,905 18 9
General rate for administration and maintenance—				Poukawa Drainage District—			
Kaitaia Drainage District ..	321	16	4	Drainage-works, &c. ..	3,447	16	4
Waihi Drainage District ..	199	12	9	Management and engineering expenses ..	265	9	3
			521 9 1				3,713 5 7
Subsidy from Consolidated Fund—Main-				Hikurangi Drainage District—			
tenance, Kaitaia Drainage District ..	950	0	0	Drainage-works, &c. ..	16,246	8	9
Rents ..	145	13	3	Management and engineering expenses ..	1,724	11	10
Interest on investments ..	50	9	9				17,971 0 7
Credits in reduction of expenditure on works, &c. ..	137	1	2	Fuel and stores ..	..		8,780 9 0
Miscellaneous receipts ..	806	11	6	Rates refunded ..	..		9 10 0
				Expenses raising loans ..	..		42 14 7
				Temporary transfers from other accounts repaid ..	..		40,500 0 0
				Cash—Balance in Public Account, 31st March, 1931 ..	..		6,337 18 1
							<u>£95,826 10 6</u>
	<u>£95,826</u>	<u>10</u>	<u>6</u>				

SWAMP LAND DRAINAGE ACCOUNT—*continued.*

BALANCE-SHEET AS AT 31ST MARCH, 1931.

<i>Liabilities.</i>					<i>Assets.</i>				
	£	s.	d.	£	s.	d.	£	s.	d.
Debtentures issued under Swamp Land Drainage Act, 1915—									
Debtentures at 4 per cent. ..	554,000	0	0						
Debtentures at 4½ per cent. ..	103,000	0	0						
Debtentures at 5½ per cent. ..	12,000	0	0						
				669,000	0	0			
Consolidated Fund—									
Loans redeemed under Public Debt Repayment Act, 1925 ..	5,000	0	0						
Interest on debtentures paid but not recouped ..	99,124	18	0						
Interest on temporary transfer from other accounts ..	2,783	19	7						
Accumulated interest on amount expended out of Public Works Fund ..	3,154	5	2						
				110,063	2	9			
Public Works Fund—Land Improvement vote ..				4,563	19	7			
Reserve Funds—Repayment, capital costs—									
Kaitaia Drainage District—									
£ s. d.									
Rural subdivision 300 0 0									
Town subdivision 41 0 0									
	341	0	0						
Waihi Drainage District—									
Pukehina subdi- vision ..	51	5	0						
Kaikokopu subdi- vision ..	76	17	6						
	128	2	6						
				469	2	6			
Rate Accounts—									
Special Rate Accounts—Capital—									
Kaitaia Drainage District—									
Town subdivision ..	8	9	0						
Waihi Drainage District—									
£ s. d.									
Pukehina subdi- vision ..	235	1	7						
Kaikokopu sub- division ..	4	12	0						
	239	13	7						
				248	2	7			
General Rate Accounts—Main- tenance—									
Kaitaia Drainage District—									
Town subdivision ..	9	17	8						
Waihi Drainage District—									
£ s. d.									
Pukehina subdi- vision ..	86	5	4						
Kaikokopu sub- division ..	344	12	8						
	430	18	0						
				440	15	8			
Sundry creditors—									
Interest on debtentures ..	315	12	4						
Departmental ..	58	2	10						
Miscellaneous ..	2,548	9	5						
				2,922	4	7			
Interest on debtentures accrued but not due ..				9,165	12	5			
Rents charged in advance ..				361	18	5			
Suspense Account ..				26	0	6			
Writings-off in Suspense ..				303	8	9			
Payments in advance—									
£ s. d.									
Rates ..				0	18	1			
Rents ..				0	0	3			
				0	18	4			
				£797,565	6	1			
Kaitaia Drainage District—									
Allocated cost of works on which rates are levied—									
Rural subdivision ..	60,000	0	0						
Town subdivision ..	8,200	0	0						
				68,200	0	0			
Excess cost of works not recover- able ..	146,543	18	6						
Interest Account—Proportion chargeable to district ..	85,457	8	9						
				232,001	7	3			
Waihi Drainage District—									
Allocated cost of works on which rates are levied—									
Pukehina subdivision ..	5,000	0	0						
Central subdivision ..	50,000	0	0						
Kaikokopu subdivision ..	7,500	0	0						
				62,500	0	0			
Excess cost of works not recover- able ..	23,698	10	2						
Interest Account—Proportion chargeable to district ..	31,233	12	0						
				54,932	2	2			
Poukawa Drainage District—									
Drainage-works ..	12,735	15	2						
Interest Account—Proportion chargeable to district ..	3,152	17	3						
				15,888	12	5			
Hikurangi Drainage District—									
Drainage-works ..	217,221	5	10						
Interest Account—Proportion chargeable to district ..	62,007	14	0						
				279,228	19	10			
Mangawai Drainage District—									
Drainage-works ..	1,877	15	9						
Interest Account—Proportion chargeable to district ..	799	7	6						
				2,677	3	3			
Harihari Drainage District—									
Drainage-works ..	4,354	15	1						
Interest Account—Proportion chargeable to district ..	1,544	10	6						
				5,899	5	7			
Buildings ..				2,398	12	9			
Wharves ..				76	15	11			
Plant and machinery ..				42,202	8	11			
Loose tools ..				626	17	0			
Live-stock ..				22	11	8			
Fuel ..				638	4	6			
Stores on hand ..				5,904	17	7			
Sundry debtors for rates—									
Kaitaia Drainage District—									
Capital ..	2,222	10	7						
Maintenance ..	1,459	7	2						
				3,681	17	9			
Waihi Drainage District—									
Capital ..	1,564	4	7						
Maintenance ..	3,360	11	5						
				4,924	16	0			
Sundry debtors—									
Rent under section 4 (5), Swamp Drainage Amendment Act, 1926 ..	2,134	16	1						
House-rent ..	10	16	10						
Law-costs ..	0	10	0						
Departmental ..	4,882	17	8						
Miscellaneous ..	59	0	5						
				7,088	1	0			
Rate Accounts—									
Special Rate Account—Capital—									
Kaitaia Drainage District—									
Rural subdivision ..									
				3	6	4			
General Rate Account—Main- tenance—									
Kaitaia Drainage District—									
Rural subdivision ..	15	16	9						
Waihi Drainage District—									
Central subdivision ..	408	9	2						
				424	5	11			
Waihi Drainage District—Revenue Account—Central ward ..				1,588	16	1			
Losses in Suspense ..				303	8	9			
Cash—									
In Public Account ..	6,337	18	1						
In transit from Post Office ..	14	17	4						
				6,352	15	5			
				£797,565	6	1			

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

I hereby certify that the Statement of Receipts and Payments, 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.—G. F. C. CAMPBELL, Controller and Auditor-General.

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