1936. NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY.

DRAINAGE OPERATIONS IN HAURAKI PLAINS.

REPORT FOR THE YEAR ENDED 31st MARCH, 1936, TOGETHER WITH STATEMENTS OF ACCOUNTS.

Presented to both Houses of the General Assembly pursuant to Section 20 of the Hauraki Plains Act, 1926.

Department of Lands and Survey, Wellington, 1st July, 1936.

I have the honour to present herewith the report of the Chief Drainage Engineer on operations carried out during the past year on the Hauraki Plains in accordance with the provisions of the Hauraki Plains Act, 1926.

I have, &c.,

W. Robertson,

The Hon. Frank Langstone, Minister of Lands.

Under-Secretary for Lands.

REPORT OF CHIEF DRAINAGE ENGINEER.

Sir,—
I have the honour to submit the twenty-eighth annual report on the land-drainage and development works carried out on the Hauraki Plains during the year ending 31st March, 1936.

The year's rainfall has been excessive, particularly during the summer, when, with the exception of December, the fall each month has ranged between 3 in. and 6 in. Though the growth of grass has been abundant, most of the settlers have found that, owing to the vagaries of the season, production has been below normal, and the increase in dairy-produce will probably be below the average rate of increase for previous years.

The following particulars of stock and produce returns from the Hauraki Plains District have been compiled from figures kindly supplied by the dairy factories and other concerns handling most of the produce of the district. The figures in parentheses are last year's returns:—

				Tons.	Tons.
Butter		 	 	3,350	(2,975)
Cheese		 	 	2,305	(2,698)
Flax		 	 	$566\frac{1}{2}$	(139)
				No.	No.
Pigs		 	 	9,846	(7,652)
Calves		 	 	24,874	(23, 262)
Miscellaneous	stock	 	 	8,205	(5,707)

Cargo received and shipped from the Piako River and Waitakaruru amounted to 6,648 tons.

These figures are by no means complete, as it is obviously impossible to get complete returns from a large district. They, however, serve as an approximate indication of the value of the annual production of the reclaimed swamp lands. Rainfall records for Kerepeehi since 1915 are as follows:—

RECORDS OF DAILY PRECIPITATION, KEREPEEHI, HAURAKI PLAINS.

		N	Tumbe	r of D	ays, w	ith gi	ven D	aily P	recipi	tation	in Inc	ches.							
Year,	0.00 to 0.49.	0.50 to 0.74.	0.75 to 0.99.	1.00 to 1.24.	1.25 to 1.49.	1.50 to 1.74.	1.75 to 1.99.	2.00 to 2.49.	2.50 to 2.99.	3.00 to 3.99.	4.00 to 4.99.	5.00 to 5.99.	6.00 to 7.00.	Total Days.	Total Fall.	Wettest	Month.	Driest 1	Month.
1916	109	12	9	7	2	3		1	١		1			144	$52 \cdot 19$	Nov.	6.65	Feb.	1.05
1917	131	11	4	4	3		1	1	1					156	$45 \cdot 61$	Feb.	$6 \cdot 26$	Jan.	0.65
1918	145	14	6	4		1			1					171	44.06	Oct.	$7 \cdot 47$	May	$2 \cdot 24$
1919	122	9	1	3	2									137	$27 \cdot 36$	July	$4 \cdot 52$	Dec.	0.89
1920	85	7	10	3	1	1	3	2						112	43.16	Feb.	$6 \cdot 10$	July.	1.73
$1921 \dots$	93	12	5	3	2			1						116	$34 \cdot 41$	Oct.	$5 \cdot 89$	Feb.	0.72
1922	101	17	9	3		1	1		1					133	$42 \cdot 81$	Feb.	$6 \cdot 62$	April	$1 \cdot 73$
$1923 \dots$	151	6	5	4		1	1						1	169	47.04	April	9.76	Mar.	$1 \cdot 72$
$1924 \dots$	132	8	10	5	2	5	1	1		2				166	$60 \cdot 37$	April	8.55	July	1.87
1925	142	15	4	2				1						164	$37 \cdot 64$	June	6.67	April	0.84
$1926 \dots$	149	15	6	4	5	2	2		٠					183	$55 \cdot 53$	May	8.86	$\hat{\text{Feb}}$.	1.79
1927	159	10	6	5	٠.	4.								184	$45 \cdot 33$	July	$6 \cdot 29$	April	$2 \cdot 01$
$1928 \dots$	125	7	9	2	3	2	2	1						151	$47 \cdot 30$	May	$7 \cdot 52$	Jan.	0.01
$1929 \dots$	124	19	8	3	1	٠.								155	41.05	April	5.09	Feb.	0.74
1930	131	4	2	2	3		2	2						146	$37 \cdot 72$	Jan.	6.87	Dec.	0.80
1931	144	10	7		4					2				167	$43 \cdot 23$	July	7.80	Mar.	0.98
1932	126	7	5	4		1					٠			143	$32 \cdot 05$	Feb.	4.95	Nov.	0.93
1933	152	13	1	4	3			1	٠.					174	$38 \cdot 93$	Feb.	$6 \cdot 54$	Mar.	$1 \cdot 20$
1934	138	11	6	5	2	2		1		1				166	$43 \cdot 23$	June	$6 \cdot 15$	Oct.	$2 \cdot 05$
1935	163	15	6	4	2	2		1		1				194	$53 \cdot 42$	July	$9 \cdot 56$	Jan.	0.93
1936*	30	7	2		{					1				40	$13 \cdot 16$	Feb.	$5 \cdot 83$	Mar.	$3 \cdot 03$

* First three months of year only.

Average annual rainfall over twenty years is 43.52 in.

The rainfall for 1935 was considerably above the average, and it will be noticed that rain fell on 194 days. It is satisfactory to record that, with the exception of the overflow of the Waitakaruru Stream on 1st February, when extensive flood damage occurred all over the Auckland Province, no serious flooding occurred on the Hauraki Plains. The need for flood-control work on the Waitakaruru Stream has been apparent for many years, but the difficulty has been that the settlers have been unwilling to raise the small contribution required from them towards the cost of the work.

For several years past the works connected with the Hauraki Plains Reclamation Scheme have, owing to the necessities of the economic situation, been carried out principally as relief undertakings. Although there is no doubt that much permanently useful work has been accomplished, it has unfortunately been necessary to depart from the original plans for the progressive development of the scheme because the grants for construction work have been to a considerable degree conditional upon the use of unemployed labour. An assurance of regular appropriations over a period of years is required to enable a longer-range programme of balanced development to be undertaken and an efficient arrangement of equipment and working-forces to be devised to provide the greatest possible return for the expenditure.

I would particularly recommend for consideration plans for the development of 11,000 acres of Crown land, known as the Pouarua area, lying to the south of Waitakaruru and west of the settled lands on the western bank of the Piako River. A considerable amount of drainage and road-construction has already been carried out within this area. The Pouarua Canal, already constructed, and the Maukoro Canal, on which further work has been authorized, provide the necessary main drainage, and several miles of subsidiary drains were constructed some years ago as a relief-of-unemployment undertaking. The land is peat, and as the result of subsidence brought about by drainage these drains require to be periodically deepened. This will cause further consolidation, and the land will then become suitable for grazing, which will hasten the process of development. A considerable portion of the area has already reached an advanced stage of development and could be prepared for permanent settlement in a few years time.

C.—8.

The following is a brief description of the principal works carried out during the year:—

DREDGES.

Only three land dredges have been in commission during the year. All the floating dredges have The year's total quantity of machine-excavated material was 164,046 cubic yards.

The following table shows the total quantities excavated each year by the dredges during the past sixteen years:

v					
Year.				Cubic Yar	ds. Cost per Cubic Yard.
1920-21			 	158,86	$5 7 \cdot 42d.$
1921-22			 	246,02	$2 ext{7.29d.}$
1922 - 23			 	440,09	$8 \cdot 20d.$
1923-24			 	508,65	$4 7 \cdot 27 d.$
1924-25			 	822,28	6 5.86d.
1925-26			 	856,65	$6 \cdot 32d$.
1926-27			 	647,18	$2 7 \cdot 42 d.$
1927-28			 	652,41	$3 7 \cdot 32d.$
1928-29			 	619,91	1 6·54d.
1929-30			 	595,56	$6 \cdot 25 d$.
1930-31			 	536,69	$2 8 \cdot 32d.$
1931 - 32			 	390,61	1 7.99d.
1932 - 33			 	200,95	4 8.00d.
1933–34			 	116,22	
1934-35			 	$52,51$	
1935–36		• • • • • • • • • • • • • • • • • • • •	 	164,04	
1000 00	• •		 • •		

No. 15 Bucyrus excavator, after completing the construction of the embankment roadway and back-filling around the site of the Kerepechi Block pumping-station, has been engaged on the construction of the Reservoir Canal and subsidiary drains leading to the pump-suction chamber. This machine requires a thorough overhaul. Interruptions for the purpose of carrying out running repairs have been frequent and have been the cause of the unusually high unit-cost. Using a half-yard Page bucket and operating with a 50 ft. boom, this machine handled 47,920 cubic yards in 197 working-days at a cost of 10.5d. per cubic yard.

No. 16 Bucyrus excavator has been employed since November, 1934, in the Patetonga District widening and deepening the Waikaka Canal. Along the lower reaches of this canal the work was delayed by frequent floods, but when working above the flood plain good progress was made. This machine has also been operating with half-yard bucket and 50 ft. boom, and the total output for

working-days was 61,844 cubic yards at unit cost of 6.92d.

No. 19 Dredge was laid up during the months of March, April, May, and June, 1935, when the 100 ft. timber boom and superstructure had to be renewed. During the nine months the machine was in commission it has been engaged widening and deepening the Piako River Channel and building stop-banks with the spoil. Material excavated from the river-bed has to be transported 200 ft. and built into a substantial stop-bank. These operations are carried out by the dredge with one handling of the material at a cost of 7.35d. per cubic yard.

The machine operates on the drag-line principle, using a 1-cubic-yard-capacity bucket. The

total output for 173 working-days was 54,282 cubic yards.

KEREPEEHI DISTRICT.

The drainage-pumping station for the Kerepeehi Block, commenced in 1934, was practically completed in July, 1935. The erection of the steel-frame pump-house and pumping-machinery occupied the first four months of the fiscal year under review. The performance of the 33 in. centrifugal pump under acceptance tests carried out in June, 1935, are given hereunder:-

Static Head, in Feet.	Discharge, Gallons, per Minute.	Pump, Revolutions, per Minute.	Water, Horse- power.	Electricity, Horse- power.	Overall Efficiency.	Brake Horse- power at Pump- shaft.	Pump, Efficiency.
					Per Cent.		Per Cent.
3.92	28,500	$155 \cdot 25$	$33 \cdot 90$	82.8	40.9	$73 \cdot 4$	$46 \cdot 2$
3.87	28,800	$156 \cdot 00$	$33 \cdot 77$	82.5	40.9	$73 \cdot 2$	46.1
3.77	28,900	$154 \cdot 80$	$33 \cdot 01$	$79 \cdot 1$	$41 \cdot 7$	$70 \cdot 2$	47.0
5.10	25,900	$155 \cdot 20$	$39 \cdot 98$	$74 \cdot 2$	53.9	65.8	60.7
5.91	24,950	155 · 10	$44 \cdot 73$	78.1	$57 \cdot 3$	$69 \cdot 3$	64 · 6

Before the pump had been connected with the drainage system, a rainfall of 3.02 in. in about twelve hours on the 20th July, followed by a fall of 1.07 in. during the following day, caused some flooding on the Kerepeehi Block. No. 15 Bucyrus exeavator, by working continuously for sixty hours, was able to connect the drainage system of the 2,000 acre occupied block with the pump. Twentyfour hours' pumping, assisted by some sluice-gate action, was then required to empty the drains.

Operating from a camp on the Awaiti Canal, a working-party of fourteen to twenty-seven men has been engaged throughout the year on land-development work on the Kerepeehi Extension Block, 368 chains of new drains have been constructed involving 7,740 cubic yards of excavation, also a considerable amount of drain cleaning and improvement, clearing approximately 400 acres of manuka, and grubbing about 120 acres of rushes. Another party of nine to twenty-two men camped at Kaihere Ferry have been engaged on the eradication of noxious weeds on the Kerepeehi Block and the flax area adjoining the Piako River. One hardwood bridge of 28 ft. span on pile abutments has been erected on the Kerepeehi Block Extension outlet. Difficulty experienced in obtaining adequate supplies of metal has delayed progress on road-metalling undertakings; 150 cubic yards of surface metal has been spread on 13 chains of Finlay's Road, Kerepeehi Block, and a surface-course of 1,546 cubic yards of metal has been laid on Wanis Road over a base-course laid last year; 176 chains of road-formation was completed on the Netherton-Tirohia Road, which has now been formed for a total distance of approximately three miles southwards from the Netherton Settlement. Maintenance-work carried out in this district includes seasonal drain-cleaning of 26 miles 74 chains of main drains. On account of the increasing volume of work being undertaken beyond the boundaries of the Hauraki Plains District, the staff in the workshops and store at Kerepeehi have had a particularly busy year. The control of 6 miles 57 chains of metalled roads and 1 mile 77 chains of unmetalled road was handed over to the Hauraki Plains County Council during the year. These roads were originally constructed, and have hitherto been maintained, by the Department in consequence of a provision of the Hauraki Plains Act giving exemption from general county rates to Hauraki Plains lands for a period of five years from date of occupation.

WAITAKARURU-TOREHAPE DISTRICT.

Two camps for men recruited from relief-of-unemployment agencies established in the Waitakaruru District some three years ago for fifty and twenty-five men respectively have been considerably below strength throughout the year. Fourteen to forty-nine men from one camp at Waitakaruru Township have been employed raising the stop-banks on the Waitakaruru Stream; 14,430 cubic yards of material have been placed by means of wheel-barrows, to raise 75 chains of stop-banks. Nine to twenty-five men from the other camp situated on the Maukoro Canal have been employed on drainage and development-work on Crown lands; 11,066 cubic yards of spoil was excavated in improving 169 chains of drains.

In the Torehape District a camp was established in February, 1932, for the purpose of continuing road-construction commenced some years previously within a block of 11,000 acres of Crown land. Owing to the number of men in this camp being reduced below that required to operate the tramway used for road-formation, this work had to be stopped in June, 1935, and the available men have since been employed on drain-improvements and noxious-weed eradication. The road-formation consists of clay ballast conveyed by light railway and laid on peat subgrade. During the many years that the work has been in progress intermittently, about eight miles of tramway has been laid. As the sleepers are of non-durable timber, every year's delay in the completion of the works necessitates the renewal of several thousands of sleepers, and the early resumption of work on at least the Torehape and Centre Roads now under construction cannot be too strongly urged. A total of 2,459 sleepers for the light railway were split at Patetonga, and 20 chains of line laid. Only 1,141 cubic yards of clay ballast was hauled on the tramway. In the construction of 19 chains of new drains and improvement of 373 chains of existing drains in this district, 18,549 cubic yards of material was excavated by manual labour and 40 miles 71 chains of drains were cleaned during the year.

PATETONGA DISTRICT.

Drain-improvement work was the principal undertaking carried out in this district during the past year. This work has been carried out by a working-party of nine to twenty-two men camped at Patetonga Township; 7,320 cubic yards was excavated in the improvement of 394 chains of drains, and 35 miles 56 chains of main drains were cleaned.

The ring-barking of the willows on the banks of the Piako and Waitoa Rivers, commenced last year, was continued during the months of January, February, and March, 1936, when a party of six men ring-barked the willows on a 3 miles 13 chains reach of the Piako River above the Patetonga Canal and inspected and, where necessary, treated with poison the willows on a ten-mile reach of the Piako River that had been ring-barked last year. Another party of six men commenced work in January, 1936, with a log-hauler snagging and clearing the growth from the banks of the Piako River above the Tahuna Bridge, and the clearing of one bank for a distance of 1 mile 44 chains had been completed at the end of March.

Fifty-six white-pine logs were cut in the bush on the Waitoa River and shipped to Kerepeehi for excavator pads and for general construction.

STRUCTURAL WORKS.

The chief structural undertaking completed during the year was the Kerepeehi Block pumping-station. The steel-frame pump-house building and pumping-machinery were erected on foundations completed in 1934–35. The 33 in. centrifugal pump is operated by a 90 h.p. motor. The equipment includes 85 kva. transformer switch-gear and electrically operated air-exhauster for priming-pump.

Five small road bridges were constructed over drains and canals, and a number of road culverts installed, including a 4-ft.-diameter culvert and flood-gate on the Maukoro Canal at Waitakaruru.

Two cottages were erected at Mill Road, near Paeroa.

FARM-LAND DEVELOPMENT AND BUILDINGS.

For some time past a considerable amount of land-development and other works outside the Hauraki Plains District has been controlled from the Kerepeehi headquarters. This year's undertakings include a small-farm land-development scheme near Cambridge, where a small working-party has been engaged stumping and ploughing and sowing in grass or other crops an area of 40 acres, also

draining, fencing, cutting, and grubbing gorse and blackberry.

At Hoe-o-Tainui a party of eleven men has been engaged since August, 1935, preparing a block of 1,400 acres of Crown land for settlement. Two hundred and eighty-six acres have been cleared, ploughed, and cultivated with the Department's teams, and at the end of March, 1936, 72 acres had

been sown in grass and treated with lime and manure.

A camp to accommodate twenty-four men was erected on Henderson's Block, near Otorohanga, in January, 1936, but only two men were employed attending to stock prior to the middle of March, when three more men were engaged by the Unemployment Relief agencies. The work carried out comprised repairs to fences and buildings and mowing ragwort.

SURVEYS AND OFFICE WORK.

Engineering surveys carried out during the year required 29 miles 62 chains of traverses, 63 miles 41 chains of levels, and 779 cross-sections. By means of automatic gauges, continuous river-stage records have been kept throughout the winter months at four gauging-stations on the Piako River and one station on the Waitoa River. Stream-flow measurements were carried out to test the discharge

curves for the Waitoa River station and the upper station of the Piako River.

The work carried out by the field and office staff merits special mention. This work comprises preparation of plans and specifications, contract and wages vouchers, payment of wages, allocation of works expenditure, keeping of store accounts, and general office work. In addition to monthly payments to standard workers and contractors, one hundred and fifty to two hundred men are paid fortnightly, and as the works are spread over a large area this involves a considerable amount of extra travelling and long working-hours for the staff.

SUMMARY.

The total length of subsidiary drains constructed on the Hauraki Plains since the inception of the scheme is now 773 miles 68 chains. The principal works carried out during the year under review are summarized in the following schedule:-

Drains cleaned by manual labour Drains widened and deepened by manual labour Drains, new construction, by manual labour Stop-banks enlarged by manual labour			Length. M. Ch. 107 26 11 71 6 4 1 15	Excavation. Cubic Yd. 25,868 9,715 14,687
Total quantity of drainage excavation by ma	nual labour			$\frac{1}{50,270}$
River and canal improvement, machine constructi			3 74	$\frac{164,046}{164,046}$
Roads metalled, top-course only	• •		$\begin{array}{ccc} 2 & 22 \\ 2 & 16 \end{array}$	Metal. 1,696
Clay ballast delivered on peat road by light railwa	у		••	Ballast. 1,141
Sleepers cut and delivered for tramway				$egin{array}{c} extbf{No.} \ 2,459 \end{array}$
Area cleared of scrub and rushes Willows ring-barked on river-banks	••		 3 13	Acres. 520
Road bridges erected 35 ft. span rolled-steel joist, pile abutments, t 25 ft. span timber joists, pile abutments, timber ft. sill bridge, hardwood.	imber deckin er decking	 g.	••	No. 5
20 ft. sill bridge, hardwood. 14 ft. sill bridge, hardwood. Road culverts and floodgates constructed		• •		5

The works expenditure totalled £27,445 19s. 10d. Drainage rates for maintenance purposes were struck for £1,558 0s. 11d., whilst £1,889 14s. 11d. were collected.

I have, &c.,

R. G. MACMORRAN, Chief Drainage Engineer.

The Under-Secretary for Lands, Wellington.

HAURAKI PLAINS SETTLEMENT SCHEME.

RATE ACCOUNT AS AT 31ST MARCH, 19) 36.
-----------------------------------	------------------

Dr. To Maintenance of completed Remission of rates	works 	 	$^{£}_{1,513}_{86}$	9	10	By Balance brought forward Rates levied Penalty, 10 per cent.	 	•••	$\begin{array}{c} £ \\ 2,154 \\ 1,500 \\ 57 \end{array}$		0
			£3,712	4	5				£3,712	4	- 5 -

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 1936.

	LULIO ELL IN	11111	I ZI III.	DWID	ACCOU.	IN J.	FO.	K THE LEAR ENDED SIST MAR	сн, 193	о.				
	Re	ceipts.	Public	Works	s Conso	abila	ted	Payme		. 12 . 31		. ~		
			Fu		Fu		VOCTE.			one v Fund	Vorks I		ondat und.	
m n			£	s. d.	£	s.	d.		£		d.	£	S.	
To Rates		٠			1,881	12	8	By Drainage works: Stop-banks,		~.		,	~•	C.
Law-costs					- 8	2	0	clearing channels, and other						
Sale of land			4,375	7 I				expenditure incidental to						
Rents and grazing	g fees				8,805	0	10	conducting drainage opera-						
Interest on sales of					668	18	3	tions (including formation						
Artesian-well bori								and metalling of roads),						
Repayment of a	advances				51	0	9	materials supplied, &c	17,783	19	9			
Interest on adv					25	5	6	Material and stores	5,015		3	• •		
Instalments on bu	ıildings	. ,			38	14	10	Fuel	392			• •		
Ferry fares					180	19	9	Maintenance of completed	002	_	-	• •		
Credits in reduct:	ion of expe	ndi-						works				1,302	12	5
ture			10,887	19 1				Management and engineering	• •			1,002	19	J
Miscellaneous rece					433	6	8	expenses	76	15	11			
Transfer expendit	ure to Treas	sury						Refund rent			11	60	5]	10
Adjustment Ac	count	٠,			1,513	7	6	Discharged Soldiers Settlement	• •			00	t.) .	10
Transfer expendi	ture to Pu	ıblic			,			Account: Recoupment in						
$_{ m Works}$ Fund			23,268	1 3				respect of merged transac-						
								tions .	2	18	Q	21	3]	11
								Kaihere Ferry expenses		10	0	210	-	
								Refund of rates	• • •			24	1 1	
								Transfer receipts to Treasury	• • •			24		10
							-	Adjustment Account				11,987	9	0
3								Transfer receipts to Public	• •			11,001	17	0
								Works Fund	15,259	7	6			
		£	38,531	7 5	£13,606	8	9		£38,531	7	5	£13,606		
		_										~ 10,000	-	

REVENUE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 1936.

7)									
Dr.				£	s.	d.	Cr.	s.	a
To Interest on Public Works	Fund ca	pital	8	35,971	4	9	By Accrued rents		
Kaihere Ferry expenses		٠		229		ĭ	9,555	•	-
Administration expenses			• •	438	_	7	C	7	6
Remissions of rent	• •	• •	• •			v	Grazing fees	15	1
	• •	• •	• • • • •			5	Ferry fares 207	18	ĥ
Remissions of interest		٠.		50	19	2	Kaihere Ferry: Half-loss charged to County		
Rebates				622	15	5		13	ıΛ
Irrecoverable costs, &c.				25	11	4	TT: e ii		
Premiums on conversion			• •		10	7	Forfitted density 174	11	5
2 Total Galleton Coll College	• •	• •	• •	14	10	υJ	Forfeited deposits 2	0	0
- 5							Royalties	10	0
							Net loss carried down 26,776	14	5
									•
and the first property and the same			£3	5,850	17 -	2	COM OFO	1.77	_
						_	£35,850	17	Z
				c		3 1			
To Not loss because dame				t a	s.		£	s. e	d.
To Net loss brought down	• •	• •	2	6,776	.14	5	By Balance carried forward 255,578	3 1	(1
Balance from previous yes	r		22	8,801	z 9	6			
. *******			- 14 1 1 <u>- 1 - 1 - 1</u>	<u> </u>					
			€25	5.578	3	11	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
		-		0,010			£255,578	3]	11

HAURAKI PLAINS SETTLEMENT SCHEME-continued.

Balance-sheet as at 31st March, 1936.

DAIR	MOE-SHEE	L 21)	3 A	1 0151 manch, 1990.					
Liabilities.				Assets.					
Capital Account— £ s.	d. £	s.	d.	Improved lands handed over to					
Public Works Fund 850,482 1	2			Land Board for settlement—	£	s. d.	£	s.	d.
Value of Crown land set apart					79,934		~	₽.	с.
under Act 45,000 0	0				11,709				
	895,482	3	9	Unpaid purchase-money for	11,700	1 0			
Employment Promotion Fund capital	8,593		$\frac{2}{5}$	land sold on deferred pay-					
		19	Ð		1# 440	0 0			
Discharged Soldiers Settlement Account: Merg					17,442		200 000		
transactions under section 20, Discharg							-00,000	1	
	411	14	0	Unimproved-value land not disposed				3 :	
	d.			Improvements on adjoining Crown la			7,710	0	0
Miscellaneous 363 2				Permanent reserves			8,851	0	0
Departmental 2 10	7			Works in progress: Expenditure on	land in	course			
	365	13	5	of reclamation, including formation	and met	alling			
Rent charged in advance	2,297	19	5	of roads			572.127	6	11
Rate Account	2,111		5	Capital expenditure: Employmen	t Pron	notion	3.2,12.		
	d.						8,593	15	ĸ
* 10 1 ×				Fund Artesian wells—		s. d.	0,000	10	O.
75 (Crown tenants, Hauraki Plains		s. a. 4 0			
Rates	U				391	4 0			
	0			Permanent reserves and Crown	21.0	10 0			
ferred-payment sales 36 10	3			lands	216	10 9			
Instalment of interest on de-				75. 47.74			567		
ferred-payment sales 22 5				Buildings			4,079	7	11
	119			Wharves			3,200	0	0
Suspense Account	59	19	8	Machinery and plant			33,508	15	11
Writings-off in Suspense	198	15	10	Live-stock			24	17	6
Deposits by lessees: Surety against drain-dams	age 10	0	0	Loose tools			901	15	1
Treasury Adjustment Account	. 257.037		9					7	
	,			Stores			0		ō
				Sundry debtors—	£	s. d.	· ·	•	v
				l p	3.766				
				l cc .	3,700 $3,315$				
					5,515	0 4			
				Instalment of principal on de-	105				
				ferred-payment sales	125	6 0			
				Instalment of principal on	-				
				buildings		17 0			
				Interest on well-boring	111	17 8			
				Interest on deferred payment					
				sales		17 7			
				Law-costs		13 5			
				Tram freights and ferry fares	29	17 6			
				Grazing	119	10 - 0			
				Miscellaneous	5,185	16 7			
				Departmental		18 10			
				*			13,786	0	6
				Postponed rent			1,406		
				Postponed instalments of principal		• • •		10	
				Postponed interest				9	
					• •	• •	198		
					• •	• •			
				Interest accrued but not due	• •		234		
				Premiums on conversion	• •		101		0
				Cash in Deposits Account	• •			0	
				Revenue Account : Balance forward			255,578	3.	ΙĹ
	01 102 00:					-	100 00		_
	£1,166,688	17	2			£1	,166,688	17	2
						-	·		<u> </u>

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. The following comments are appended: (1) In the opinion of the Audit Office, interest charged on works in progress should be capitalized. (2) A Bad Debts Reserve should be created. (3) Suggestions in reference to the treatment of expenditure on lands already handed over for settlement were made to and are at present under consideration by the Department. (4) No charge for the cost of exchange on payments made in London is included in the Account.—J. H. Fowler, Deputy-Controller and Auditor-General.

Approximate Cost of Paper.—Preparation, not given; printing (674 copies), £9 10s.

