

1946
NEW ZEALAND

DEPARTMENT OF LANDS AND SURVEY

Drainage Operations in Hauraki Plains

REPORT FOR THE YEAR ENDED 31st MARCH, 1946

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

Department of Lands and Survey, Wellington, 28th June, 1946.

SIR,—

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.,

R. G. MACMORRAN,

Under-Secretary for Lands.

The Hon. the Minister of Lands.

REPORT OF CHIEF DRAINAGE ENGINEER

SIR,—

I have the honour to submit the thirty-eighth annual report on the drainage and land-development work carried out on the Hauraki Plains. The report covers the year ending 31st March, 1946.

The following is a schedule compiled from information supplied by dairy companies and merchants, setting out the approximate quantity and value of farm production from the Hauraki Plains for the year 1945-46, and for the purposes of comparison also one for the previous year :—

	1945-46.		1944-45.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Butter (tons)	2,186	313,997	2,951	423,680
Cheese (tons)	3,617	294,713	4,688	382,215
Plus farm-cost allowance on above	117,087
Pigs	4,023	17,580	5,000	22,000
Bobby calves	13,337	9,556	21,136	12,731
Cattle, sheep, &c.	27,025	95,944	..	32,110
	..	848,877	..	872,736

In addition to the above, 2,127 tons of flax was milled at the flaxmill, Kaihere.

From the above it is apparent that, despite the severe drought conditions experienced this year, production has been well maintained. This indicates the very great value of reclaimed swamp land.

The rainfall recorded at Kerepechi for the year was 31.68 in., compared with an average over the last thirty-nine years of 43.01 in. The wettest month was August, with 4.32 in. and the driest, February, with 0.21 in. The total fall for the four months November, December, January, and February was only 3.56 in.

The labour force employed on the Hauraki Plains has now grown to about sixty men. This number requires to be greatly increased if the urgent arrears of essential maintenance work are to be overtaken. Unfortunately, the number it is possible to employ is limited by the amount of accommodation available, which is restricted by the extreme shortage of all classes of building material. Men are now coming forward in increasing numbers, but accommodation is apt to present a serious problem in the future, particularly for the better class of tradesman, whom it is desired to keep permanently. To retain these men, married men's accommodation is essential.

During the year a start was made with the maintenance dredging of main canals, when No. 15 excavator commenced the work of removing accumulations of *Poa aquatica* and improving the channel in the Awaiti Canal. Stop-bank reconstruction work was also continued on the foreshore and along both banks of the Piako River and on the left bank of the Waihou River, where a total of 306 chains was completed.

Four drag-line excavators have been continuously employed throughout the year, and the following is a *résumé* of the work done by each machine :—

No. 15 Bucyrus Excavator.—This machine was engaged on reconstructing the Hauraki Gulf foreshore stop-banks. It completed to the Maukoro Canal and then moved to Pipiroa, where 45 chains of bank were completed on the west bank of the Piako River between Marshall's flood-gate (the starting-point for previous work) and No. 5 flood-gate, farther up-stream. The plant then returned to the depot for overhaul, cleaned out the Ferry Channel, the slipway, and several flood-gate outlets, and commenced work on removing *Poa aquatica* from the Awaiti Canal. In 66 working-days 128 chains of bank had been completed at a cost of £4 9s. 2d. per chain, and in 107 working-days 21,205 cubic yards of spoil were placed on the foreshore stop-banks at a cost of 9.7d. per cubic yard.

No. 16 Bucyrus Excavator.—This plant was engaged on the construction of the Maukoro Canal all the year. The left bank was completed from peg 3 mile 75 chains to peg 3 mile 11 chains. The spoil from excavation has been used for constructing roadways on both banks. In addition, this machine removed the piling from, and strengthened the dam in, the canal. In 201 working-days 34,027 cubic yards of material were excavated at a cost of 10.8d. per cubic yard.

No. 29 Bay City Excavator.—This machine has been employed on stop-bank reconstruction on the left bank of the Piako River. It completed the portion between Pipiroa flood-gate and the Pipiroa Ferry, where all spoil had to be carted by trucks, and the stretch between the ferry and No. 5 flood-gate which was constructed in one lift by borrowing from the river-side of the bank. The plant then moved up-stream and commenced work on the second lift of the portion between Pipiroa flood-gate and Hopai Road, which was also completed. After overhaul, the plant commenced the widening and deepening of the south side of Hopai Road drain, from which the spoil was carted by truck to the stop-banks. During the year 160 chains of stop-bank were completed and 26,866 cubic yards of spoil handled in 220 working-days at a cost of 11.12d. per cubic yard. A considerable amount of double handling and truck carting increased the unit cost.

No. 31 Ruston Bucyrus Excavator.—This excavator continued working south on the Orongo stop-bank until the main highway was reached at Kopu Bridge, and was then moved to the back of Sections 32s and 35s, where 27½ chains of stop-bank were reconstructed owing to erosion having caused bank-caving. Fifteen chains of the lower end of the Orongo boundary drain were widened and deepened before moving the plant to Kopuarahi to commence work on the Piako River stop-bank-improvement scheme,

right bank, where, working northwards, the machine completed 34 chains of bank. During the year this plant handled 39,407 cubic yards of material in completing 101½ chains of stop-bank and 25 chains of drain improvement in 233 working-days at a cost of 8·05d. per cubic yard.

On the land-development blocks within the Hauraki Plains area work has, with one exception, been almost entirely confined to essential maintenance of pastures, fences, and main drains, attending to the 3,000 cattle and 5,000 sheep grazing on the areas, and controlling noxious weeds and swamp regrowth. Towards the end of the year, as more men became available, a start was made with the reconditioning of the main drains in these areas. The exception mentioned above is Section 35, Block XII, Piako Survey District, a section of 102 acres taken over by the Department for the rehabilitation of a returned serviceman. This area, which has been considerably improved, the house enlarged, and a new cow-shed erected, will be ready for a settler to commence milking at the beginning of the next dairy season.

An unforeseen and costly feature of the year under review was the disastrous peat fires experienced during the summer's long drought. These fires, which proved very difficult to control and necessitated the employment of many men for lengthy periods, caused extensive damage to fences and destroyed good pasture, which will be required to be resown.

The ferry service across the Piako River at Kaihere was continued during the year. The pontoon will be docked for inspection and repair in the near future, when it is hoped to make it serviceable for another year. This timber pontoon, which is showing signs of age and decay, will require to be replaced before long.

The pumping-station serving an area of 3,900 acres in the Kerepechi Block was required to operate for 155 hours during the year.

The principal works carried out on the Hauraki Plains during the year are listed in the following table:—

	Length. Miles. Ch.	Excavation. Cubic Yd.
Drains cleaned by manual labour	109 0	..
Drains and canals cleaned by weed-cutting launch	8 38	..
Drains widened and deepened by manual labour	2 0	5,950
Drains and canals improved by machines	1 76	38,027
Stop-banks reconstructed by machines	3 66	83,478
Canals cleaned by machine	1 16	..
	Acres.	
Area of swamp harrowed or rolled with tractor	565	

EXPENDITURE AND RATES

Maintenance expenditure for the year amounted to £3,069. Rates struck amounted to £3,417, and collections, including arrears, totalled £3,303.

Net expenditure on other works amounted to £3,548.

The amounts shown as expenditure on maintenance may be subject to slight variation on completion of accounts.

I have, &c.,

E. TAYLOR,

Chief Drainage Engineer.

The Under-Secretary for Lands, Wellington.

STATEMENT OF ACCOUNTS

A statement of accounts is published in parliamentary paper B.-1 [Pt. IV].

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