STATEMENT OF ACCOUNTS (as required by Section 10 of the Rangitaiki Land Drainage Act, 1910 for the Year ended 31st March, 1912.

1911. Reccipts.  April I. To Balance—Cash in Public Account				1912. Expenditure. Mar. 31. By Expenditure— Payments for liabilities of old Board	£ 1.616		d. 6
Mar. 31. To Rates received under section 7 of the Rangitaiki Land Drainage Act, 1910	0	5	'n	New works by contract or day labour, purchase and maintenance of dredges,			
"Thirds," &c., received under section 9 of the Rangitaiki				&c	9,271		8
Land Drainage Act, 1910	605	2	õ	Interest	905		9
•				Repayment of principal Balance—Cash in Public Ac-	346		
					12.931	18	1
				Advances in hands of officers of the Government	1,248	iι	9
	€26,320	18	3	£	26,320	18	3
		So.	AN A	Account.			
1912. Mar. 31. To Balance	£ 24,653		d. 6	1912. Mar. 31. By Advances made by the New Zealand State-guaranteed	£	s.	d.
				Advances Office—			
					24,653	2	6
•							

## REPORT BY LAND DRAINAGE ENGINEER.

Sir,--

I have the honour, in accordance with the provisions of the Rangitaiki Land Drainage

Act, 1910, to report upon the various operations carried out during the past year.

During this, the first year of actual drainage-work, a great deal of very useful work has been accomplished. The whole area was systematically explored, and all main works, outfalls, and drains located, and the engineering surveys were duly made and plotted. Careful examination of the scheme of works, together with the results so far attained, cannot but carry conviction of the ultimate complete success of the works in rendering the area extremely productive and valuable.

Every possible effort was made to get out contract plans of major works, and this was done with regard to some 8½ miles of large main outfalls. Tenders were invited throughout the Dominion for this work, some six weeks being allowed for return thereof, but there was no response. Without doubt this is attributable to three causes—(1) the prosperous condition of the Dominion, and the large amount of available work near centres; (2) the uncertainty of labour conditions; and (3) the inaccessibility of these works, and the consequent delays, inconvenience, and expenses that must necessarily occur in getting supplies and machinery on to ground.

Machinery.—After due consideration it was decided that the Department would undertake

Machinery.—After due consideration it was decided that the Department would undertake the large works and purchase the necessary machinery and plant to deal with same. Accordingly a new Hammond "pony dredge" that was available locally was purchased at a great reduction on original cost, and orders were placed with Messrs. Priestman (Limited), England, for the supply of two high-purchase grab dredgers and excavators. The foregoing plants all work upon

floating pontoons.

Rangitaiki River Diversion.—The contract for this diversion was let to Messrs. Rich and Jeffreys in the previous year, but progress has so far been slow. The initial delay was caused through the difficulty in procuring a suitable plant for the work, and some months elapsed on this account. The inaccessibility of works and attendant worries of landing machinery were also contributing factors. The contractors' plant consists of a suction dredge of two 16 in. centrifugal pumps with a capacity of 700 cubic yards per hour of solids. The pumps are driven by a 400 i.h.p. engine, marine type, and a 375 h.p. locomotive boiler. The delivery-pipes to spoilbanks are to be carried on some twenty-two floats. A large dam with special sluice-gates was also erected, this proving a very expensive work. The whole plant should be in thorough working-order about the middle of May, and the work should from then progress rapidly. All timber for training-walls is on the ground, and a great deal of unseen work has been accomplished. The amount of contract is £11,123.

Tarawera River Improvements.—Great changes have been effected at the headworks, the river having been diverted for some 3 miles from its old bed. The river was diverted into Lake Rotoiti-paku, and thence a channel was cut leading into Lake Rotoroa. From the latter lake the new river follows the course of the Otarakuti Stream, which was straightened and widened right to its junction with the Tarawera River. Considerable scouring was then set up, and the new river-bed has at present an average width of 35 ft. A lowering of the water-level at headworks of about 4 ft. has resulted, and this will be further increased. A very small percentage of the Tarawera River water now finds its way by old courses in the direction of the swamp road to