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APPENDIX III.—LAND-DRAINAGE AND LAND-DEVELOPMENT OPERATIONS.

(R. G. Macmorran, Chief Drainage Engineer.)

In accordance with statutory requirements, separate reports deal with (1) Hauraki Plains, (2) Rangitaiki, and (3) Swamp Land Drainage Districts-viz., Kaitaia, Hikurangi, Waihi, and Poukawa Drainage Works.

Land-development operations have been carried out on nine areas under the Small Farms Act, whilst development operations on the Galatea Estate, purchased under the Land for Settlements Act, have been steadily pushed forward.

Details of the above operations, as well as other works, are as follows:—

Mangatete Farm Settlement (1,270 acres).—Development-work was carried out on this block throughout the year with from twenty to thirty relief workers. Of the nine sections comprising this block, five were occupied last year and have since been worked by settlers under the supervision of the Commissioner of Crown Lands.

Two more sections were occupied during this year and cows milked by workers on wages, whilst on the remaining two sections 150 acres of bush was felled and burnt and sowing of seed commenced at the end of March, so that the whole block will be carrying stock and sufficiently developed to be farmed in the ensuing year.

The seven occupied sections have been provided with cottages, cow-sheds, and pigsties. boundaries have been fenced, some subdivision fences crected, and clearing and logging-up of the area carried out on part of each section. Timber for the sheds, gates, and fences was obtained on the block, and houses were built by contract.

Other work carried out on this area was bush-felling, post-splitting, hauling-out of milling timber and logs for splitting, and widening of Champion's Road to give access to Sections 3, 4, and 9.

Buildings are required on Sections 3 and 4, on which the felled bush was recently burnt, and it is proposed to erect these during next summer. Further fencing is required, but the heaviest work is logging-up, which could be carried out on all the sections if labour is available. It is proposed to fell about 60 acres of bush on Section 8, where a timber company is now busily engaged removing the millable timber.

When this work is carried out it will be possible for nine settlers to be successfully established. Kaitaia Small Farm Settlement (1,000 acres).—Development-work was carried on during the year, labour being supplied by the Unemployment Board, an average of forty men being engaged and housed in a camp erected on the block and in houses erected on sections of land sufficiently developed to carry milking cows. The men were employed throughout the year on various works for the development and farming of the area. Two hundred acres of pasture laid down in the two previous years had become well established, but summer floods this year, followed by a species of caterpillar which swarmed over the areas flooded, have destroyed portions of the English grass.

Construction of drains on the area is almost completed and these effectively deal with local drainage, but flood-waters from the main watersheds of the Kaitaia River and tributaries over-

flowed on to this land during last year.

Further work is required to prevent overflow of flood-waters, and the past year's experience shows that flooding can only be eliminated by a comprehensive scheme embracing the whole district and providing for the run-off from the whole watershed served by the Kaitaia River. Complete development and successful working of this country as small farms cannot be assured unless such work is carried out.

The principal work carried out during the year is as under:-

Buildings: Six cottages, an implement-shed, and seven cow-sheds were erected. Cottages are occupied at a rental of 5s. per week by relief workers who are employed on milking and farm work.

Water-supply: Fifteen artesian bores were sunk and water connected to cow-sheds and concrete troughs. It appears that an ample supply of water suitable for stock can be secured for the whole area by this means.

Drains: A total length of 4 miles 26 chains of new drains were constructed, some old drains deepened and improved, and drains previously constructed cleared of weeds and maintained in good condition.

Roads: To give access by metalled road from all sections to Kaitaia and Awanui, 3 miles of road was formed and 4 miles 8 chains of road metalled.

Fencing: A total length of 5 miles 75 chains of fencing was erected for section boundaries, road, and subdivision fences, the grassland being sufficiently fenced and subdivided to enable the country to be stocked and milking cows handled.

Grassing: Some 60 acres of peat land was cleared of tea-tree, burnt, disked, harrowed, sown with grass-seed, and rolled during March. Tea-tree has been cut on a further area, and it is hoped to burn and surface sow a further 170 acres during April. The areas of old pasture most severely affected by flooding have been harrowed and about 70 acres will be resown as soon as crickets and caterpillars have been eliminated by wet weather.