

STOP-BANKS.

The total length of stop-banks now completed is 27 miles 42 chains, some 40 chains of new bank having been built during past year.

The "green" banks have stood remarkably well, only a few portions being damaged where situated in exposed positions. This was on the foreshore, when, in February last, the remarkably high spring tides, driven up by a heavy gale, breached the bank to some extent in several places. The actual breaching was caused by logs, which had broken away from a sawmiller's raft, pounding against the bank. By timbering, grassing, and protecting by small groynes the difficulty of protecting exposed portions of bank will be overcome. The stop-banks have been considerably strengthened during the year for the greater portion of their length, and except in a few places are now substantial and high enough to withstand any reasonable flood. All weak points will be duly strengthened during the coming year, and grassing on all banks is being proceeded with. A great deal of close flax-planting has been done along foot of banks subject to erosion, and this work will be carried out wherever possible.

FORMED ROADS.

The total length of formed clay cart-roads—i.e., drains on both sides of road and formation to full width, or one drain only with finished formation—is now 39 miles 16 chains, of which amount some 20 miles 13 chains was converted from road-bank tracks during past year.

Some 5½ miles of the above roads give access to the most southerly sections selected, and these have been blinded with sand, drays and scoops having been used with great success. The necessity of metalling all formed roads is manifest, and must sooner or later be faced out of special grants and loans other than moneys raised under the provisions of the Hauraki Plains Act, 1908, which did not provide for metalling.

ROAD-BANKS.

The total length of road-banks—i.e., spoil from road-drains removed 4 ft. from edge thereof and spread 12 ft. in width—is 13 miles 10 chains. As circumstances permit these banks will be converted into formed roads. Some 7 miles 70 chains of above has now a drain on each side, but no clay is available from drains for road-formation, and other arrangements are being made to provide the necessary spoil.

DRAINS IN OPERATION.

The total mileage of drains in operation is now 258 miles, and includes stop-bank drains, road-drains, subdivisional drains, service-drains, and outfalls of all descriptions. This is an increase of 46 miles 11 chains during past year.

SNAGGING PIAKO AND WAITOA RIVERS.

Two special votes are being satisfactorily expended upon the snagging of the above rivers, and excellent results have so far been obtained from the operations.

The Piako River has now been snagged for a total of 7 miles 24 chains from Junction southwards, bullock teams being mainly used; while the Waitoa River has also been snagged for a total distance of 9 miles 30 chains from Junction southwards. A special snagging-plant on pontoon has been used for the latter work, as willows had to be dragged from the bed of the river.

The respective distances snagged during the year are 5 miles 34 chains and 6 miles 30 chains, and much more would have been done had it not been for the very wet season experienced.

WHARVES.

The total number of wharves in position is ten, and several more are projected. Improvements will be effected in several directions, and those without small sheds and low-level stages will be provided with same. Piles have, as usual, been rather difficult to obtain.

Three new wharves were erected and two wharves rebuilt during the year. A few small service jetties will be provided in place of making certain roads along river-frontage, this being more economical.

FLOOD-GATES.

There is now a total of fifty-two flood-gates in position, the simpler class of gate being still erected for the reasons mentioned in last year's annual report. Reinforced-concrete gates will eventually be required.

The number of new gates built during the year was seventeen, besides which certain alterations in addition to usual maintenance were effected.

SILL BRIDGES AND CULVERTS.

The total number of small sill bridges to date is seventy-three; culverts, four; small bridges on piles, six; and one two-span bridge across Puhanga Spillway.

PRIVATE TELEPHONE-LINE TO WORKS.

During the year the Post and Telegraph Department obtained permission to place a wire upon the poles of some 14 miles of the works telephone-line, and several offices are now established upon the plains, resulting in great convenience to settlers.