

- “(3.) To ascertain the best method of providing for the control of the said river and its tributaries so as to safeguard the lands affected, and to provide for the effective control and improvement of the said river and its banks ;
- “(4.) To ascertain the nature and extent of any drainage-works that may be required, and the best method of carrying out such works ;
- “(5.) (a.) To furnish estimates of the cost of such remedial measures as you may recommend should be taken for the effective control and improvement of the said river and its banks ;
- “(b.) To report what area or areas of land should be constituted a district in respect of which a rate may be levied to secure and pay the interest on and provide a fund for the repayment of any loan that may be raised to carry out any river-improvement works which you may recommend should be undertaken ;
- “(c.) To report your opinion as to what matters, if any, should be adjusted by legislation ; and
- “(d.) Generally, to report your opinion on all matters arising out of or touching the premises, including the question as to whether or not one or more competent authorities shall be appointed to control the whole or any portion of the said river, and what statutory powers should be possessed by such authority.”

Our Commission also required us to report separately in respect of each river.

INVESTIGATIONS MADE.

Sittings, Evidence, and Inspections.—After examining the various rivers in Otago upon which they were directed to report, your Commissioners arrived at Temuka on the 2nd July, 1919, and on the following day proceeded with their investigations in connection with the Waihi River.

In company with Mr. J. E. McEnnis, Resident Engineer, Public Works Department, Christchurch, your Commissioners carefully examined the river from Geraldine down to its junction with the Haehaetemoana. The characteristics of this river are very similar to those of the Orari, but the tendency of the Waihi to dry up along portion of its course and to reappear later in vigorous springs gradually swelling into quite a large stream is even more marked. It would almost appear as if the springs had other sources than the Waihi itself, and it is quite probable that a great deal of the water escaping into the shingle bed of the Orari reappears in the springs in the Waihi.

TRAVEL OF SHINGLE.

Very little shingle travels in this stream, and no more than can be provided for by nature, if suitably assisted, as indicated below, instead of being thwarted as it is at present.

FLOODS.

Floods in this river are not aggravated to any great extent by melting snow, it being a very much shorter river and draining only sixty-five square miles, forty miles of which are above Geraldine. Naturally, with the smaller watershed the volume of flow per square mile is greater, and the floods more of a flashy character.

EXISTING WORKS.

In a few places stop-banks have been erected along the banks of this river and some of the acute bends have been cut off ; but, on the other hand, its banks have been allowed to grow into such a condition as makes it an absolute impossibility for flood-waters—or even the waters of quite a moderate fresh—to be accommodated. To some extent this appears to have been brought about by the efforts of the landowners along the stream to obtain the maximum of grazing-area, parts of the legitimate bed of the stream having been fenced in, and the parts which have not been fenced in have been entirely obliterated by prodigious growths of willows.