

Scheme 2: With regard to the modified scheme for dealing with partial floods, this is open to the same criticism as the major scheme as regards the position of the levees. Your Commissioners do not consider that the stop-banks should enclose a large area of valuable land, even though the drawing-in of the levees close to the banks may necessitate slightly higher and consequently more expensive banks.

Your Commissioners further criticize the modified scheme in that, as far as can be ascertained by them, there was no intention to concentrate on an effort to obtain a through connection with a temporary bank of small size; also it is unnecessarily costly for a partial scheme—estimate, £128,730.

Generally, the Commission is of opinion that the importance of navigation, and the inseparable way in which it is bound up with the other river-improvement works, has not been sufficiently appreciated by the Department; neither has the necessity for a low-water river-level for drainage purposes been entirely recognized.

#### REFERENCE No. 3.

*To report on any other matters which may be brought before you in connection with the questions referred to, and which in your opinion have any bearing on these premises.*

The question of the importance of navigation and its intimate connection with the flood-protection works has already been stressed in this report. Your Commissioners can only reiterate that no scheme can be considered satisfactory which does not, simultaneously with providing protection from floods, also contemplate the improvement of the river for navigation.

The importance of drainage to the low-lying land along the Waihou is such that every endeavour must be made to keep the low-water level as low as possible. In other words, aggradation of the river-bottom must be prevented. Suitable works to improve navigation can be made also to improve drainage and assist flood-discharge. Maintenance dredging may be necessary, but its magnitude cannot be forecasted.

Your Commissioners consider that the betterment principle as laid down by the Waihou and Ohinemuri Rivers Improvement Act, 1910, is inequitable and should be amended, it bearing unjustly on the riparian owners.

The works recommended by your Commissioners will not be effective unless the works on the Waihou and Ohinemuri Rivers above Ngahina are completed simultaneously in accordance with stage 1 and stage 2 of our recommended programme of works.

This our report, which has been unanimously adopted, we have the honour to respectfully submit for the consideration of Your Excellency, together with the appendices and the plans illustrating the works recommended by us, enumerated below:—

Appendix A: Precis of evidence given by local witnesses and Public Works officials.

Appendix B: Letter from Mr. C. R. Vickerman, member of Waihou and Ohinemuri Rivers Commission, 1910. (9th October, 1919.)

Appendix C: Notes of interview with Mr. William Ferguson, Chairman of Waihou and Ohinemuri Rivers Commission, 1910. (14th October, 1910.)

Appendix D: Graph showing the relative intensity of storms during past twenty years.

Plan No. 1: Waihou River below Ngahina. [Not printed.]

Plan No. 2: Longitudinal section, lower Waihou River. [Not printed.]

Plan No. 3: Typical cross-sections. [Not printed.]

Your Commissioners also have the honour to return herewith Your Excellency's Commission.

Given under our hands and seals, this 5th day of December, 1919.

F. W. FURKERT, Chairman.

ASHLEY J. HUNTER, } Commissioners.  
F. C. HAY, }