

The work required presents no difficulties. The steps we recommend to improve the main channel are—

- (a.) The clearing of all vegetation in the beds. The willows are at present causing untold damage. In view of the protection of the banks a fringe of willow may be necessary, but this must be strictly regulated.
- (b.) The extension of the works of the Harbour Board at the mouth, and the making of the same permanent. The channels connecting with the lagoon should be improved so that the full benefit of the tidal scour should be obtained.
- (c.) The enlarging of the channel to a uniform discharging-capacity, which should be capable of carrying the largest flood hitherto observed with a reasonable margin of safety.
- (d.) The work under clause (c) will necessitate the straightening of the river at the Maori Point, at the point immediately above the Ferry Bridge (Sections 84, 85, 86), and at the Peninsula.
- (e.) Portion of the existing stop-banks will require to be moved so as to allow adequate waterway, and others must be strengthened, and some raised. Some flood-gates may be necessary.
- (f.) The removal of the damaged banks at Leslie's breach and its vicinity is necessary.
- (g.) Upon the fixing of the lines of banking, all lands lying outside of them should be acquired, and all obstructions removed therefrom.
- (h.) Protective measures, including groynes, may be required to deal with erosions.

*Further Recommendations.*

- (j.) Protective works of a durable and substantial character should be erected to prevent the waters of the Waihopai from breaking into Gibson's Creek.
- (k.) From the junction of the Omaka with the Opawa to Dillon's Point the Opawa must be treated in a way similar to that recommended for the Wairau, based on the amount of water which it will have to carry.
- (l.) The Fairhall and Mill Creeks should be led into the Opawa at a site to be determined after survey, preferably below their confluence, and the necessary stop-banks and protection provided.
- (m.) The present position of the Taylor seems to us satisfactory, but careful investigation must be made to ascertain whether in all parts its discharging-capacity is adequate, and if found not to be so it must be enlarged and all obstructions removed. If the Omaka and Opawa are relieved as proposed, the dangers of the flood to Blenheim will be obviated.
- (n.) The co-operative drain should be improved so that it may be adequate to deal with all the water which enters it.
- (o.) The Pukaka main drain should be cleared and enlarged if necessary, and the stop-banks continued to its outlet. Necessary flood-gates should be provided.
- (p.) The banking on the sides of the Tuamarina must be made to conform to the amended levels and design of the works on the main river.
- (q.) We found an opinion prevailing among many of the witnesses that an overflow channel from Tuamarina to the sea would provide adequate flood-relief. We cannot recommend this, as from rough levels taken we are satisfied that an adequate channel could not be provided under an expenditure of £50,000. An examination of the ground traversed leads us to believe that the difficulties inherent to the project and the keeping of the sea mouth open are insuperable. Further, we consider it unnecessary, and detrimental to the present harbour-entrance.

There is a possibility of Rose's overflow becoming a serious source of expense. The channel should be protected in such manner as may be deemed advisable from the scouring action of the flood-waters, which may lower the level of its bottom until the whole of the Opawa flows down this channel. If, however, the Harbour