

HARBOUR.

In the early days both the Wairau and the Opawa were navigable—the Wairau up to the Ferry Bridge and the Opawa up to Blenheim. The tidal range is 3 ft. 6 in. to 4 ft. 6 in. at the entrance, and its effect is felt at Blenheim in the Opawa River, and at the Peninsula on the Wairau.

Under the influence of the weather the entrance used to shift up and down the Boulderbank within a range of two to three miles, and as a result the bar was often unworkable. When the bar was in its extreme northerly position, the course of the river being longer with no more fall, the floods, especially in the lower reaches, were intensified. The Lower Wairau River Board and those interested in shipping made attempts, more or less successfully, to open a more direct channel through the Boulderbank, sometimes at the very place where the present channel runs.

The Wairau Harbour Board (constituted in 1907), acting on engineering advice, constructed a training-wall to confine the river to a new cut which was subsequently made. This work is not yet completed, but for the past two years has had a beneficial effect on the entrance, which is now workable except in cases of very heavy weather. Witnesses state that the effect of this straight and open channel has been to reduce the flood-level by 4 ft. at Dillon's Point (the confluence of the Wairau and the Opawa) and by a lessening amount to a distance of five miles up the course of both rivers. Probably the beneficial effect is felt higher than this.

The Wairau has been gradually shoaling, and this has been accentuated by the opening of Rose's overflow, and it is no longer navigable to the Ferry Bridge. This may be due to the decreased amount of water flowing down the stream as a result of the diversion of part into the Opawa. The navigable part of the Opawa has been silting up, but it is still open for small boats up to 100 tons. The tidal flow to and from the lagoons lying between the mouth and the Vernon Bluff assists materially in keeping the entrance open, although the fullest effect is not obtained owing to constriction in the connecting channels.

There is a danger of Rose's overflow scouring out so as to absorb all the Opawa water. It would probably then become the navigable channel, but this would cut off access to the existing wharves, upon which a large expenditure has been made by the Harbour Board.

The policy of the Board is to improve the harbour and channels with a view to accommodating vessels up to 200 tons burthen. If this were done a large trade in coal and produce might be developed, to the great advantage of the district. The effect of these harbour improvements would be markedly beneficial to drainage and flood-prevention.

REFERENCE CLAUSE I.—CONTROL AND IMPROVEMENT OF WAIRAU RIVER AND TRIBUTARIES.

Without extensive surveys and the preparation of proper engineering plans it is impossible for us to indicate in detail the works necessary to give effect to the general scheme which we propose to recommend. It is to be noted that none of the local bodies are in possession of plans of the works which they have constructed, many of which works may be incorporated into the new scheme.

We consider that the channel of the Wairau should be improved so as to carry all the waters of the Wairau, as no scheme which could be devised within practical limits would ensure a proportional division of these waters between the Wairau and the Opawa. The tendency referred to before, of the river oscillating from north to south, makes this imperative. More than this, from such data as is obtainable we find that the old Opawa Channel and Rose's overflow channel are not capable of carrying safely more than the high-flood waters of the southern tributaries—viz., the Omaka, Fairhall, Mill Creek, and Taylor River.

Having regard to the necessity of making the Wairau capable of carrying all the water, there remains no valid reason why the breach should remain open. Further, in view of the extreme danger, amounting to disaster, which would ensue if the Wairau changed its course to the Opawa, as it undoubtedly might under the influence of a southerly trend, the breach must be closed at all costs.