

That portion of the scheme relating to the grading of the river-bed from the breakwaters up to the relief channel has been entirely ignored. The object of such grading was to increase the tidal compartment, and, so far from this object having been gained, the Board have taken no steps to preserve the tidal capacity of the western lagoon, which has been allowed to silt up without protest.

The floating basin has been changed from the original site on the western side of the river to the eastern side, where the natural features are not so favourable as on the original site, but to this change Sir John Coode had assented upon the representation of Mr. Napier Bell that the eastern site would be more economical in working.

BREAKWATERS.

48. The western breakwater was originally constructed some 400 ft. further out to sea than the eastern, but since 1909 the eastern breakwater has been extended seaward for a distance of 80 ft. beyond the western when measured at right angles to the fairway line, with the result from a navigational point of view that the entrance is rendered somewhat more difficult, especially in heavy weather from the westward (the prevailing set), as the vessels are deprived of the projecting shelter of the western breakwater and there is a consequent tendency to be set on to the eastern wall.

There is no evidence that consultations were held with or inquiries made from shipmasters as to the effect on navigation from the extension of the eastern breakwater, and such complaints as have been made by shipmasters since the work of extending the eastern breakwater has been commenced have been ignored, notwithstanding the advice of the Marine Engineer in his report of August, 1912, that the effect of the extension on navigation should be carefully watched.

CAPE FOULWIND RAILWAY.

49. No proper or sufficient check has been kept over the working of this line, particularly in regard to passenger traffic and fares. The Board has a printed scale of fares for carrying passengers on this line, but for years past this scale has not been enforced in the case of passengers travelling for short distances, and the Board or its executive officers do not seem to have been aware of this fact.

The system of measuring logs carried for sawmillers on the line is that of measuring the square contained in the small end of the log and adding one-fifth thereto. This system, or a similar one, has been abandoned by the New Zealand Railways for some years as being inadequate for ascertaining the true contents of logs carried. The advantage is in favour of the sawmiller, with the result that the sawmiller has his logs carried on this line at a greater advantage than sawmillers in the district and elsewhere obtain on the New Zealand Government Railways.

Maintenance of this line : The cost of upkeep and maintenance of permanent-way has been much in excess of the cost of similar work on the Government lines.

DREDGING AND TUG.

50. In the year 1890 the Board purchased from the Lyttelton Harbour Board for the sum of £12,000 the bucket-and-ladder self-propelling dredge "Erskine," and its two attendant self-propelling hopper barges "Heathcote" and "Sumner." In 1903 the Board obtained a twin-screw 500-ton hopper suction dredge (the "Rubi Seddon"), and in 1910 obtained the twin-screw 1,000-ton hopper suction dredge "Eileen Ward." In 1895 the tug "Mana" was purchased. All these vessels are fully manned with complete staffs and crews, except that one crew works both the hopper barges. The hours for which the dredgemen are paid are forty-eight per week, between 7.30 a.m. and 5.15 p.m.

The suction dredges cannot work on the bar if the scend exceeds 3 ft. They cannot be navigated out to sea when a heavy sea is running, owing to the position of the suction-pipes outside the hull, as the pipes are liable to be carried away by the sea; consequently dredging can be carried on only in fine weather outside the entrance, and loads dredged in the river cannot be taken to sea in rough weather. The hopper barges, being of low power, are unable to go to sea in bad weather, or to work when the river is in flood. Owing to the necessity of keeping the fairway