

*Further Extensions.*—Your Engineer has also prepared plans for 200ft. of extension of the wharf from the present end upwards towards Riley's wharf. Unless these extensions are used to load coal I should say that the first-mentioned extension from the present end of the wharf to the staiths would be found to be sufficient for the traffic of passengers and merchandise. If, however, coal is to be loaded from this wharf by cranes, then the whole of the extension, of which drawings have been prepared, would be necessary, the upper part being occupied for merchandise and the lower part for loading coal.

*Commissioners most concerned.*—But the question of using two sets of loading appliances, one by staiths and one by cranes, more immediately affects the railway authorities, whose opinions should be ascertained before steps are taken to provide these wharf extensions, with the view of loading coal from them.

*Floating-basin.*—I presume the construction of the floating-basin is not considered at present, and it is left over for the future. This would be a much safer and more commodious loading-place than the wharves and staiths on the river-bank, and, if it is made in the near future, it may be then found that the staiths and wharves on the river-bank will become disused, and the money spent on them lost. I think it would be advisable, when the extension of the staiths and wharf is completed, to wait and see whether the accommodation provided is not sufficient for the coal trade of the next few years. The fact of a permanent increase of coal-traffic would then be a sufficient justification for proceeding with the construction of the floating-basin, as shown on the plan recently sent out by Sir John Coode.

*Gridiron.*—I inspected the gridiron recently erected for the purpose of repairing the dredge and hoppers. I consider the site is very suitable, and, in fact, it is the only available site there is. The only other place that could be thought of is the lagoon on the opposite side of the river, but this is too inaccessible to the town, involving the passage across the river of men and materials, so that I do not consider it a suitable site at all. The gridiron is placed in a creek out of the way of most floods. It has water enough at present, and could easily be dredged to any depth required. It is also capable of being made into a patent slip, if ever such is required in this river.

*Relief-channel.*—I visited the relief-channel, and noticed that the floods are gradually widening and deepening it. After the dredging was done on the bar at the head of the channel in 1887 the depth of water was 2ft. 6in., at present, in a similarly low state of the river, the depth is 4ft. 6in., and the depth of the main channel opposite is also 4ft. 6in., so that now the head of the relief-channel is as deep as the main river and I should say that in floods about half of the water passes down the relief-channel. I think that the floods will continue to deepen and widen this channel, until, in the course of years, the greatest body of water will flow down it. This is what is wanted, as the more that passes down the relief-channel the less overflows at the Orawaiti. Mr C. Y. O'Connor was of opinion that dredging should be resumed at the head of the channel. I am of opinion it should be let alone, with the exception of keeping it always clear of snags and drift-timber, and in course of time nature will achieve the desired object.

*Orawaiti Overflow.*—The Orawaiti overflow is the skeleton in the cupboard to Westport. It is a danger that I think grows less every day and can be perfectly controlled, provided it is not neglected. The most immediate necessity is the protection of the river-bank from the wear-and-tear of floods, and there can be little doubt that, if the overflow had not been protected to the extent it has been, the Buller River would now be flowing out at the Orawaiti.

*Cribwork.*—In 1885 I erected 8 chains of cribwork, filled with boulders, which has stood the floods for six years, and is still as good as ever. The banks below this have during the last six years been cut away to the depth of nearly a chain, and this bank must be protected without further delay.

*Deposits of Stone.*—Your Engineer has discovered some deposits of stone in two or three creek-beds under the terrace on the Nine-mile Road. This will, I believe, give sufficient stone to protect the river-bank, which is being damaged by the river, and I do not think it is advisable at present to go to the great cost of making a road from the Buller Bridge to bring stone from the main quarries for this purpose, which can be done at any future time if found to be urgently necessary. The length of road required to get the stone found in the above creek-beds is only 60 chains, and will not cost much, but the road from the Buller Bridge to the Orawaiti overflow would be about three miles, and would cost much more than at present seems justifiable.

*Protection by Planting.*—The foreshore of the overflow being made quite secure by stonework, all other damage by floods can be checked by placing fascines loaded with stones in the holes and gullies which the floods cut out of the soil, and by planting every part of the overflow with willows and blackberries. When the low ground is thus overgrown with bushes the sand and silt of floods will be arrested and again overgrown, and thus the land grows higher after each flood, instead of being cut away as it would be if neglected. At the same time the relief-channel is slowly cutting its bed deeper, and taking more of the flood-water every year. Between these two influences the danger of the overflow will be entirely averted.

*Time of Completion.*—The harbour-works have now been six and a half years in operation. The first year was taken up in building the railway to the quarries, opening the quarries, constructing trucks, and procuring plant and machinery. The breakwaters have been five and a half years under construction, and the general average rate of depositing stone has been 160,000 tons a year, but during 1888 and 1889, 470,000 tons were deposited, or at the rate of 235,000 tons a year, the daily rate varying from 800 to 1,000 tons.

*Good Time.*—The breakwaters, therefore, have been completed in a fairly expeditious manner, considering that the quarries are seven miles from the west and ten miles from the east breakwaters, and taking also into consideration the very inferior and unsatisfactory nature of the quarries.

*Cost of Works.*—In considering the actual cost of the works as compared to the estimated cost given by Sir John Coode, it must be remembered that he reckoned to obtain the stone from the