

foregoing the figures are based upon the known cost of one of the largest works of its class in the world, costing £1,285,000 (Holyhead Breakwater), and in a country where every facility was at hand to enable large works to be economically carried out.

In taking this subject into consideration, it may possibly be of service to you to bear in mind the probable cost of an alternate section, for which purpose I beg to submit to you the following estimate for a western mole of concrete blocks and rubble combined, and also an estimate for the same work, but built entirely of concrete blocks :—

							£
Section A, from A to Y Y, concrete blocks and rubble combined,—							
From A, in Sir John Coode's plan to 9 feet at low water, 87,000 cubic yards of rubble, at, say, 8s. 6d. per cubic yard	...	...	...	...	...	...	36,975
From 9 feet at L W to Y Y, 1,610 feet of concrete blocks, 59,607 cubic yards, at 30s. per cubic yard	...	...	...	...	...	...	89,410
Staging from A to 9 feet at L W—viz., 726 feet, in twenty-five bags...	...	...	...	...	...	...	4,116
Plant	...	...	...	...	...	...	50,000
Preliminary charges on offices, sheds, &c.	...	...	...	...	...	...	10,000
Landing-stage and roadway	...	...	...	...	...	...	14,000
							£204,501
Contingencies	...	...	...	...	...	...	10,000
							£214,501
Section B, entirely of concrete blocks,—							
From A to Y Y with 1,000 feet of stage and roadway, 73,885 cubic yards concrete, at 30s....	...	...	...	...	...	...	110,827
Landing stage and roadway	...	...	...	...	...	...	14,000
Plant	...	...	...	...	...	...	44,000
Preliminary expenses	...	...	...	...	...	...	10,000
							£178,827
Contingencies	...	...	...	...	...	...	17,000
							£195,827

The price of concrete blocks, cost of plant, &c., is derived from the report on the Kurachee Harbour Works by Mr. W. H. Price, M.I.C.E., read before the Institute of Civil Engineers on the 9th November, 1875; and, as the report above referred to gives detailed cost of each particular of a large work successfully completed, a better guide in the matter could not be obtained. I may add that, in estimating the cost of Sections A and B, I have added 8s. 3d. per cubic yard to the cost of the concrete-block-making and setting at Kurachee, so as to allow a very fair margin for contingencies. The cost of Portland cement at Kurachee was £4 3s. 9d. per ton; landed here the cost would be £4 2s. 6d. Should your Board deem it expedient to go further into this matter, I will prepare the necessary plans and detailed estimates of the probable cost. The estimates herewith have been prepared from sketch sections and plans, which have enabled me to give you a reliable estimate.

I have, &c.,

J. R. REES,
Engineer.