

TABLE H.—MR. A. C. MACKENZIE'S ESTIMATE OF COST OF COMPLETION OF BREAKWATER.

BREAKWATER.

The following are the estimated costs submitted for our consideration for the completion of the Breakwater Harbour:—

F. W. Furkert (23rd August, 1924).—Completion of breakwater over the Auckland Rock, the ending being in 35 ft. of water; height, 6 ft. above H.W. or about one-half the extension proposed by Cullen and Keele in their 1912 report. The construction of the western mole, leaving a width at entrance of 600 ft.; one new jetty, 550 ft. long by 180 ft., providing two berths, with two cargo-sheds; dredging between jetties and to form a swinging-basin to a depth of 30 ft.; reclamation on foreshore (see Exhibit 21, page 8)—£400,000.

Cullen and Keele (23rd November, 1925).—Completion of breakwater over Auckland Rock, 1,550 ft., as against some 2,880 ft. proposed in 1912. Thus, accepting the lengths suggested by Mr. Furkert, height as at present, 6 ft. above H.W.; western mole, 3,800 ft. long (about similar lengths to Mr. Furkert's), entrance 600 ft. wide; reclamation; dredging, 31 ft. generally, with 35 ft. at berths; two jetties, 500 ft. long, 178 ft. wide, with cargo-sheds on each side 350 ft. by 35 ft.; shed on reclamation, 200 ft. by 60 ft.—£511,009, which is exclusive of engineering contingencies and plant. Similar to above, with one pier and two sheds, and shed on reclamation, also exclusive of engineering contingencies and plant—£393,082.

F. W. Furkert (September, 1927). Deposited to by Mr. Furkert as a safe estimate—

	£
Completion of breakwater.. .. .	185,000
West mole	85,000
Wharf, 600 ft. by 200 ft., with shed	120,000
Dredging	50,000
Reclamation	10,000
	£450,000

J. D. Holmes (August, 1927). See evidence, page 101

	£
Extension of breakwater, 1,550 ft., 6 ft. above H.W.	386,800
West-mole construction	330,000
Wharf, 550 ft. by 200 ft., with approach 664 ft.	161,000
Cargo-shed, 300 ft. by 170 ft.	7,600
Four cranes	4,000
Reclamation-wall, 2,900 ft. (22½ acres)	12,000
Dredging basin to 26 ft., berths to 30 ft.	18,700
Removal of Auckland Rock	3,400
Removal of other rock	2,000
Engineering contingencies.. .. .	47,500
	973,000

(Note.—On page 101 Mr. Holmes makes the total £983,000.)

Extra not provided for by Mr. Holmes on page 101—

Dredging to 31 ft.—	£
Per A. C. Mackenzie	24,000
Per J. D. Holmes	18,700
	5,300
Extra removing portion of Auckland Rock to provide 34 ft.	7,500
	12,800
	985,800
Mr. J. D. Holmes's estimate for raising breakwater 10 ft.	223,000
	£1,208,800

A. C. Mackenzie's Estimate.

To complete the Breakwater Harbour and to provide four berths for overseas vessels drawing 26 ft., I consider the following work would have to be done: Extend the present breakwater 1,550 ft., either with concrete blocks as at present or in stone, whichever is cheaper. The height to remain as it is at present—i.e., 6 ft. above H.W. Construct the west mole; length, about 3,800 ft. Construct a new wharf 600 ft. by 178 ft. Provide two cargo-sheds on wharf, 400 ft. by 35 ft., with roadway between sheds and 4 ft. below deck-level. Provide two railway-lines in front of sheds and one at back of each shed on roadway. Provision to be made for cranes in case they are required. Provide wall for reclamation somewhat as shown on Cullen and Keele's 1925 plan, about 2,900 ft. long (see Plan B, Commission's Exhibit 3). Provide for dredging between wharves and swinging-basin to 31 ft. below low water. Remove portion of the Auckland Rock at entrance to 34 ft. and other rock in enclosed area to 31 ft. As the trawlers and small coastal vessels are well provided for at the Inner Harbour, which