## Enclosure in No. 20.

COPY of QUESTIONS submitted to Sir JOHN COODE by the Otago Harbour Board.

Memorandum.

Drawing No. 1 shows harbour improvements sanctioned by the Government, the works of which are now in progress. Drawing No. 2 shows extension of the area proposed to be reclaimed in No. 1, it having been found essential for the future requirements of commerce that more railway accommodation should be provided. The arrangements exhibited on Drawing No. 2 meet the views of the Government, Chamber of Commerce, City Corporation, and the Harbour Board, by all of which bodies the plan has been adopted. The sanction of His Excellency the Governor to Drawing No. 2 is required, and only withheld pending the following expression of opinion from Sir John Coode.

## Questions.

No. 1. Will the extension of the reclamation proposed in Drawing No. 1 to meet the requirements indicated in Drawing No. 2 prejudicially affect the scour on the bar, or curtail the tidal area to an extent calculated to be injurious to the general interests of the harbour?

No. 2. Should there be any risk of injury by the adoption of Drawing No. 2, can remedial measures be instituted at the bar, or at any part of the harbour, to counteract such injury?

The following subsidiary questions were also agreed upon:-

No. 1. Will the alteration of the Dunedin and Port Chalmers Railway to the extent of taking it straight from point to point of the three bays exhibited on Drawing No. 1 prejudicially affect the interests of the harbour?—The combined area is forty-eight acres, upon the entire extent of which the tide has full action.

No. 2. Is the half-tide wall proposed by the Board's Engineer a necessary work? If so, should

it be undertaken contemporaneously with the deepening of the channel?

No. 3. What is Sir John Coode's opinion upon the Board's Engineer's proposed method of

reclaiming with the dredged material?

No. 4. Can Sir John Coode express an opinion or afford information on Duckham's pneumatic process of reclaiming with the dredged material?

No. 5. Can Sir John Coode recommend a more expeditious and economical mode of reclaiming with the dredged material than either of the foregoing proposals?

JOHN L. GILLIES,

Secretary.

12th June, 1878.

## No. 21.

The CHIEF HARBOURMASTER, Dunedin, to the CHAIRMAN, Otago Harbour Board. [Ordered to be forwarded together with reply to letter from Marine Department accompanying Sir John Coode's report.]

Harbour Office, Dunedin, 12th June, 1878 Sir,—

It would appear that information touching the depth of water on the bar at Otago Heads has been forwarded to the Government at Wellington, and one-half of the truth anent same withheld. The information given is that there is only 15 feet at low water where formerly there was 18 feet, and that withheld is that there is 17 feet where formerly there was only 14 feet.

As this conduct is of no advantage to any person, and decidedly an injury to the port, I thought it desirable to bring the matter under your notice at once. I will also request the Chief Pilot, who has been stationed at the Heads for the last nineteen years, to report his experience generally of the entrance to this harbour during that long period. According to instructions, he takes soundings on the bar once in every month, and oftener if the winds cause any change in the direction of the

My own experience of this harbour extends from 1855 till now, and I find that there is always a good channel across the bar, but is of a shifting nature according to the winds. North-east wind sets it slightly to the westward, south-west wind brings it back again, and north-west wind causes a slight

shoaling to take place.

Now during last month the prevailing winds were from the north-east and north-west, which explains the difference in the depth of water in the channel as reported by Mr. Pilot Kelly in April and May, also the position of the channel being slightly to the westward. I unhesitatingly assert that there has been no practical change in the depth of water at the entrance to this harbour during my long experience.

I will forward the Chief Pilot's report for the information of the Board as soon as I receive it.

I have, &c.,

WM. THOMSON,

The Chairman, Otago Harbour Board.

Harbourmaster.

P.S.—If such information has been forwarded with a view to frustrate harbour improvements, I may add that I have known there to be only  $16\frac{1}{2}$  feet in the channel across the bar before any part of Dunedin Bay was reclaimed.—W. T.

## No. 22.

The COLONIAL MARINE ENGINEER to the ENGINEER, Otago Harbour Board. Wellington, 22nd June, 1878. (Telegram.) Re Sir John Coode and reclamation: A memorandum is on the way to Harbour Board, which I think will make this clear.

D. L. Simpson, Esq., Engineer, Harbour Board, Dunedin.

JOHN BLACKETT,