

1925

KENYA

27644

Date

17th June 1925.

REC

PL 16 JUN 25

EXTENSION OF KILIMBINI DEEP WATER PIER.

Fwd Report and Estimate from Consulting Engineers. Hope to forward a second copy early. Suggest Messrs Pauling be asked to quote.

Previous Paper

MINUTES

As per as in draft minutes.

Send copy of this report to Mr. E. Hope saying that the S. & S. will await the recommendations of the Executive as to policy referred to in para 2 of 1035.

1035

2/6 at all

*copy to be sent to 30/6/25  
S. & S. (S. & S. Pauling) send  
and copy report to  
1035*

Subsequent Paper

006 1014



C.O.  
27644

RE  
16 JUNE 5

4, MILLBANK

WESTMINSTER,  
LONDON, S.W. 1

17th June 1925

Sir,

I have the honour to refer to your letter No. 10355/25 of the 16th March transmitting copy of a despatch from the late Governor of Kenya regarding the question of the extension of the deepwater quay at Kilindani.

2. We now enclose in original a report dated 13th June which we have received from the Consulting Engineers in regard to the above matter. We hope to forward a second copy of the report at an early date. It will be observed that the Consulting Engineers, in compliance with the Colony's request, have considered the possibility of adopting a lighter type of construction for the proposed extension. They have, however, reached the conclusion that the present block wall design, slightly modified, is likely to prove less costly and more satisfactory than the alternative methods considered. They agree, however, that as the result of the experience gained in the construction of the present wharf the cross section of the wall can be reduced with some saving in cost, without undue risk.

3. The Consulting Engineers estimate that the cost of an extension 1,000 feet long, with two single

storeys

Secretary of State  
Colonial Office

story transit sheds will amount to 2515,000. This figure does not include the cost of engineering supervision, the provision of cranes and work to be carried out departmentally by the Railway Administration. If cranes are required an additional sum of 232,000 should be provided while it is estimated that the cost of extending the railway tracks, provision of electric lighting and water supply etc. will amount to a further sum of 215,000.

4. If it is decided to proceed with the work the Consulting Engineers recommend that Messrs. Pauling & Co. Ltd. who are at the present time constructing the first section of the deep water wharves, should be asked to quote a price for the work. As Messrs. Pauling & Co. have suitable staff and plant on the ground we agree that they are in a position to carry out the work more economically than any other contractor. If their quotation should prove to be unreasonable further tenders could be obtained or alternatively, the work could be carried out departmentally.

I have the honour to be,

Sir,

Your obedient servant,

*Walter Wickham*  
For Crown Agents

A further copy of the report has been received and is attached.

RECEIVED BY  
15 JUN 1925Kilindini HarbourProposed extension of deep  
water Quay

Report

by

Messrs Goode, Fitzmaurice, Wilson &amp; Mitchell

13<sup>th</sup> June 1925With plan accompanying

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SAVILE WILSON & MITCHELL,  
100, 102 & 104, NORTHERN  
ROAD, LONDON, E.C. 4.  
TELEGRAMS ADDRESSED "WORLD LONDON"  
TELEPHONE NUMBER "VICTORIA 47"

9 Victoria Street,  
London, S.W.1.

15th June, 1925.

KILINDINI HARBOUR.

Gentlemen,

As requested in your letter No. N.430/5 dated 17th March, 1925, covering a copy of a despatch dated 27th January, 1925, from the late Governor of Kenya to the Secretary of State, we have gone very carefully into the question of the proposed extensions of the deep water quay at Kilindini.

2. In compliance with the second portion of paragraph 3 of the above named despatch, we investigated various alternative forms of construction and prepared rough designs and estimates therefor, with a view to seeing if there was any lighter form of construction which would afford the requisite facilities at a less cost than a blockwork wall.

3. We again considered a ferre concrete pile wharf. We were, however, at the outset, faced by a difficulty in connection with the building of a piled structure which has come to light during the construction of the present quay wall. The patches of rock that have been met with during the construction of the present work, and which are now known to occur in places on the

Green Agents for the Colonies.

4, Millbank S.W.1.

site of the proposed extension, practically precludes the possibility of driving ferro concrete piles so as to be certain of making a satisfactory job, apart altogether from the question of cost.

4. We, however, prepared an estimate for the ferro concrete pile design on the assumption that there would be no difficulty in driving the piles, but at the present prices it came out dearer than the modified blockwork wall which we describe below. There are also the objections to this class of work on account of the cost of maintenance, to which we have referred to in previous reports.

5. Of the other rough designs prepared, a structure composed of ferro concrete caissons, built on shore, launched, floated to site, sunk on a prepared bed and subsequently filled with stone and sand, appeared to offer a prospect of being economical. A design on these lines was worked out closely, but the estimate came out higher than either the ferro concrete pile or blockwork wall design.

6. The present blockwork wall design was examined with a view to seeing whether in the light of the experience gained during the construction of the present wall, the section could be reduced, and consequently cheapened without undue risk.

7. Observations made, and experience gained, during the construction of the present wall, have led us to the conclusion that it will be safe to somewhat reduce the sectional area and as a consequence the cost of the wall.

8. We have accordingly adapted a modified cross section for the quay wall and based our estimates thereon.

9. The proposed extension is shown by red colour on the accompanying plan, Drawing No. 38.

10. We have provided for the construction of two additional deep water berths each 500 feet long, with 35 feet of water alongside at low water.

11. The quay wall except for the modification referred to above, will be similar to the existing wall.

12. We have arranged for two single storey transit sheds each 414 feet long by 120 feet wide, one at each berth.

13. Provision has been made for widening the whole area and for a layout of roads similar to those at the back of the present quay.

14. Sooner or later it will no doubt be found advisable to equip the new berths with quay cranes. As the transit sheds at these berths will be single storey, quay cranes are not essential. Vessels could, to start with, work alongside to and from the wharf with their own derricks. We have therefore not included the cost of wharf crane equipment in our estimate. If it was considered desirable to provide these cranes from the outset, a sum of £32,000 should be provided therefor.

15. We have, however, included in the estimate provision for the crane track and cable chases, so that cranes at present under supply could move up from the existing berths and be used at these new berths if required.

8. We have accordingly adopted a modified cross section for the quay wall and based our estimates thereon.
9. The proposed extension is shown by red colour on the accompanying plan. Drawing No. 38.
10. We have provided for the construction of two additional deep water berths each 500 feet long, with 33 feet of water alongside at low water.
11. The quay wall except for the modification referred to above, will be similar to the existing wall.
12. We have arranged for two single storey transit sheds each 414 feet long by 120 feet wide, one at each berth.
13. Provision has been made for draining the whole area and for a layout of roads similar to those at the back of the present quay.
14. Sooner or later it will no doubt be found advisable to equip the new berths with quay cranes. As the transit sheds at these berths will be single storey, quay cranes are not essential. Vessels could, to start with, work cargo on to and from the wharf with their own derricks. The wharf, therefore, has included the cost of wharf crane equipment in our estimate. If it was considered desirable to provide these cranes from the outset, a sum of £28,000 should be provided therefor.
15. We have, however, included in the estimate provision for the crane track and cable chase, so that the cranes at present under supply could move up from the existing berths and be used at these new berths if required.



16. Our estimate for the above works at current prices amounts to 2515,000, which includes 10% for contingencies, but does not include engineering supervision.

The estimate includes:-

- (1) Quay wall, 1000 feet long with its crane track, bollards, fenders, etc. and an apron in front of the wall.
- (2) Dredging in front of and to the northward of the wall to give the required depth of 33 feet at low water.
- (3) Reclamation at the back of the wall approximately 4.5 acres in extent.
- (4) Two single storey sheds each 414 feet by 130 feet.
- (5) Roads and drainage of the area at the back of the proposed quay extension.

17. In addition we estimate that a sum of 215,000 will be required for the extension of the railway tracks now being laid, for the cable and plug taxes for crane cables on the quay, for the electric lighting of the sheds and yard, and for the water supply. These items on the work at present under construction are being carried out departmentally by the Railway Administration, so the above figure could be reviewed in the Calcutta in the light of the actual expenditure incurred on the work now in progress. These items would presumably not be included in the main contract for the extension work.

18. With regard to the best procedure for carrying out the work, if it is decided to proceed with the work at an early date, we consider that the Contractors for the present work, Messrs. Pauling & Co., Ltd. who have their

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somewhat doubtful if other Contractors would be prepared to quote competitively against the existing Contractors.

24. We estimate that it would take 2 1/2 years to complete all the work in connection with the extension for which we have now estimated, dating from the day a Contract is let.

25. We hope we have given all the information you require; if any further information is needed we shall be glad to supply it on hearing from you.

We have the Honour to be,

Gentlemen,

Your obedient servants,

*Wm. D. Fox & Co. Messrs. Nelson & Mitchell*

departmental work locally  
Causes estm of required work  
Estimated cost of cranes of  
required £32000 + cost of  
extending railway tracks,  
power & electric lighting  
and water supply etc. at £150000  
Consulting Engineers considered  
present water block design  
slightly modified to be  
cheaper and more satisfactory  
have alternative methods  
available. It follows  
to send.

Back June 25  
27/6

Ca 27/6/25  
Henry 355  
29

Building  
Date  
From  
Location  
No. of  
No. of

AFT.

17 June  
27/6

30 June 1925

Enclosure of  
submitted to my copy of the  
report of the present conditions  
to you a copy of a letter from  
the Co. for the L. railway  
a report from the Consulting  
Engineers on the proposed  
extension of the deepwater