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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W.

DEPARTMENT

G.O. No.	2197-W	Press.
B.P. No.		Mis.
Dated	17. 5. 1878	-197-

Not to be folded or roughly handled

2197
1

GOVERNMENT OF MADRAS
PUBLIC WORKS DEPARTMENT.

17th April 1878, No 2,197 W.

Buildings and Roads.
Civil Works

Read the following paper:—

No 210 From N. Sr. B. BEARDMORE, Esq, Acting Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, Buildings and Roads Branch, dated Madras, 1st May 1878, No 4 W.

THE progress which I have the honor to report in connection with the Madras Harbour during the month of April has, with regard to the superstructure of the breakwaters, been small, but in other parts of the work the progress has been considerable

2 It will be necessary in order to explain why so short a length of breakwater has been constructed to recapitulate the amount of work done during the previous three months

3 On the 1st January there were in store on the block grounds 741 blocks of different ages, but nearly all well seasoned. In January a length of 79 feet of breakwater was constructed at the north pier, and $98\frac{1}{2}$ feet at the south pier, 170 blocks being thus consumed. In February a length of 165 feet of breakwater was constructed at the north pier, and $124\frac{1}{2}$ feet at the south pier, 350 blocks being set. In March a length of $94\frac{3}{4}$ feet of breakwater was constructed at the north pier, and 120 feet at the south pier, 302 blocks being set. Thus in the short period of three months 681 feet of breakwater were constructed, and 822 blocks set. In consequence of this rapid rate of work therefore by the 1st of April all the well-seasoned blocks had been consumed. The block grounds were nearly full of young green blocks, but it was unsafe to set them, and the work of extending the breakwaters had for a time to be stopped until the blocks by age and exposure became sufficiently hardened and seasoned to enable them to be set in the breakwaters with safety.

4 *North Pier*—One course was set in this pier on 1st April extending the breakwater by 4 feet 9 inches, and making the total length from the commencement, or point B $699\frac{1}{2}$ feet.

5. *Rubble Base*—The amount of stone deposited for the rubble base during the month has been 2,745 tons. Of this 1,832 tons were laterite from Ambatoor, 30 tons of granite from Palaveram, and 883 tons of granite brought by the Steam Barge *Hobart* from Covelong. There is stone deposited now for the rubble base to a distance of 350 feet from the scar end of the breakwater, and it is nearly made up to its proper height and form for 250 feet

6. *South Pier*.—For the reasons stated above only one course likewise was set in the length of this pier extending it 4 feet 9 inches, and making the total length from the commencement, or point E 423 feet

7. During the month, however, the *Titan* was brought back from the end, to near the root of the breakwater, and 142 of the smaller sized six-ton blocks, prepared for the purpose, have been deposited on both sides of the pier for foreshore. This is in order to strengthen that part of the breakwater where the blocks are only two (one

Received at the office of the Secretary to Government, Public Works Department, Madras, 17th April 1878.

above the other) in a tier, and consequently where the stone foundation is brought up higher and is more exposed to the action of the surf waves. The length of the foreshore thus formed is from the root of the breakwater to the point where there are three full-sized blocks in a tier, or for 250 feet

8 *Rubble Base*—The rubble base of this pier has been added to by 3,325 tons of Palaveram stone, deposited by masula boats and catamarans, by 160 tons thrown by hand from the pier, and by 918 tons of granite stone brought from Covelong by the Steam Barge *Salisbury*. The distance in advance of the pier to which stone is deposited is about 300 feet, and the base is nearly made up to its proper height and form for 250 lineal feet.

9. *Block-making*—The number of blocks used in the breakwater since the date of the last report has been 14 (a course in each pier). The number of blocks made has been 327. Of these 213 were made by machinery, and 114 by hand labor.

10. In order to diminish the chance of having, on another occasion, to delay the work of the breakwaters by the necessity of waiting until blocks are aged and well seasoned, the only remedy is to have a greater number of blocks in store. An extra length therefore of 64 lineal feet of platform has been added to each block ground at the East ends, and a length of about 33 lineal feet to each ground at the West ends. These extra block platforms are shown in red on the accompanying plan; the total length of platforms thus added is 194 feet. By moving the older blocks and replacing them, some on these platforms, and some on the lines of railway which pass down the centre of each block ground, clear spaces are gained for the manufacture of new blocks. In this manner 172 blocks have been removed and packed together on places commanded by the Goliath Cranes, from whence they can be again lifted on to the trucks, and 172 spaces have been gained for the manufacture of new blocks.

11. Information has been received during the month that the indent of December 5th, 1877, for parts of machinery to replace portions broken, for diving dresses, and other things has been sanctioned and some of the articles despatched.

12. *Quarries*—The quantity of stone sent from the different sources of supply during the month has been as follows.—From Ambatoor for rubble base 2,643 tons, gravel for concrete purposes 361 tons, from Chunnampett for block-making 222 tons, from Palaveram and the neighborhood for rubble base 4,217 tons; for block-making 2,442 tons, from Sandapett and the neighborhood by the contractor for making blocks by hand 1,360 tons, from Covelong by the Steam Hopper Barges 1,801 tons.

13 *Railway Lines*—A new line of Railway has been commenced leading off the North surf bank on to the sand, in order to bring sand by it in trucks on to the block ground for making blocks. The line is shown in red on the accompanying plan, a length of 400 feet of it is completed, and 400 feet further of embankment is made.

14 *General*—It will be seen on the accompanying plan that a little cutting out of the shore has occurred between the iron pier and the south pier, and that a small accumulation of sand has been formed between the iron pier and the north pier, but it does not appear that any foreign sand has been deposited by the waves within the two piers of the harbour.

15 The crate No. IV which was deposited in 6½ fathoms water in line of north pier on April 24th, 1877, was visited on April 6th. It was found, as on the last examination, to be capsized and a little sunk in the sand on one side, on the other sides not so. The crate lies as it were in a depression in the sand which at a little distance rises away from the crate. The woodwork was covered with shell fish.

16 On the same day the four feet square tank B deposited in 7 fathoms water in line of north pier on January 26th, 1878, was visited. This was the first examination made since it had been deposited. It was not sunk in the sand at all, but as in the case of crate No. IV lay in a sort of depression in the sand, and at a

short distance, about 18 inches, from the tank the sand rose to a somewhat higher level. There was no sediment whatever discovered inside the tank, the outside was covered with barnacles and shell fish.

17. Tank C deposited in 6 fathoms water in line of the south pier on March 23rd, 1878, was also visited on April 6th last. This was the same tank notified in the last report as having been removed from the line of the north pier. It was found that it had capsized, in being dropped to the bottom of the sea on March 23rd, it not having been examined at the time. No sand had collected around it. It was set upright with the broken open part (damaged at the time of lifting) uppermost. It was then observed that it sank by its own weight about 2 inches in the sand, and that the deposit of sewage mud inside, which had not been taken out before the tank was dropped, measured about 3 inches deep. This therefore must be allowed for when estimating any fresh deposits that may occur in the tank.

18. Crate No. 1 deposited in 5½ fathoms water in line of north pier on January 5th, 1877, and visited on 5th October 1877, was revisited on April 13th, and found to be partially buried with stone deposited for the rubble base of the pier.

19. Crate No. 3 deposited near to No. 1 was searched for on the same day, but could not be found.

20 *Expenditure*.—The expenditure on the works during April was about Rupees 71,062. The total expenditure to the end of April has been Rupees 17,43,309.

No. 211. ORDER THEREON, 17th ^{May} 1878, No 2,197 W.

HIS GRACE the Governor in Council regrets to notice the slow progress reported and the loss of time that has occurred in fair weather from the want of seasoned blocks, the rapid consumption of which cannot be deemed a sufficient reason for the maximum demand not being supplied. The original block ground was never large enough to supply both piers.

(True Extract)

(Signed) E. A. FOORD, Colonel, R.E.,
Secretary to Govt, P.W.D.

(True Copy.)

Major, R.E.,
Under Secy. to Govt, P.W.D.

To the Superintendent, Madras Harbour Works
Marine Department

Exd C Howarth.
Spare Copies

★
BUILDINGS AND ROADS,
CIVIL WORKS.

Gobl. of (1873) Madras.
PUBLIC WORKS.

THE SUPERINTENDENT, MADRAS
HARBOUR WORKS.

From

To

Per

G. O. 170 VOL 17, 3 CIV W.

MAY.

Nos. 210-211.

Madras Harbour Works - No 173
copy retained in Madras Harbour Works
- 1873

No. 4/1V

From

THE SUPERINTENDENT,

MADRAS HARBOUR WORKS.

To

Madras Harbour Works Office,

24th May 1878

2197
4.

Proof of Progress Report for April 1878
and original copy are herewith returned
corrected.--

Nathan B. Beardmore
Asst. Superintendent
M. H. Works

The Under Secretary to Government.
P. W. Department
Fort St. George

was constructed at the North Pier, and



BUILDINGS AND ROADS,
CIVIL WORKS.

Govt. of (1873) Madras

No. 414

2197
4.

From

THE SUPERINTENDENT,
MADRAS HARBOUR WORKS.

To

Colonel E. S. Ford, R.E.
Secretary to Government, M. S. Dept.
for Roads & Buildings, Madras, 1873

SIR,

1 The Progress which I have the honour
to report in connection with the Madras
Harbour during the month of April, has,
with regard to the superstructure of the
Breakwaters, been small, but in other parts
of the work the progress has been considerable.

2 It will be necessary in order to ex-
plain why so short a length of Break-
water has been constructed to recapitulate
the amount of work done during the pre-
vious three months.—

3 On the 1st January there were in store
on the block grounds 741 blocks of different
ages, but nearly all well-seasoned. In
January a length of 79 feet of Breakwater
was constructed at the North Pier, and

Yours
Sd/-

RECEIVED BY THE
GOVERNMENT OF MADRAS
21 APRIL 1873

45 1/2 ft at the South Pier, 170 blocks being
 thus consumed. In February a length of
 115 feet of Breakwater was constructed at
 the North Pier and 121 1/2 feet at the South
 Pier, 350 blocks being set. In March
 a length of 94 3/4 feet of Breakwater was
 constructed at the North Pier and 121 feet
 at the South Pier, 307 blocks being set. -
 Thus in the short period of three months
 181 feet of Breakwater were constructed
 and 522 blocks set. In consequence, of
 this rapid rate of work therefore by the first
 of April, all the well seasoned blocks had
 been consumed. The block grounds were
 nearly full of young green blocks, but it
 was unsafe to set them, and the work
 of extending the breakwaters had for a time
 to be stopped until the blocks by age and
 exposure became sufficiently hardened and
 seasoned to enable them to be set in the
 Breakwaters with safety -

4. One course was set in this Pier on North P.

Rubble Base

2197 1/2
 1. Spud extending the breakwater by four
 feet nine inches and making the total
 length from the commencement or point
 B 699 1/2 feet. -

5 The amount of stone deposited
 for the Rubble base during the month has
 been 2745 tons. Of this 1832 tons were
 Lignite from Ambatoor, 30 tons of granite
 from Pallavaram, and 583 tons of granite
 brought by the Steam Barge "Hobart" from
 Cavelong. There is stone deposited
 now for the Rubble base to a distance of
 350 feet from the seaward end of the Break-
 water and it is nearly made up to its pro-
 per height and form for 250 feet -

South Pier

6 In the reasons stated above only one
 course likewise was set in the length of
 this Pier producing it four feet nine inches
 and making the total length from the
 commencement or point B, 1123 feet. -

During

During the month, however, the Stone was brought back from the end to near the root of the Breakwater and 112 of the smaller sized six ton blocks, prepared for the purpose, have been deposited on both sides of the Pier for fore shore. This is in order to strengthen that part of the Breakwater where the blocks are only two (one above the other) in a tier, and consequently where the stone foundation is brought up higher, and is more exposed to the action of the surf waves. The length of the fore shore thus formed is from the root of the Breakwater to the point where there are three full sized blocks in a tier, or for 250 feet.

The Rubble base of this Pier has been added to by 3325 tons of Pallavaram Stone, deposited by maula boats and catamarans, by 160 tons thrown by hand from the Pier, and by 918 tons of granite stone brought from Cavelong by the Steam Barge Salisbury. The distance in advance of the Pier to which stone

217/6

stone is deposited is about 300 feet and the base is nearly made up to its proper height and form for 250 lineal feet.

Blockmaking 9 The number of blocks used in the Breakwater since the date of the last report has been fourteen (a course in each Pier) the number of blocks made has been 327 of these 213 were made by machinery and 114 by hand labour.

10 In order to diminish the chance of having, on another occasion, to delay the work of the Breakwaters by the necessity of waiting until blocks are aged and well-seasoned, the only remedy is to have a greater number of blocks in store. An extra length therefore of 64 lineal feet of platform has been added to each block-ground at the East ends and a length of about 33 lineal feet to each ground at the West ends. These extra block platforms are shown in red on the accompanying plan: the

The total length of platforms thus added is 194 feet. By moving the older blocks and replacing them, some on these platforms, and some on the Lines of Railway which pass down the centre of each block ground, clear spaces are gained for the manufacture of new blocks. In this manner 172 blocks have been removed and packed together on places commanded by the Goliath cranes, from whence they can be again lifted on to the trucks, and 172 spaces have been gained for the manufacture of new blocks.

11 Information has been received during the month that the indent of December 5th for parts of machinery to replace portions broken, for diving dresses, and other things, has been sanctioned and some of the articles despatched.

12. The quantity of stone sent from the different sources of supply during the month has been as follows. From Ambaloor for

Quarries

2197
7

For Rubble base 2643 tons. Gravel for concrete purposes 261 tons. From Chinnampett for blockmaking 222 tons. From Pallavaram and the neighbourhood for Rubble base 11217 tons. for Blockmaking 2442 tons. - From Saidapett and the neighbourhood by the contractor for making blocks by hand 1360 tons. From Corvolong by the Steam Hopper barges 1801 tons. -

ay Lines 13. A new Line of Railway has been commenced leading off the North Quay Bank on to the sand, in order to bring sand by it in trucks on to the Block ground, for making blocks. The Line is shown in red on the accompanying Plan: a length of 400 feet of it is completed and 400 feet further if embankment is made.

real 14. It will be seen on the accompanying Plan that a little cutting out of the shore has occurred between the Shore Pier and the South Pier, and that a small accumulation

of sand has been formed between the "Iron Pier" and the North Pier, but it does not appear that any foreign sand has been deposited by the waves within the two Piers of the Harbour.

15. The crate N° IV which was deposited in 6½ fathoms water in Line of North Pier on April 24th 1877 was visited on April 6th. It was found, as on the last examination, to be capsized and a little sunk in the sand on one side, on the other sides not so. The crate lies as if were in a depression in the sand which a little distance rises away from the crate. The woodwork was covered with shell fish.

16. On the same day the four foot square Tank B deposited in seven fathoms water in Line of North Pier on January 26th 1878, was visited. This was the first examination made since it had been deposited

2197/8

deposited. It was not sunk in the sand at all, but as in the case of crate N° IV lay in a sort of depression in the sand and at a short distance, about 10 inches, from the Tank the sand rose to a somewhat higher level. There was no sediment whatever discovered inside the Tank: ~~and~~ the outside was covered with barnacles and shell fish.

17. Tank B deposited in six fathoms water in Line of the South Pier on March 23rd 1878, was also visited on April 6th last. This was the same Tank notified in the last report as having been removed from the Line of the North Pier. It was found that it had capsized in being dropped to the bottom of the sea on March 23rd, it not having been examined at the time. No sand had collected around it. It was set upright with the broken open part (damaged at the time of lifting) uppermost.

uppermost. It was then observed that it sunk
by its own weight about two inches in the sand
and that the deposit of sewage mud inside,
which had not been taken out before the tank
was dropped, measured about 3 inches deep.
This therefore must be allowed for when
estimating any fresh deposits that may
occur in the tank.

15. Grate No 1 deposited in five and a half
fathoms water in Lane of North Pier on
January 5th 1877 and visited on 5th October
1877 was revisited on April 13th and found to
be partially buried with stone deposited for the
Rubble base of the Pier.

14. Grate No 3 deposited near to No 1
was searched for on the same day but could
not be found.

20. The expenditure on the works during
April was about Rs 740 2. The total expendi-
ture to the end of April has been Rs 744 304. -

Expenditure

2197
9

I have the honor to be,

Sr,

Your most Obedient Servant

Nathl B Beardmore

Acting Superintendent

Madras Harbour Works

C. 5 1929 W - 22.4.78

Roads & Buildings

From Mr. 5265
The Acting Superintendent
Madras Harbour Works

No 11 W
Dated 1st May 1878
Despatched

1 of Enclosures 1 Plan

Progress Report
Submits progress report for
April 1878.

Recd 16.5.78. Qld 17.5.78.
C. 5 11.5.78. Qld 10.5.78.
C. 5 10.5.78

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 17th May/78

Read the following -

From the Supt, Madras Harbour Works (H.E. No 5265 dated
1st May/78)

His Grace the
Governor in Council reports
to have read the slow
progress brought to notice
on the wharves and the
loss of time that has oc-
curred in fair weather
from the want of suffi-
ciently seasoned blocks
the rapid consumption
of which cannot be
deemed a sufficient
reason for the maxi-
mum demand not
being available. The
original black ground
was never large enough to
supply both piers

Supt. M. H. Works
Maine Dept.

C. 5 11.5.78

Qld 10.5.78

18 ²¹⁹⁷/₁₁

From the Acting Superintendent Madras
Harbour Works No. 4 W. dated 1st May 1898.

FOR ORDERS

Loss of time in procuring
from various sources
is very unfortunate. It is admitted
the rapid accumulation is a
great loss. The May 1898
supply of stone has been
asked to satisfy the demand.

Edmund Col. P.E.
Secy to Govt. P.W.D.

W.M. 11/2

11/2

11/2

11.5.78

FOR ORDERS.

11.5.78
11.5.78
11.5.78

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13

Cir 11.5.78. REC 16.5.78
11.5.78

5265

Vol. of (1878) 2nd

PUBLIC WORKS

Supl. [unclear] [unclear]
[unclear]

Iss. of

Recd.

Recd.

May
G O. 17 ~~1878~~ 1878, No. 2197M.

Recd.

Madras Harbour works

Noticing the delay, being
referred to in Progress report
of the — for the month of
April 1878.

Int. Rep.