Archives I 10,006—16-8 77.

(1) Number of pages 26

(2) Date of repair Jan 1987

(3) Initials of the Referencer [illegible]

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Public Works DEPARTMENT

G.O. No. B.P. No.	2077 W	Press. Mis.
Dated	20-8-1881	197

Not to be folded or roughly handled

2077/1

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

20th August 1881, No. 2,077 W.

Buildings and Roads.
Civil Works.

Read the following paper :—

No. 91. From F. N. THOROWGOOD, Esq., M. Inst., C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 4th August 1881, No. 32 W.

I HAVE the honor to submit the following report of the progress on these works during July, and I much regret that many circumstances have prevented satisfactory advance.

2. NORTH PIER SUPERSTRUCTURE.—On July 1st the corner blocks of the pier head were satisfactorily reset in accordance with the plan I had, with Mr. Parkes's permission, prepared in April, superseding his original design. Three rows of blocks were also set supporting the corner or quadrant, and all seemed ready for resuming steady work at the pier end. On July 1st, however, Mr. Parkes telegraphed to Mr. Beardmore to stop work at the north pier. Mr. Parkes did not approve of the work as reconstructed, and having first ordered block-setting to be stopped, he has since ordered three rows of blocks to be taken up for the second time, so that they may be laid on their sides instead of on their natural beds. I was aware that Mr. Parkes thought this new arrangement a good one, and better than what I had proposed myself, but I believed, and still believe, that the delay following its adoption (requiring special arrangement for slinging the blocks not easily adapted to our cranes) more than balanced the advantages it presented. Mr. Parkes's telegrams and letters leave me no alternative but to take up the three rows of blocks already mentioned, and endeavour to carry out his latest plan.

3. This will necessarily cause delay in completing the north pier, as the gear used in lifting and lowering the blocks will have to be altered. This is now being done, and preparations are made for resetting the work in accordance with Mr. Parkes's plan received on July 23rd. But I would particularly note that the actual delay to progress has not been so serious, as on almost every day in July there has been so heavy and persistent a ground swell as would not only prevent divers from working, but even rendered it often impossible and always unsafe to go to the end of the pier.

4. On this subject of the alteration in the design of the pier head, rendered necessary by the failure of the plan first adopted, Mr. Parkes has, I believe, addressed Government separately, but I am not aware whether he has touched upon his orders to me by telegraph of July 1st.

5. QUARRIES.—During July there were 6,712 tons of laterite brought from Ambatúr quarries for the beach improvement work. On July 31st I closed this quarry (except as an occasional source of supply for ballast, &c.,) and have now commenced to take up the railway lines. From Pallavárам 4,263 tons of granite were received.

6. South Pier Superstructure.—The state of the sea caused most serions interruption to work at the south pier, both by stopping diving work and by cutting off all communication with the shore. There were, however, sixty-one blocks set in the pier head during the month, bringing the total length up to 3,861 feet from the commencement.

7. In the order passed upon Mr. Beardmore's report for June (G.O., No. 1,826 W., of July 26th,) attention is called to the settlement at the south pier and the lowness of the outer end. Anticipating in a measure the result of a reference to the Engineer-in-Chief, I have indicated on the plan accompanying this, by the letters P. Q., the portion of the pier over which the waves so frequently sweep. I have also prepared a special elevation showing the actual levels of the blocks at this low spot, when it will be seen that the lowest point of all is only 9 inches lower than Mr. Parkes's design of 5 feet above mean sea level. I would remark that the permanent settlement seems to have taken place, and that I consider the work at this spot to be perfectly secure. The rubble base under this length of pier does not contain so much laterite as the corresponding length of the north pier.

8. South Pier Rubble Base.—The south pier rubble base approaches completion, and the supply of material is reduced to what is necessary for levelling up the beds for the blocks. For this purpose 4,179 tons of stone were used in July.

9. Protective Works north of Harbour.—The sea continues to wash away small portions of the coast to the north, and, as already ordered, I am carrying on the longitudinal wall of rubble stone as a protection. During July only 704 tons of material were used for this purpose, but in the present month it will be necessary to put greater pressure on this work. The latest encroachment is some distance to the north, near the remains of the saw mill buildings. To reach this point with a sufficient revetment will take some time.

10. Stores received on Works.—The S.S. *Navarino* brought out some more of the mooring plant in July, viz., the apparatus for releasing the buoy spindles from the mooring rings. And the S.S. *Vega* brought out thirty-one lengths of the 2¼-inch stud chains for the moorings.

11. Moorings.—We have met with a series of misadventures, at first with the screwing machinery for the moorings, the most vexatious of which has been apparently the fault of the manufacturers at home. The mooring chains fit so tight in the wrought iron screwing tube, that it is very difficult to release the latter when wanted. I hope that we have remedied this defect for the shallow water moorings, but I fear that it will always be a source of annoyance. One screw mooring is now driven down and the buoy attached. I think I can with confidence predict that more rapid progress will be attained in future. There are, however, no shackles yet received for attaching the buoys to the bridle chains, but I hope that they will arrive in the next steamer.

12. Beach Improvement Works.—The work on the beach has been chiefly confined to levelling up and metalling the newly formed ground, extending the jetty, and laying in the rails for the formation of another jetty to the north. The laterite from Ambátur was becoming so bad in quality that I have abandoned its use, and must finish the work with material from the Pallávaram quarries at a slightly increased rate. There were 1,768 tons of laterite tipped in the jetty during July, and 4,681 tons of small material spread over the sand as metalling. The timber for the jetty is being cut, and a pile-engine is erected for driving the piles. I would remark with reference to this work that although I have twice applied for payment on account of work done, up to the present time I have received nothing from the Marine Department, and, in the meantime, the Madras Railway Company are very naturally asking for payment of their bills for hauling material to this work.

13. Expenditure.—The expenditure on the works as shown on the books up to July 31st is Rs. 55,30,355, and the outlay during July has been Rs. 50,892.

14. Plans and Sections.—The usual plan and one section accompany this report, besides a special elevation of the blocks at the lowest portion of the south pier. On the plan there will be observed a retirement of the high water line within the Harbour. This appears to be due to sand thrown up from the bottom by the reflected waves off the north pier. To become certain of this it will be desirable to resurvey the Harbour area and take the contour lines. I will do this as soon as practicable.

15. Mr. G. W. Lowe.—It is with the deepest regret that I have to report the failure in health of Mr. Lowe, the indefatigable Head Foreman of these works. He has devoted six years of unceasing labour in the sun to the advancement of the work, and as it approaches completion he is with the utmost reluctance ordered home, having sacrificed his health, and probably his constitution, to his zeal in working at the construction of this Harbour. He left for England on the 20th July, still buoyed up with the hope that he would yet return and complete his work of block-setting, in which hope I joined.

No. 92. Order thereon, 20th August 1881, No. 2,077 W.

Till further instruction the Superintendent of the Harbour Works will postpone the removal of the three rows of blocks adverted to in paragraph 2.

2. The removal of the railway lines for the Ambátur quarries, paragraph 5, is approved, but those for the Pallávaram quarries should be maintained pending special instructions.

3. The extension of the protective revetment north of the Harbour, paragraph 9, is approved. The progress of this work should be expedited as much as possible.

4. A further detailed report regarding the difficulties experienced in the release of the screwing tube, as noticed in paragraph 11, should be submitted, in view, if necessary, to the matter being brought to Mr. Parkes's notice.

5. It should be distinctly stated whether any changes can now be made in the gearing by the manufacturers, as would tend to overcome the difficulties anticipated in screwing home the deep sea moorings.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent of Madras Harbour Works.
,, Engineer-in-Chief do. do.
,, Master Attendant.
,, Marine Department.
,, Consulting Engineer for Railways.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1881} Madras.

PUBLIC WORKS.

To

The SUPERINTENDENT,
MADRAS HARBOUR WORKS,
&c., &c., &c.

Dated August, 20th.

Issued

Recd. *Encl.*

G. O., 20th August 1881, No. 2,077 W.

AUGUST.
Nos. 91-92.

Madras Harbour Works.—Orders on Progress Report of the — for the month of July 1881.

[illegible]

2087/83

Governor

for draft order

For orders!

2077 W

The attention of Mr. Parker should I venture to think be drawn to the several points noticed in the annexed draft order 2077 W

It is clear from Mr. Thornyhood's remarks that there are serious doubts as to the possibility of removing the 3 rows of blocks para 2 — if Seaton instruction be needed that could evidently be done by tipping masses of "pierre perdue" on to the top of the rubble base

As regards the removal of the railway lines it is now clear that we have more work before us in the revetment

Ord. 8/8 - Cir 13/8 -

north of the Harbour than was anticipated and very possibly the rubble base north west arm of the pier & many and dilapidating with rough stone tipped on the pier as at Colombo

It would therefore I think be premature to remove the rails of the Palavarm Quarry — those to the Ambalam quarries which only supply ~~lateritic~~ (nos) of a bad quality may of course be dispensed with

An examination of the large plan sent up shews a very sensible amount of erosion to north of the Police Thana — and a curious accretion at base of the Harbour

This letter I do not understand 205 and it is not very clearly worded to me by Mr Thorowgood — but it may prove quite immaterial

The defects of the dressing gear in the moorings is very provoking, and should at least be brought to Mr Parker's notice

12.8.91

No. 32 W. 27/8 81

From

The SUPERINTENDENT,

MADRAS HARBOUR WORKS,

To Colonel R.H. Sankey, C.B. R.E.
Secretary to Government P.W. Dept
Buildings & Roads
Fort Saint George

MADRAS, 4th August 1881.

Sir,

I have the honor to submit the following report of the progress on these works during July, and I much regret that many circumstances have prevented satisfactory advance.

[illegible] 11-8

North Pier Superstructure

2. On July 1st the corner blocks of the Pier Head were satisfactorily reset in accordance with the plan I had, with Mr. Parkes's permission, prepared in April superseding his original design. Three rows of blocks were also set supporting the corner or quadrant and all seemed ready for resuming steady work at the pier end. On July 1st however, Mr. Parkes telegraphed to Mr. Beardmore to stop work at the North Pier. Mr. Parkes did not approve of the work as reconstructed, and having first ordered blocksetting to be

stopped

stopped, he has since ordered three rows of blocks to be taken up for the second time, so that they may be laid on their sides instead of on their natural beds. I was aware that Mr. Parkes thought this new arrangement a good one, and better than what I had proposed myself but I believed, and still believe, that the delay following its adoption (requiring special arrangement for slinging the blocks not easily adapted to our cranes) more than balanced the advantages it presented. Mr Parkes telegrams and letters leave me no alternative but to take up the three rows of blocks already mentioned and endeavour to carry out his latest plan.

3. This will necessarily cause delay in completing the North Pier, as the gear used in lifting and lowering the blocks will have to be altered. This is now being done and preparations are made for resetting the work in accordance with Mr Parkes plan received on July 23rd. But I would particularly note that the actual delay to progress has not been so serious as on

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almost every day in July there has been so heavy and persistent a ground swell as would not only prevent divers from working but even rendered it often impossible and always unsafe to go to the end of the Pier.

4. On this subject of the alteration in the design of the Pier head, rendered necessary by the failure of the plan first adopted, Mr. Parkes has I believe addressed Government separately, but I am not aware whether he has touched upon his orders to me by telegraph of July 1st.

Quarries

5. During July there were 6712 tons of laterite brought from Ambathoor quarries for the Beach Improvement work. On July 31st. I closed this quarry (except as an occasional source of supply for ballast &c.) and have now commenced to take up the railway lines. From Pallavaram 4263 tons of granite were received.

South Pier Superstructure

6. The state of the sea caused most serious interruption to work at the South Pier both by stopping diving work and by cutting off all communication with the shore. There were however 61 blocks set in the Pier Head during the month bringing the total length up to 3861 feet from the commencement.

In

7 In the order passed upon Mr. Beardmore's report for June (G.O. No. 1826 W. of July 26th) attention is called to the settlement at the South Pier and the lowness of the outer end. Anticipating in a measure the result of a reference to the Engineer in Chief, I have indicated on the plan accompanying this by the letters P. Q. the portion of the pier over which the waves so frequently sweep. I have also prepared a special elevation shewing the actual levels of the blocks at this low spot when it will be seen that the lowest point of all is only 9 inches lower than Mr. Parkes's design of 5 feet above Mean Sea Level. I would remark that the permanent settlement seems to have taken place, and that I consider the work at this spot to be perfectly secure - The rubble base under this length of pier does not contain so much laterite as the corresponding length of the North Pier.

South Pier Rubble Base

8. The South Pier Rubble Base approaches completion and the supply of material is reduced to what is necessary for levelling up the beds for the blocks.

For

For this purpose 4179 tons of stone were used in July.

Protective works North of Harbour

9. The sea continues to wash away small portions of the coast to the North, and as already ordered, I am carrying on the longitudinal wall of rubble stone as a protection. During July only 7014 tons of material were used for this purpose, but in the present month it will be necessary to put greater pressure on this work. The latest encroachment is some distance to the North near the remains of the Saw Mill buildings. To reach this point with a sufficient revetment will take some time.

Stores received on works

10. The S.S. 'Navarino' brought out some more of the mooring plant in July, namely the apparatus for releasing the Buoy spindles from the mooring rings. And the S.S. 'Vega' brought out thirty one lengths of the 2¼" stud chains for the moorings.

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Moorings

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Beach Improvement Works

12. The work on the Beach has been chiefly confined to levelling up and metalling the newly formed ground, extending

the

the jetty, and laying in the rails for the formation of another jetty to the North. The laterite from Umbathoor was becoming so bad in quality that I have abandoned its use and must finish the work with material from the Pallavaram quarries at a slightly increased rate. There were 1768 tons of laterite tipped in the jetty during July, and 4681 tons of small material spread over the sand as metalling. The timber for the jetty is being cut, and a pile engine is erected for driving the piles.- I would remark with reference to this work that although I have twice applied for payment on account of work done up to the present time I have received nothing from the Marine Department, and in the meantime the Madras Railway Company are very naturally asking for payment of their bills for hauling material to this work.-

Expenditure.

13. The expenditure on the works as shewn on the books up to July 31st is Rs 55,30,355 and the outlay during July has been Rs 50,892.-

The

Plans & Sections

14. The usual plan and one section accompany this report, besides a special elevation of the blocks at the lowest portion of the South Pier. On the plan there will be observed a retirement of the High Water line within the Harbour. This appears to be due to sand thrown up from the bottom by the reflected waves off the North Pier. To become certain of this it will be desirable to resurvey the Harbour area and take the contour lines. I will do this as soon as practicable.–

Mr. G. W. Lowe.

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of –

of this Harbour. He left for England on the 20th July, still buoyed up with the hope that he would yet return and complete his work of block settings in which hope I joined.–

I have the honor to be,
Sir,
Your most Obedient Servt.
F. N. Thorowgood. M. Inst. C.E.
Superintendent
Madras Harbour
Works

G.O. No 561 W, 1st March 1881
" " 1340 W, 28th May 1881
" " 1826 W, 26 July 1881

P.W.C. No 4463

Buildings & Roads

From
The Superintendent
Madras Harbour Works

No 32 W
Dated 4th August 1881
Recd: 6th —

No of Enclosures 3 (plans)

D 8/8

Progress Report

Submits for the month
of July 1881.

O. 5.8.81 o.s. 8/8 - Ci 13/8.

A

87

B of R
Draft ord [illegible]

No 2077 W. d/ 20th August
1881

File. Further instructions.

The Superintendent of the Harbour Works will postpone the removal of the three rows of blocks adverted to in para 2

2. The removal of the railway lines for the Ambattoor quarries para 5 is approved but those for the Pallavaram quarries should be maintained pending special instructions

3. The extension of the protective revetment north of the Harbour para 9 is approved. The progress of this work should be expedited as much as possible

o.s. 8/8 - Ci 13/8 - Sdt 16/8.

G. C. No. 561 W. 1st March 1881
" "
" "

4. A further detailed report regarding the difficulties experienced in the release of the securing tube as noticed in para 11 should be submitted in view of [illegible] necessity to the matter being brought to Mr. Parker's notice

5. It should be distinctly stated whether any changes can now be made in the gearing by the manufacturers as would tend to overcome the difficulties anticipated in securing home the deep sea moorings

O. 8-8-81

Sept. M. A. Works
E. in C. — do — Sent thro' India ~~Office~~ 3/7/81
Master Attendant.
Marine Dept.
Consg. Engr.

Recd 20-8-81

Recd 30-8-81

4463

Govt. of 1881 Madras.

PUBLIC WORKS.

Dated 23/8/8

Issued

Recd.

Encl.

G. O., 20 August 1881, No. 2077 W

Nos. 91-92

Madras Harbour Works

Orders on progress report of the — for the month of July 1881.

X

Entd. in Receipt Regr.