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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W. DEPARTMENT

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GOVERNMENT OF MADRAS

PUBLIC WORKS DEPARTMENT.

11th September 1878, No 3,607 W.

Buildings and Roads
Civil Works

Read the following paper —

No 138 From F N THOROWGOOD, Esq, Superintendent, Madras Harbour Works, to the Secretary to Government Public Works Department, Buildings and Roads, dated Madras, 2nd September 1878, No. 30 W

I HAVE the honor to submit the following report of the progress on these works during the month of August 1878

2 NORTH PIER—SUPERSTRUCTURE.—The weather has not been favorable for work of any description, and from the 11th to the 22nd the surf was high and constant At the North Pier the Divers worked on every day when the sea was sufficiently smooth and 192 concrete blocks were successfully set This increases the length of the North Pier by 114 feet since the 31st July, and makes the total length of regular block-work now 1,003 feet from the point B, of which length there have been 647 feet built since January 1st, 1878

3 RUBBLE BASE.—The work of depositing rubble base has been carried on briskly, and gradually, the masula boats and country craft are being superseded by the Hopper Barge *Salisbury* and three large cargo boats These cargo boats are found to be very handy in depositing laterite in places where the steamer cannot conveniently come They are loaded from the wagons at the North Pier and towed out to their destinations by native boatmen. During August there were deposited in the base by these means 5,977 tons of laterite, of which 2,113 tons were deposited by the *Salisbury* and 3,864 by the cargo boats. The *Salisbury* would have deposited more, but that her steering apparatus got out of order on the 22nd, and we did not succeed in repairing it until the 26th In addition to the stone thrown into the base from boats, there was 1,037 tons of stone dropped from the Titan Crane for the Divers to use in levelling the beds for the blocks A total quantity therefore of 7,014 tons of stone have been deposited in the base during August as compared with 5,821 tons in July and 3,784 tons in June I hope in September to manage nearly 300 tons a day with the *Salisbury* alone.

4. BLOCK-MAKING.—The machinery for block-making has been at work throughout August, and 230 blocks for the superstructure of the piers have been made The machinery has worked fairly well, but delays have occurred through failure in the pumping machinery for water-supply. There is now a good stock of blocks in the yard, and a greater number are being made daily than are being set.

5 QUARRIES.—The laterite quarry at Ambattoor has supplied 7,630 tons of material during August, and the railway lines are being extended to facilitate the working out of the present area that is opened up On the 24th I visited the district round about Ambattoor and selected two other sites for future supply of laterite To work these places a long length of railway will have to be laid in

6 The quarries on the South Indian Railway have worked well during August, and two trains of 23 wagons each have been received daily. These trains have brought a total quantity of 8,753 tons of stone, of which 3,745 tons have been used in block making.

7 SOUTH PIER—SUPERSTRUCTURE —Again I regret that I cannot report much progress at the South Pier, but delay from sand is what we were led to expect at this time of year, and I hope that in six weeks' time the South Pier will have been carried through its present difficulties The surf has been very troublesome in advance of the block-work, rendering diving operations often impossible and always dangerous By taking advantage of smooth periods and by the use of Pull's dredger to remove sand, the divers succeeded in setting 60 superstructure blocks fairly well This work is advanced to the 1,047 feet length, 471½ feet of block work now built 247 feet from the point, of which length 471½ feet have been built since January 1st, 1878

8 In addition to the delay caused by the sand in the formed trams, block setting has had to be stopped for a time, owing to the breaking of some of the Titan travelling cranes being repaired as quickly as possible

9 The sand has again shifted to the south of the South Pier still more during August as shown by the green lines on the accompanying plan It is possible that during September no change will take place, and if the weather is favourable every effort will be taken at the South Pier to bring the side of the bottom within the line before the north-east monsoon sets in, but hitherto the constant surf has prevented me from getting any sections that can be relied on.

10. RUBBLE BANK —The rubble base of the South Pier is still deposited from masula boats, some of which are loaded on the beach and some from the pier itself As much of the base is buried in sand, which will be removed by the seas from the north-east, the boats are allowed to deposit their stone a considerable distance away from the end of the block-work on the sand which one may consider as permanent A total quantity of 5,971 tons has been deposited during August, against 5,142 tons deposited in July, and 3,156 in June The stone is all granite in quality and is quarried both at Pallavaram and near the quarry siding at the 15th mile of the South Indian Railway

11 DRAINAGE AND INTERCEPTING SEWER —The sand accumulation round the South Pier has closed the outlet for the drainage which I carried through the surf bank as I stated in my report for July I hope to submit immediately a plan and estimate for an intercepting sewer in the Harbour as directed by G O, No 2,963 W, of July 2nd, 1878, but as long as the surf bank is directly on the beach, as at present, I think that there can be no harm done by the discharge of the drains Mr Parkes is of opinion that the scheme for intercepting or otherwise dealing with the drainage does not call for immediate attention, and he hopes to be able to take up the matter thoroughly when he visits Madras

12 SEA ENCROACHMENT—NORTH OF HARBOUR —The green line on the accompanying plan shows the result of the survey of the shore line August 31st, 1878 It will be observed that opposite Shand's Cotton Press the encroachment is greatest, but it is not worse than in September 1876. The new protective groynes are shown in red, and I am at present carrying on those nearer the Harbour in preference to the most northerly ones so as to stop present damage at once Owing to the concrete block and laterite traffic along the Harbour railways at Royapooram, it becomes somewhat difficult to arrange for a sufficient supply of laterite to be unloaded separately into bandies for the groynes Consequently I have been unable to supply more than 10 wagons per day for the protective works During the month of August 1,115 tons of large laterite boulders were used for these works and the results are favorable Many of the inhabitants of the villages near the beach have petitioned me to compensate them for loss and to use means to stop the encroachment, but I cannot do much more than is being done at present without delaying the main work of constructing the Harbour itself I still am of opinion that the encroachments are now more attributable to high tides and heavy surf working conjointly than to the effect of deflected waves from the north breakwater

13 PLANS AND SECTIONS —This report is accompanied with one plan of the Harbour as existing, and two elevations showing the progress on the two piers

3607/78

14 EXPENDITURE —The total sum expended upon the work up to August 31st 1878, is Rupees 21,26,182.

15 GENERAL INFORMATION CONNECTED WITH WORKS —Having in view the arrival of more Portland cement from England, I have commenced to build in the yard at Royapooram two sheds for storing cement. Formerly when a large quantity of cement was coming in from England I built two pandals of bamboos and palmyra leaves, but these were blown down by the first heavy squall and much cement damaged, I therefore have judged it to be better economy to build more permanent structures with brick pillars and tiled roofs

16 I have completed the agreement with General Morgan to supply another 2,000 tons of his cement delivered on the works at Rupees 43 per ton. The specification under the terms of which this 2,000 tons will be supplied makes the breaking strain of the test bricks 500 lbs instead of 400 lbs, as was the test for the quantity (2,000 tons) already being supplied at Rupees 40 per ton The cost of the last quantity of English cement delivered to the works, including freight, landing, and storing charges, loss from sea damage, &c, &c, amounted to Rupees 19 per ton.

17 STAFF, &c —I am sorry to have to report that my staff has suffered and is still suffering from sickness Since the death of J Clucken on July, 15th, one of the Locomotive Engine Drivers, a European, died at the General Hospital on August 24th The Foreman Diver, one European Driver and two European Divers Signalmen are either in hospital or under the District Surgeon unable to work The European Foreman Block-maker is also laid up with dysentery I am happy to state that all are going on favorably, but the works suffer greatly from their absence. It is to be hoped that matters will improve when the north-easterly wind sets in

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No 1,09. CAMP TUTICORIN, 11th September 1878 No 3,607 W.

ORDERED to be recorded

(True Extract.)

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

(True Copy)

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

To the Superintendent, Madras Harbour Works
" Marine Department

Ex I D Rao
Spare Copies

No. 3017

5607/71

From

THE SUPERINTENDENT,
MADRAS HARBOUR WORKS.

To Colonel G. A. Hoord R. E
Secretary to Government Public Works Dept
Buildings & Roads
Fort Saint George
Madras, 3 September 1878

Sir,

I have the honor to submit the following report of the progress on these works during the month of August 1878. –

North Pier Superstructure

2 The weather has not been favourable for work of any description and from the 11th to the 22nd the surf was high and violent. At the North Pier the divers worked on every day when the sea was sufficiently smooth and 193 concrete blocks were successfully set. – This increases the length of the North pier by 111 feet since the 31st July, and makes the total length of regular blockwork now 1003 feet from the joint B, of which length there have been 603 feet built since January 1st 1878 –

Rubble Work

3 The work of depositing rubble base has been carried on briskly, and gradually the mamul boats and catamarans are being superseded by the Hopper Barge "Tilbury" and

and three large cargo boats. These cargo boats are found to be very handy in depositing laterite in places where the steamer cannot conveniently come. They are loaded from the wagons at the North Pier and are towed out to their destinations by native boatmen. During August there were deposited on the base by these means 5477 tons of laterite of which 2113 tons were deposited by the "Salisbury" and 3364 by the cargo boats. The "Salisbury" would have deposited more but that her steering apparatus got out of order on the 22nd and we did not succeed in repairing it until the 26th. In addition to the stone thrown into the base from boats there was 1067 tons of stone dropped from the steam crane for the divers to use in levelling the beds for the blocks. A total quantity therefore of 7044 tons of stone have been deposited in the base during August as compared with 5821 tons in July, and 3784 tons in June. There in September to manage nearly 300 tons a day with the "Salisbury" alone.

Quarries

5 The laterite quarry at Ambalthoor has supplied 7688 tons of material during August and the railway lines are being extended to facilitate the working out of the present area that is opened up. On the 24th I visited the district round about Ambalthoor and selected two other sites for future supply of laterite. In each these places a long length of railway will have to be laid in.

6 The quarries on the South Indian Railway have worked well during August and two trains of 29 wagons each have been received daily. These trains have brought a total quantity of 8758 tons of stone, of which 3745 tons have been used in block making.

Blockmaking

4 The machinery for block making has been at work throughout August and 235 blocks for

South Pier Superstructure

7 Again I regret that I cannot report much progress at the South pier, but

delay

delay from sand is settled we were led to expect at this time of year, and I hope that in 6 weeks time the South pier will have been carried through its present difficulties. The surf has been very troublesome in advance of the blocks at rendering diving operations often impossible and always dangerous. By taking advantage of smooth periods and by the use of Bell's dredger to remove sand, the divers succeeded in setting 60 superstructure blocks fairly well. This work has advanced the pier by a length of 147½ lineal feet making the total length of blockwork now built 547 feet from the round E, of which length 471½ feet have been built since January 1st 1878. —

8. In addition to the delay caused by the sand on the formation blockwalling has had to be stopped for a time, owing to the breaking of some of the Island travelling gear. This is being repaired as quickly as possible. —

9. The sand has accumulated to the South of the South pier still more during August, as shown by the green line on the accompanying plan. It is probable that during September, no change will take place, and if the weather

weather is favourable, cross sections will be taken at the South pier, to show the state of the bottom within the Harbour before the North East Monsoon sets in, but hitherto the constant surf has prevented me from getting any sections that can be relied on. —

Rubble Base

10. The rubble base of the South pier is still deposited from Granite boats, some of which are loaded on the beach and some from the pier itself. So much of the base is buried in sand which will be removed by the seas from the North East, the boats are ordered to deposit their stone a considerable distance away from the end of the blockwork on the sand which one may consider as permanent. A total quantity of 5371 tons has been deposited during August, against 5142 tons deposited in July and 3161 in June. The stone is all granitic in quality and is quarried both at Pallavaram and near the quarry siding at the 15th mile of the South Indian Railway. —

Drainage and Intercepting Sewer

11. The sand accumulation round the South pier has closed the outlet for the drain —

which

which I carried through the surf bank as I stated in my report for July. I hope to submit immediately a plan and estimate for an intercepting drain in the Harbour as directed by G. O. No 381 of July 12th 1876 but as long as the surf breaks heavy on the beach, as at present, I think that there can be no harm done by the discharge of the drains. Mr Parkes is of opinion that the scheme for intercepting or otherwise dealing with the drainage does not call for immediate attention, and he hopes to be able to take up the matter thoroughly when he visits Madras.

12. The green line on the accompanying plan shows the result of the survey of the shore line August 31st 1876. It will be observed that opposite Shands Bellon pier the encroachment is greatest, but it is not worse than in September 1876. The new protection groynes are shown in red, and I am at present carrying on those near the Harbour in preference to the most Northerly ones so as to stop present damage at once. Owing to the coarse stock and laterite traffic

Sea Encroachment North of Harbour

along the Harbour railways at Poyapuram, it becomes somewhat difficult to arrange for a sufficient supply of laterite to be unloaded separately into lanches for the groynes. Consequently I have been unable to supply more than 10 wagons per day for the protective works. During the month of August 1115 tons of large laterite boulders were used for these works and the results are favourable. Many of the inhabitants of the villages near the beach have petitioned me to compensate them for loss and to use means to stop the encroachment, but I cannot do much more than is being done at present without delaying the main work of constructing the Harbour pier. I still am of opinion that the encroachments are now more attributable to high tides and heavy surf working conjointly than to the effect of deflected waves from the North breakwater.

Plans & Sections.

13. The report is accompanied with one plan of the Harbour as existing, and two elevations showing the progress on the two piers.

Correspondence

14. The total sum expended upon the work up

up to August 31st 1875 as £ 21,216/12/2

15 Having on view the arrival of men & Pilliers cement from England, & have commenced to build in the yard at Royapooram two sheds for storing cement. I merely when a large quantity of cement was coming in from England & built two sheds of bamboo and palmyra leaves but these were blown down by the first heavy squall and much cement damaged, & therefore have judged it to be better economy to build more permanent structures with brick pillars and tiled roofs -

General information connected with works

16 I have completed the agreement with General Morgan to supply another 2000 tons of his cement delivered on the works at £4.13 per ton. The specification under the terms of which this 2000 tons will be supplied makes the breaking strain of the last breaches 500 lbs instead of 400 lbs as was the last for the quantity (2000 tons) recently being supplied at £4.10 per ton. The cost of the last quantity of English cement delivered to the works including freight, landing and storing charges, less from sea damage, &c &c amounted to £4.8 per ton. -

a/

2,607/1

Staff &c

17. I am sorry to have to report that my staff has suffered and is still suffering from sickness. Since the death of J. Chicken on July 19th one of the Locomotive engine drivers, a European, died at the General Hospital on August 24th - The Fireman diver, one European diver and two European diver's assistants are either in Hospital or under the District Surgeon, unable to work. The European foreman blacksmith is also laid up with dysentery. I am happy to state that all are going on favourably, but the works suffer greatly from their absence. It is to be hoped that matters will improve when the North easterly wind sets in. -

I have the honor to be,
Sir,
Your most obedient Servant
F. Thorowgood.
Superintendent
Madras Harbour Works

Buildings & Roads 8-41

From

The Superintendent
Madras Harbour Works

No 30 W

Dated 2nd September 1878

Progress Report

Submits progress report of the works for August 1878

PUBLIC WORKS DEPARTMENT.

FOR ORDERS

FOR ORDERS

6 BPP
Cruiser

Sir Stephen Hill Knt

Ordered to be
Recorded.

CNF
11/9

Lieu 6.9.78 Rec'd 11.9.78
8.9.78

Capt. M. H. Hawkshaw
Marine Dept.