

1913 w 29.7.08.
2059 C. 9. 9. 08.

40

P.W.C. No. 793/V

2002 w 11.8.06.
2057 w 20.6.08.

P.W.C. No. 793/V

Govt. of {1886} Madras.

MARINE.



13.5.C.

No. 2693 w 13. Oct/86

10

Recorded &
Recorded

For
12/10/86

Issued

Recd. 12.10.86

Encl.

G.O., 4th October 1886, No. 554 M.

No. 2693 w 13. Oct/86

OCTOBER.

Madras Harbour.

Communicating to the Public Works Department and the Harbour Trust Board a letter from the Port Officer, Madras, submitting observations with reference to Mr. Parkes' remarks regarding the effect of the cyclone of 23rd May 1886 on the —.

2 Copies to be kept
with the order

For
14/10
P.W.C.

with the order

For
14/10
P.W.C.

to the Engineer III

1913 W 29.7-08.
3059 C. 9-9.08.
40
P.W.D. No. 704-1

4TH OCTOBER 1886, No. 554, MARINE.

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

READ—the following paper:—

From J. H. TAYLOR, Esq., Lieut., R.N.R., Port Officer, Madras, to the Chief Secretary to Government, dated Madras, 20th September 1886, No. 9072.

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ORDER—dated 4th October 1886, No. 554, Marine.

Communicated to the Public Works Department and the Chairman, Harbour Trust Board.

(True Extract.)

E. F. WEBSTER,
Chief Secretary.

To the Public Works Department.

„ Chairman, Harbour Trust Board.
„ Port Officer, Madras.

Exd. T. O'Connor.

Gobt. of (1886) Madras.

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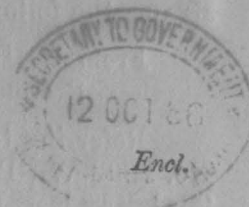
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11TH AUGUST 1886, No. 2002 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following despatch from the Right Honorable the EARL OF KIMBERLEY, Her Majesty's Secretary of State for India, to His Excellency the Right Honorable the Governor in Council, Fort St George, dated India Office, London, 15th July 1886, No. 4, Public Works:—

I transmit herewith, for the information of your Excellency's Government, a copy of a letter * from Mr. Parkes, describing the effect of the recent cyclone and heavy sea on the Madras Harbour Works.

2. It will be observed that Mr. Parkes feels justified in saying that such a sea would have no effect on the works when completed according to the sanctioned design.

ENCLOSURE.

From W. PARKES, Esq., to the Under Secretary of State for India, dated 23, Abingdon Street, 23rd June 1886.

I have the honor to inform you that on the 23rd ultimo Madras was visited by a cyclone accompanied by a heavy sea, of which the following description has been sent me by Mr. A. Lee Pogson, the Assistant Superintendent of the Harbour Works, who is in temporary charge during the absence of Mr. Thorowgood (through indisposition) at Coonoor.

2. "On Sunday the 23rd May 1886 at 6 A.M. the sea was rough and wind from N.E. increasing till 8-0 A.M. when it was blowing a gale from the same direction, with the sea considerably risen.

"At 12-0 A.M. the sea had roughened up, so much so that the three steamers in the harbour made several attempts to go to sea, but were blown round again, and it was not until 2-0 P.M. when the third steamer steamed out. The wind was from N.E. still, and the sea fairly heavy, washing over the north pier from end to end, excepting at the wave-breakers which retarded the waves wonderfully, so much so that our men stood behind them safely while rescuing the men from the wreck hereafter mentioned. At 2-15 P.M. all cargo and other boats had been washed ashore, and two hours later a barque of 401 tons had dragged her anchors and struck the north pier at about 2,000 feet and slowly bumped along the north pier shorewards until she reached the inner wave-breakers when she went to splinters in five minutes. The crew were saved by the bravery of our divers from the north pier.

"At 5-0 P.M. there was a good heavy sea on, and the spray from the south pier wave-breakers was thrown up half as high again as the Titan. The backwash from these was tremendous, causing every wave to wash over the old single wall some feet high. Between the waves I could now see the single wall had been breached near the double wall, about two blocks having gone then. At 6-0 P.M. a large barque of 453 tons struck the north pier outer straight at 3,000 feet from B stone and soon went to pieces, all the crew being saved but three.

"On Monday the 24th the sea had considerably gone down, when I had a look round the works and found that the south pier single wall had gone in the night, and the south pier wave-breakers had settled down about two feet but not much displaced.

"At the north pier the wave-breakers have settled a little, but I do not miss more than two or three blocks in all. The new pier stood the sea perfectly and has only settled half an inch since it was set, no side movement having taken place, which may be due to its being so thoroughly tied to the old pier at every alternate block. I can see no other movement along the old damaged portions of both piers, except where the second barque struck the north pier, and here two blocks which stood above water have been overthrown in the accident. The hull of this barque was washed over the pier and is still floating in the harbour to the danger of the steamers.

"It was not till yesterday that I could get a boat near the south pier to see what had really happened, when I managed to get a correct surface plan of all that remains above water, of the

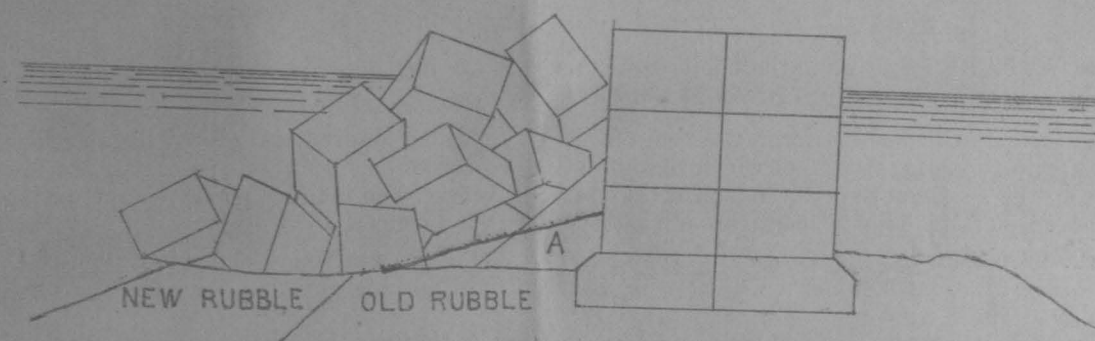
old single wall. Just 219 feet of this wall has been overthrown for certain, but I believe only the first two courses of these have gone; and, as far as I can see, they have fallen into the harbour and on our new base. As soon as possible I will get cross sections and repeat exactly the new cross sections I have lately taken.

"I have taken a few measurements from the top of both piers to see if the boulders which were tipped into 13 feet below the top of the piers have been moved, and I find an average of 6 feet of boulders at both piers has been levelled down, being now 19 feet below the pier top. This I start to make good at once to receive the wave-breaker blocks."

3. The above is a satisfactory report as far as it goes, but I hope to receive fuller particulars of the meteorological conditions preceding and accompanying the storm, including the measured velocity of the wind and its changes of direction and the estimated force of sea and its direction as compared with previous occasions.

4. The effects upon the works are of no importance. The 219 feet of single wall at the south pier which has gone was left in a state by the storm of November 1881 that could not be expected to withstand a second heavy sea. The outer wall had been overthrown by undermining on the sea side, and the harbour wall remained ready to succumb to the next attack. It was not intended to retain it as a wall in the restoration works. The new pier is designed to be built complete inside it, and the old blocks would have been lifted and used for the wave-breaker. Some additional labour will probably be required in raising or blowing up the blocks or a portion of them where they have fallen upon the new rubble base instead of having merely to lift them from the wall, but that is the extent to which our plans are affected by this overthrow. No portion of the old work, which it is intended to retain as part of the permanent structure, has been touched.

5. The boulders, which Mr. Pogson speaks of as having been lowered 13 feet at the face of the wall, are the large lumps of rubble which form a core for the wave-breaker as at A in sketch.



They have been drawn down to something like the form shown in red. The lower part of the slope might have formed part of the original plan but for the expense of depositing the material at that distance from the wall, so that no harm has been done. When it is covered with the wave-breaker blocks, as it will be in the current season, of course it will not be any longer liable to movement.

6. The only new experiences afforded by this storm are the effect of the wave-breakers on the sea and the want of effect of the sea on the wave-breakers, and these are decidedly satisfactory. It was evidently a sea of very considerable force, though I have not the data for comparing it with former seas in this respect. It certainly, however, justifies me in saying that such a sea would have no effect on the works when completed according to the sanctioned design.

ORDER—dated 11th August 1886, No. 2002 W., Public Works.

Communicated to the Chairman, Madras Harbour Trust Board.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Chairman, Madras Harbour Trust Board.
„ Marine Department.

Exd. J. Moses.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Gobt. of 1886 Madras.
PUBLIC WORKS.

Dated August, 11th.

Recd.

Encl.

G.O., 11th Aug. 1886, No. 2002 W.

AUGUST.

Madras Harbour Works

Despatch from the Secretary of State forwarding copy of a letter from Mr. Parkes describing the effect of the recent cyclone and heavy sea on the —, communicated to the Chairman, Harbour Trust Board.

30TH JUNE 1886, No. 1651 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following letter from A. L. POGSON, Esq., Assistant Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 5th June 1886, No. 15 W.:—

I have the honor to submit the progress report with a plan of the work done on these works during the past month of May.

2. It would be gathered from the Superintendent's last report that little or no work could be done on the piers during the rough weather, but every opportunity was seized to re-arrange the block-yards and repair all machinery, &c., for a fair start again on the 1st June.

3. Before proceeding I must mention that the Superintendent availed himself of the 56 days' privilege leave from noon, the 5th May.

4. *Surveys.*—Throughout the standing portions of both piers a permanent new centre line has been laid out, and a series of cross sections are now complete over both curves on the proposed new centre line of piers, most of which are plotted and will be submitted with each report as the new piers reach the point of each section.

5. *North pier rubble base.*—As the north pier rubble base is advanced as far as the overthrown blocks have been blown up, nothing could be done under this head until the weather permits the divers continuing the blasting operations.

6. Throughout the length of the new pier 220½ tons of large stone were deposited from boats to protect the foundation blocks of this new work.

7. *Wave-breaker.*—Nothing has been done since the crane was withdrawn on the 28th April, and it is probable that some little delay will be unavoidable in this work as the concrete blocks require time to harden, the present stock of these blocks being required to complete the gap in the south pier wave-breakers.

8. *North pier superstructure.*—On account of the withdrawal of the Titan crane nothing has been done since April, when a length of 89 feet lineal of the new pier was completed.

9. On the 1st May all the temporary rails were taken up as they have so often been lost in rough weather, but were relaid by the 2nd instant, when block setting was resumed.

10. *Block-making.*—All the machinery being repaired, a fair start at block-making was made on the 17th May, and it is to be hoped this work will continue uninterrupted for some months. At present an average of only nine blocks a day are turned out as only one platform is available for the work. All the blocks at present being made are for the wave-breakers. One hundred and one blocks were made up to the 31st May, representing 3,030 tons of concrete.

11. During May, 104 of the south pier superstructure blocks, and all the old stock of wave-breakers, viz., 186, making 290 blocks in all, were safely transferred from the north block-yard to the south pier stacking ground, thus giving more space

at the two platforms at the north pier block-yards for carrying on the work of block-making.

12. *South pier rubble base.*—Although work at the south pier rubble base was stopped for several days in May through rough weather, the progress was fair, 12,224½ tons of stone being deposited, making a total of 92,056¾ tons, of which 12,030 tons is due to old blocks blown to pieces by divers.

13. Of the 12,224½ tons of stone deposited, 2,638¾ tons was tipped south of the south pier in the gap between the two detached portions of the wave-breaker. This gap is now nearly completed (see paragraph 9, progress report for April; G.O., No. 1204 W., dated 12th May 1886).

14. *Wave-breaker.*—Shortly the south pier Titan crane will be travelled out to resume work at forming the wave-braker, which I hope to complete by the 20th instant, when the Titan will be turned north to its legitimate work of building the new south pier.

15. *South pier superstructure.*—In the meantime until the Titan crane is turned north, I have run out to the end of the south pier a 10-ton jib crane, by which the levelling up of the base for the new pier can be at once proceeded with, as the crane will be used for raising the surplus stone to the surface, in boxes filled by divers. For this purpose I have launched a third divers' boat, to be exclusively kept at this work.

16. *Pallavaram quarries.*—The outturn of stone from Pallavaram has not been so good owing to the trains being so often cancelled on account of rough weather. For the first week in May, five trains ran daily and with fair punctuality; the out-put of stone for the month amounts to 13,461¾ tons.

17. An extension of 250 feet to the main line of railway was completed.

18. *Stores from England.*—During May the steamers *Chyebassa*, *Cormorant*, and *Almora* arrived with 434 tons of Portland cement; the latter steamer also brought stores consisting of screws, nails, and galvanized iron blocks.

19. *Miscellaneous.*—A great addition to the workshops has been the erection of a lathe, drilling and slotting machines, in a building just completed for the purpose. These machines are driven by steam and will do most of the turning which has hitherto been sent to the Public Works shops.

20. *Cyclone at Madras.*—On Sunday, the 23rd May, the heavy sea caused two barques to drift on to the north pier, where they were both wrecked at the positions shown in accompanying plan.

21. The barque *Runganayakooloo* struck and went to pieces on the wave-breakers, the crew being saved by several of the Madras Harbour Works employes, who deserve great credit for the bravery shown by them, and I really think that some reward might be permitted to them for their conduct on this occasion, their services being purely voluntary.

22. The barque *Nonpareil* struck on the damaged portion of the north pier curve, displacing two or three of the old blocks that appeared above high-water and carrying away one of the new tangent point survey beacons. At the extreme end of the south pier a few blocks of the old single wall were overthrown. These blocks were not yet protected by a wave-breaker, and not only had they to stand the direct sea, but also to resist the reflected waves which were thrown with great force off the nearest heap of wave-breaker blocks. So far the sea has been too rough for a diver to ascertain where these blocks have fallen; but should they be on the line of the new pier, I can see no difficulty in slinging and removing them by chains with the Titan crane when this point is reached.

23. The only other damage done was the washing ashore of most of the contractor's boats for depositing stone, and this will delay the progress of depositing base until other boats are purchased or the damages repaired. I may add that the settlement in the wave-breaker blocks in both piers was very small and that the new north pier work has not moved, showing the foundations to be compact and as near perfection as possible.

ORDER—dated 30th June 1886, No. 1651 W., Public Works.

Recorded.

2. The Government are glad to learn that the damage done to the works by the storm of the 23rd May was small.

3. The Superintendent will submit a full report on the subject of paragraph 21, intimating at the same time the names of the employes referred to and his recommendations on their behalf.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
„ Marine Department.

Exd. E. Fernandez.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Gobt. of 1886 Madras.

PUBLIC WORKS.

Dated June, 30th.

Recd.

Encl.

G.O., 30th June 1886, No. 1651 W.

JUNE.

Madras Harbour Works

The progress report for May 1886
recorded with remarks.

4TH OCTOBER 1886, No. 554, MARINE.

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ORDER—dated 4th October 1886, No. 554, Marine.

Communicated to the Public Works Department and the Chairman, Harbour Trust Board.

(True Extract.)

E. F. WEBSTER,
Chief Secretary.

To the Public Works Department.

„ Chairman, Harbour Trust Board.
„ Port Officer, Madras.

Exd. T. O'Connor.

2673 Wd/13 Oct 1886
Gobt. of (1886) Madras.

MARINE.

Recorded
(Sgd) JON W
Issued

Recd.

Encl.

G.O., 4th October 1886, No. 554 M.

No. 2673 Wd/13 Oct 1886
OCTOBER.

Madras Harbour.

Communicating to the Public Works Department and the Harbour Trust Board a letter from the Port Officer, Madras, submitting observations with reference to Mr. Parkes' remarks regarding the effect of the cyclone of 23rd May 1886 on the —.

With order

4TH OCTOBER 1886, No. 554, MARINE.

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

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(True Extract.)

John Macintyre

Chief Secretary.

To the Public Works Department.

„ Chairman, Harbour Trust Board.
„ Port Officer, Madras.

Exd. T. O'Connor.

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