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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P - W . DEPARTMENT

G.O. No.	424 W	Press.
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Dated	16 . 2 . 1882	197 .

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Not to be folded or roughly handled

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

16th February 1882, No. 424 W.

Buildings and Roads.
Civil Works.

Read the following papers :—

No. 56. From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, to the Secretary to Government, Public Works Department, dated Madras, 6th February 1882, No. 976.

I HAVE the honor to report that in January Mr. Parkes paid a visit to this department for the purpose of procuring information for his report called for in G.O., No. 3169 W., dated 21st December 1881.

2. The opinion, as given by the universal judgment of all the Marine Officers, and by all nautical men who have visited the port since the erection of the harbour walls, was to the effect that in any plan for reconstruction of the harbour, measures must be taken to close the sea face, substituting a side entrance in 6 fathoms.

3. Independently, however, of the inconvenience of the easterly opening, it was undoubtedly a source of weakness to the work. The subsidence of the outer line of the blocks on a former occasion* proved incontestably that the current swirled round the corner and cut out the rubble base, and it is in my judgment incontestably proved to have done so on the last occasion by the fact, patent to all observers, that the broad section of both piers was the first to give way, without the opposition of a first-class cyclone, the Titan cranes having been withdrawn to a considerable distance, and so not contributing to the result. We are in fact as far as ever from knowing what the effect of that would be. It was the current chiefly that worked the present destruction, and it requires no engineering knowledge to point out that a return to the original form of construction, if that is contemplated, will be followed by a similar result at a slightly extended period. The total disappearance of Sir A. Cotton's breakwater, and that of a large quantity of the rubble north of the harbour, shows the treacherous quality of the Madras sand, and the depth of $7\frac{1}{2}$ fathoms does not, as is now proved, dispose of the danger.

* G.Os., Public Works Department, No. 2851 W., dated 9th December 1880, No. 60 W., dated 11th January 1881.

4. On the occasion of the recent disaster there was no wind to speak of, and the storm which caused the sea evidently broke up on reaching the land. As regards the height of the sea itself, many opinions have been given. It certainly came up to the level of the T head of the pier, and washed up the number of planks usual on occasions of rough weather; but it is described on all sides to have been worse inside the harbour than out, a pyramidal kind of sea, which the experienced boatmen were afraid to tempt. They, however, one and all declared that if their services had been required

outside the walls they would have ventured. Now, this they could not possibly have done in a heavy cyclone sea, and thus the question of the amount of mischief due to that source is still unsolved. The opinion of nautical men, freely delivered during the past two years, with one exception, has condemned the present work, and since the accident has suggested that the ruin should be retained as a backbone for a sloping work of large loose blocks tipped over and forming a broad base, and coming to the surface in a something similar manner, though not on so large a scale, as Plymouth breakwater. The Marine Department diver has always assured me that wave and current actions were powerful even at $7\frac{1}{2}$ fathoms, and when endeavouring to clear the moorings of the red buoy marking the harbour mouth on the occasion of its final removal, he was violently driven against the cable and his helmet bent in.

5. I respectfully submit to Government that such an important work does not appear to me to have sufficient sub-marine supervision. There should, I consider, be means by which the Chief Engineer and the Harbour constructor or Superintendent, or responsible officers of that class, be able to go down and witness for themselves the actual features of the sea and current action. I have in my store a good diving bell, which only wants a little refitting to be in perfect readiness. It was got out from England for the purpose of recovering anchors, goods, &c., but when the diving dress was invented, it was found so much more suitable for such work that the bell was laid aside, but for inspection it would now be invaluable. I do not wish to disparage the working divers, but in a matter of this importance their unsupported statements are not reliable enough to justify a reconstruction of the work on its former plan. I believe the rubble has largely disappeared, and that if the new work has even double the old section it will only take one or two storms to inflict the same amount of destruction. If the first harbour had stood, it would have formed a cheap and comfortable method of carrying on the trade of the port except during rough days, but beach improvements would not have been safe, as a storm of any kind near or far would send enough sea on to injure the boat traffic, and prevent wharf construction; but now that more money must be forthcoming, it would be advisable in the best interest of Madras to make the harbour more complete, even at a much increased outlay.

6. I have been very urgent with the Harbour Committee to adopt a plan for strengthening the Port Fund, and offering satisfactory assurance to Government that the interest on their capital amount can be met without increasing the charges on the mercantile community, and with that view have prepared a plan which only waits the further inquiry of the Collector of Sea Customs to be brought again before the Committee, with any change the Collector may see fit to recommend. It is high time, I respectfully submit, that steps were taken in this direction.

No. 334 C.

REFERRED to the Engineer-in-Chief, Madras Harbour Works, for remarks.

9th February 1882.

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

No. 56-A. From W. PARKES, Esq., M. Inst. C.E., Engineer-in-Chief, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 10th February 1882, No. 5 W.

I HAVE the honor to return, herewith, the original of the letter addressed to you by the Master Attendant on the 6th instant, which was forwarded to me for remark.

2. After a careful perusal I have failed to find in it any information on matters of fact not already in my possession, and with regard to the conclusions on purely engineering questions submitted by Captain Taylor, I have only to remark that I hope soon to submit my own conclusions, based on a much more accurate and complete collection of facts than those now in Captain Taylor's possession.

3. With respect to the suggestion for the use of the diving bell for examination under water, I am not aware of any way in which it could at present be employed either usefully or safely.

No. 57. ORDER THEREON, 16th February 1882, No. 424 W.

Recorded.

(True Extract.)

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

To the Superintendent, Madras Harbour Works.
" Engineer-in-Chief, do. do.
" Marine Department.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1882) Madras.

PUBLIC WORKS.

To

THE SUPERINTENDENT OF MADRAS
HARBOUR WORKS.

&c., &c., &c.

Dated February, 16th.

Issued

Recd.

Encl.

G.O., 16th February 1882, No. 424 W.

FEBRUARY.

Nos. 56-57.

Reconstruction of the Madras Harbour.—
Letter from the Master Attendant offering
certain observations in connection with the
—, recorded.

Administrative Department.

No. 976

MADRAS, 3

Marine Office,

6th February

1882.

From

J. H. TAYLOR, Esq., LIEUT., R.N.R.,

Master Attendant,

Administrative Department,

Madras,

To

Colonel R. H. Sankar, R. E. & C. B.

Chief Secretary to Government,

Public Works Marine Department,

Fort Saint George.

SIR,

I have the honour to report that in
January Mr. Parkes paid a visit to this
Department for the purpose of procuring
information for his report called for in
G. O. No. 3169 W., dated 21st December 1881.

2 The opinion, as given by the universal
judgment of all the Marine Officers, and by
all nautical men, who have visited the port
since the erection of the Harbour Walls, was
to the effect that in any plan for reconstruc-
tion of the Harbour, measures must be taken
to close the sea face, substituting a side entrance
in 6 fathoms.

3 Independently, however, of the inconvenience
of the Easterly opening, it was undoubtedly
a source of weakness to the work. The subsidence
of the outer line of the blocks on a former

occasion proved incontestably that the current swirled round the corner and cut out the rubble base, and it is in my judgment incontestably proved to have done so on the last occasion by the fact patent to all observers that the broad section of both Piers was the first to give way, without the opposition of a first class cyclone, the Tatham cranes having been withdrawn to a considerable distance, and so not contributing to the result. We are in fact as far as ever from knowing what the effect of that would be. It was the current chiefly that worked the present destruction, and it requires no engineering knowledge to perceive that a return to the original form of construction, if that is contemplated will be followed by a similar result at a slightly extended period. The total disappearance of Sir A. Cotton's breakwater, and that of a large quantity of the rubble North of the Harbour, shows the treacherous quality of the Maadras sand, and the depth of $7\frac{1}{2}$ fathoms does not, as is now proved, dispose of the danger.

4 On the occasion of the recent disaster, there was no wind to speak of, and the storm

G. C. R. M. Sopatt 1881
W. dated 9 December 1880
A. E. 60 W. dated 11 January 1881

storm which caused the sea evidently broke up on reaching the land. As regards the height of the sea itself, many opinions have been given. It certainly came up to the level of the T head of the Pier, and washed up the number of planks, on occasions of rough weather, but it is described on all sides to have been worse inside the Harbour than out, a pyramidal kind of sea which the experienced boatmen were afraid to tempt. They, however, one and all declared that, if their services had been required outside the walls, they would have ventured. Now this they could not possibly have done in a heavy cyclone sea, and thus the question of the amount of mischief due to that source is still unsolved. The opinion of nautical men freely delivered during the past two years, with one exception, has condemned the present work, and since the accident has suggested that the ruin should be retained as a backbone for a sloping work of large loose blocks tipped over and forming a broad base and coming to the surface in a something similar manner, though not on so large a scale as Plymouth

breakwater. The Marine Department Diver has always assured me that wave and current actions were powerful even at $7\frac{1}{2}$ fathoms, and when endeavouring to clear the workings of the red buoy marking the Harbour mouth on the occasion of its final removal, he was violently driven against the cable and his helmet bent in.

5. I respectfully submit to Government that such an important work does not appear to me to have sufficient Submarine Supervision. There should I consider be means by which the Chief Engineer and the Harbour Constructor or Superintendent or responsible Officers of that class be able to go down and witness for themselves the actual features of the sea and current action. I have in my store a good Diving Bell which only wants a little refitting to be in perfect readiness. It was got out from England for the purpose of recovering Anchors, goods &c but when the Diving dress was invented, it was found so much more suitable for such work that the Bell was laid aside, but for inspection it would now be invaluable. I do not wish to disparage the working

divers, but in a matter of this importance ^{high} their unsupported statements are not reliable enough to justify a reconstruction of the work on its former plan. I believe the rubble has largely disappeared, and that if the new work has even double the old section it will only take one or two storms to inflict the same amount of destruction. If the first harbour had stood, it would have formed a cheap and comfortable method of carrying on the trade of the Port except during rough days, but beach improvements would not have been safe, as a storm of any kind near or far would send enough sea on to injure the boat traffic, and prevent wharf construction, but now that more money must be forthcoming, it would be advisable in the best interest of Madras to make the Harbour more complete, even at a much increased outlay.

6. I have been very urgent with the Harbour Committee to adopt a plan for strengthening the Port Trust, and offering satisfactory assurance to Government that the interest on their Capital amount can be met without

without increasing the charges on the mer-
cantile Community, and with that view
have prepared a plan which only waits the
further enquiry of the Collector of Sea
Customs to be brought again before the
Committee with any change the Collector
may see fit to recommend. It is high
time I respectfully submit that steps
were taken in this direction.

I have the honor to be

Sir

Your most Obedient Servant

W. Taylor
Master Customs

Administrative Department

(1882) DEPARTMENT.

P. W. C. P. 810.

From

THE MASTER ATTENDANT,
ADMINISTRATIVE DEPARTMENT,
Madras,

To

THE CHIEF SECY. TO GOVERNMENT,
P. W. MARINE DEPARTMENT,
Fort St. George.

No. 976

Dated

Received

6 February 1882.

No.

Subject.

Reporting in connection
with the Harbour.

Referred.

175
No 334.C of 9th Feby/82
Referred to the
Engineer-in-Chief
Madras Harbour
Works for remarks.

Col R.E.
Secretary to Government,
S. W. Dept.

To
The E. in. Chief M. H. W.
in original - to be
returned with reply.

No 5 W.

No 6 424/7

From The Engineer in Chief
Madras Harbour Works

To The Secretary to Government,
Public Works Department,
Fort Saint George.

Madras
10th February 1882

Sir,

Enclosure

I have the honor to return
herewith the original of the letter
addressed to you by the Master
Attendant on the 6th instant, which
was forwarded to me for remark.

2. After a careful perusal I have
failed to find in it any information
on matters of fact not already in
my possession, and with regard to
the conclusions on purely engineer-
ing questions submitted by Captain
Taylor I have only to remark that
I hope soon to submit my own con-
clusions based on a much more
accurate and complete collection

of

of facts than those now in Captain
Taylor's possession. -

3. With respect to the suggestion
for the use of the diving bell for ex-
amination under water, I am not
aware of any way in which it could
at present be employed either usefully
or safely. -

I have the honor to be

Sir

Your most obedient Servant.

W Parkes M. Inst. C.E.
Engineer in Chief
Madras Harbour Works

P. W. L. No 913
From
The Engineer in Chief
Madras Harbour Works

Recd

Att

11/2/82

No 5
Dated 10th February 1882
Recd. 11

C.O. 28510 9.12.80
" 60 W. 11.1.81
" 29270 13.11.81
" 29560 25.11.81
" 31690 21.12.81

No of Inclosures 1

Reconstruction of Harbour
Returns Captain Taylor's
letter on - with remarks.

C.O. 13/2 1882

To Hon W. B. Sullivan

For order

In forwarding the
annexed correspondence
regarding the Harbour
works which it may
suffice to record I
hope it may yet be
found feasible to use
the diving bell as pro-
posed by Captain Taylor
as it is most desirable
that I should in company
with Mr. Parker and
other responsible officers
examine the precise
condition of the blocks
forming the lower tier
and decide if their
condition is such as to
admit of their being
used in building on
again as it is understood
will be proposed, instead
of having to depend en-
tirely for the condition on
the reports of divers

See
P.W.

C.O. 13/2 1882

11/2/82 Att

810
913.

From index.

R. H. P.
C. 1115

8

N^o 424 W of 16th July 1882

Recorded.

Att

15-2-82

S. M. H. W. H. ✓
Enl. M. H. W. H. ✓
Marine Dept. ✓
Sept 1-3-82

913.

Govt. of (1882) Madras.

PUBLIC WORKS.

To

Dated

20/2/82

Issued

Recd.

Encl.

G. O. No. 16th July 1882, No. 424 W.

Nos. 30 to 35

Restoration of the
Madras Harbour.

Letter from the Master
Atendant offering
certain observations
in connection with
the ——— recorded.

20/2